KONICA MINOLTA

SERVICE MANUAL

bizhub

C658/C558/C458
C368/C308/C258

KONICA MINOLTA, INC.

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Revision List

No.	Title	Description of revision	Date
1	O.24 CHANGES IN REFRESH MODEL	Correspondence of the refresh model.	2017/08/31
2	I.5.19.12 Self-diag. (Full)	Correspondence of the function version 4.0.	2017/08/31
3	I.5.19.13 Self-diag. (Individual)	Correspondence of the function version 4.0.	2017/08/31
4	K.4 Troubleshooting using Self-diag. (Full)	Correspondence of the function version 4.0.	2017/08/31
5	K.5 Troubleshooting when NG is displayed on the Self-diag. (Individual)	Correspondence of the function version 4.0.	2017/08/31
6	I.5.16.6 Software Switch Setting	Correspondence of the function version 4.1.	2017/11/06
7	Nonvolatile memory clear function	Correspondence of the function version 4.1.	2017/11/06
8	K.3.5 List of the trouble code (bizhub C358/C308/C258)	Correspondence of the function version 4.1.	2017/11/06
9	K.3.6 List of the trouble code (bizhub C658/C558/C458)	Correspondence of the function version 4.1.	2017/11/06
10	K.3.13.9 C392A (bizhub C368/C308/C258)	Correspondence of the function version 4.1.	2017/11/06
11	K.3.14.10 C392A (bizhub C658/C558/C458)	Correspondence of the function version 4.1.	2017/11/06
12	K.3.14.14 C3B09 (bizhub C658/C558/C458)	Correspondence of the function version 4.1.	2017/11/06
13	K.3.21.1 C9401, C9402 (bizhub C658/C558/C458/C368/C308/C258)	Correspondence of the function version 4.1.	2017/11/06
14	K.4.21 E10-1, E10-2	Correspondence of the function version 4.1.	2017/11/06
15	C.1.10 Web browser function	Correspondence of the function version 4.2.	2018/05/07
16	I.2.3.12 Change PIN Code	Correspondence of the function version 4.2.	2018/05/07
17	I.2.4.2 (1) (j) User Box Settings	Correspondence of the function version 4.2.	2018/05/07
18	I.2.4.2 (3) Administrator Settings > System Settings [3/3]	Correspondence of the function version 4.2.	2018/05/07
19	I.2.4.6 (1) Administrator Settings > Network Settings [1/4]	Correspondence of the function version 4.2.	2018/05/07
20	I.5.4.17 Move Scanner to Home	Correspondence of the function version 4.2.	2018/05/07
21	I.5.16.6 Software Switch Setting	Correspondence of the function version 4.2.	2018/05/07
22	I.5.17.5 Warning	Correspondence of the function version 4.2.	2018/05/07
23	I.5.24 FAX setting (Address parameter list: for line 1, line 2, line 3 and line 4)	Correspondence of the function version 4.2.	2018/05/07
24	I.8.3.7 Authentication Device 2	Correspondence of the function version 4.2.	2018/05/07
25	K.1.1 JAM display	Correspondence of the function version 4.2.	2018/05/07
26	K.3.5 List of the trouble code (bizhub C358/C308/C258)	Correspondence of the function version 4.2.	2018/05/07
27	K.3.6 List of the trouble code (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/05/07
28	K.3.24.28 CD2D1	Correspondence of the function version 4.2.	2018/05/07
29	C.1.4 Material (bizhub C368/C308/C258)	Correspondence of the function version 4.2.	2018/07/17
30	C.2.4 Material (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/07/17
31	F.6.1 Consumable/part replacement time (bizhub C368/C308/C258)	Correspondence of the function version 4.2.	2018/07/17
32	F.6.2 Consumable/part replacement time (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/07/17
33	F.7.1.1 Replacing the drum unit (bizhub C368/C308/C258)	Correspondence of the function version 4.2.	2018/07/17
34	F.8.2.1 Replacing the drum unit (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/07/17
35	I.7.3.9 Engine FW DipSW	Correspondence of the function version 4.2.	2018/07/17
36	K.1.2 List of the JAM code (bizhub C368/C308/C258)	Correspondence of the function version 4.2.	2018/07/17
37	K.1.3 List of the JAM code (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/07/17
38	K.1.12 3#-## (bizhub C368/C308/C258)	Correspondence of the function version 4.2.	2018/07/17
39	K.1.13 3#-## (bizhub C658/C558/C458)	Correspondence of the function version 4.2.	2018/07/17
40	K.16.3.1 Image trouble sample illustrations	Correspondence of the function version 4.2.	2018/07/17
41	K.16.3.2 Skewed image/Image deviation	Correspondence of the function version 4.2.	2018/07/17

A SAFETY AND IMPORTANT WARNING ITEMS

1. IMPORTANT NOTICE

- Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, KONICA MINOLTA, INC. (hereafter called KM) strongly recommends that all servicing be performed only by KM-trained service technicians.
- Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KM does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.
- The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended. Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly. Keep this service manual also for future service.
- Distributors or KM issue password for customer engineers (CE) as necessary. The password is required for operations or machine settings that are based on this service manual. These customer engineers (CE) must manage the password carefully. Never leak the password to a third party.

2. DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

2.1 Description items in this Service Manual

In this Service Manual, each of three expressions "⚠DANGER", "⚠WARNING", and "⚠ CAUTION" are defined as follows.
When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

⚠ DANGER	: Action having a high possibility of suffering death or serious injury
⚠ WARNING	: Action having a possibility of suffering death or serious injury
⚠ CAUTION	: Action having a possibility of suffering a slight wound and property damage

2.2 Description items for safety and important warning items

Symbols used for safety and important warning items are defined as follows:

: Precaution when servicing the product.	 General precaution	 Electric hazard	 High temperature
: Prohibition when servicing the product.	 General prohibition	 Do not touch with wet hand	 Do not disassemble
: Direction when servicing the product.	 General instruction	 Unplug	 Ground/Earth

Illustrations representing the power plug and wall outlet used in the following descriptions are only typical. Their shapes differ depending on the country or region.

3. SAFETY WARNINGS

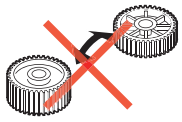
3.1 MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA, INC.

KONICA MINOLTA brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.
Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. the points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

3.1.1 Actions requiring special attention

⚠WARNING

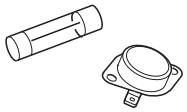
- Do not make any modifications to the product unless otherwise instructed by KM.
- Do not use any part not specified by KM.



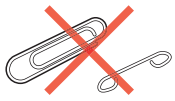
- Do not use any power cord or power plug not specified by KM.



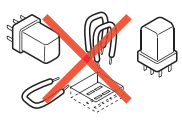
- Use only the protective fuses specified by KM.
  Use of any type of fuse or related part not specified by KM makes safety devices inoperative which may result in a fire from high heat.



- Do not disable fuse functions or use a wire, metal clip, solder, or other conductor in place of the fuse.
  Fire may result from high heat.

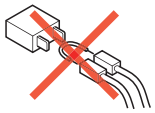


- Do not disable relay functions (for example, inserting a piece of paper between relay contacts to hamper circuit action.)
  Fire may result from high heat.



⚠WARNING

- Do not disable safety functions (for example, interlocks and safety circuits).
  Safety devices become inoperative, resulting in fire from high heat, electric shock, or injury.



3.2 POWER PLUG SELECTION

In some countries or areas, the power plug provided with the product may not fit the wall outlet used in the area. In that case, it is the obligation of the customer engineer (hereafter called the CE) to attach the appropriate power plug or power cord set in order to connect the product to the supply.

3.2.1 Power Cord Set or Power Plug

⚠WARNING

- Use a power supply cord set which meets the following criteria:
  - provided with a plug having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - provided with three-conductor cable having enough current capacity, and
  - the cord set meets regulatory requirements for the area.

  Use of inadequate cord set leads to fire or electric shock.



⚠WARNING

- Attach power plug which meets the following criteria:
  - having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - meets regulatory requirements for the area.

  Use of inadequate cord set leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

- The wires in the power supply cord shall be connected to the terminals of the plug in accordance with the following:

Color of the wire		Terminal of the plug
Brown	Black	Marked with "L", "A" or "W" or colored RED
Light Blue	White	Marked with "N" or colored BLACK
Green-and-Yellow		Marked with "E", "PE" or " ⏚ " or colored GREEN or GREEN-AND-YELLOW

- Wrong connection may cancel safeguards within the product, and results in fire or electric shock.

3.3 CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

3.3.1 Power Supply

(1) Connection to Power Supply

⚠WARNING

- The power outlet should have a capacity of at least the maximum power consumption and be dedicated only to the product.
  The current that can be passed through the outlet is limited and any current exceeding the limit could result in fire.



- If the wall outlet has two or more receptacles and the product and another electrical appliance are plugged into this wall outlet, make sure that the total load does not exceed the rating of the wall outlet. The current that can be passed through the outlet is limited and any current exceeding the limit could result in a fire.

⚠WARNING

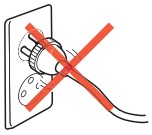
- Do not use any conversion plug adapter even if the power plug shape does not match your wall outlet.

  The shapes of the power plug and the wall outlet are set according to the voltage and allowable current. Use of a conversion plug adapter could result in an abnormal voltage or insufficient current capacity, leading to a fire. It may also result in an electric shock due to a grounding failure.

  If the plug shape does not match the wall outlet, request the user to perform power source installation work.

- Make sure the power cord is plugged into the wall outlet securely.

  If the power plug is left loose in the wall outlet, contact failure may occur, leading to abnormal heating of the power plug and a risk of fire.



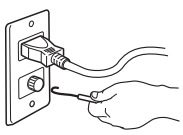
(2) Ground Connection

⚠WARNING

- Check whether the product is grounded properly.

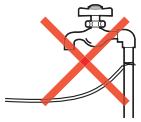
  If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.

  Connect power plug to grounded wall outlet.



⚠WARNING

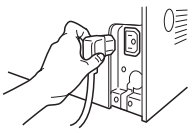
- Make sure of correct ground connection.
  If the grounding wire is connected to an inappropriate part, there is a risk of explosion or electric shock. Do not connect the grounding wire to any of the following parts:
  a. Gas pipe: Gas explosion or fire may result.
  b. Lightning rod: Risk of electric shock or fire during lightning.
  c. Grounding wire for telephone line: Risk of electric shock or fire during lightning.
  d. Water pipe and faucet: These parts do not serve as a ground connection because of a plastic part that is very often installed midway within the water pipe.

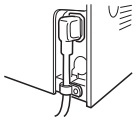


(3) Power Plug and Cord

⚠WARNING

- When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product.
  When a securing measure is provided, secure the cord with the fixture properly.
  If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.



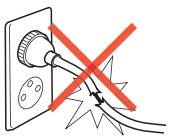


⚠WARNING

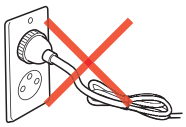
- Do not allow the power cord to be stepped on or pinched.
  Overheating may occur there, leading to a risk of fire.



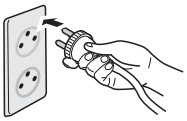
- Check whether the power cord is damaged. Check whether the sheath is damaged.
  If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KM. Using the damaged power cord may result in fire or electric shock.



- Do not bundle or tie the power cord.
  Overheating may occur there, leading to a risk of fire.

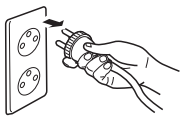


- Check whether dust is collected around the power plug and wall outlet.
  Using the power plug and wall outlet without removing dust may result in fire.



- Do not insert the power plug into the wall outlet with a wet hand.
  The risk of electric shock exists.

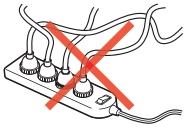
- When unplugging the power cord, grasp the plug, not the cable.
  The cable may be broken, leading to a risk of fire and electric shock.



(4) Wiring

⚠WARNING

- Never use multi-plug adapters to plug multiple power cords in the same outlet.
  If used, the risk of fire exists.



⚠WARNING

- When an extension cord is required, use one that meets the rated current, rated voltage, and the relevant safety standards of the country.

  Current that can be passed through the extension cable is limited and fire may result from the use of an inappropriate type of an extension cable.

  Do not use an extension cable reel with the cable taken up. Fire may result.



3.3.2 Installation Requirements

(1) Prohibited Installation Places

⚠WARNING

- Do not place the product near flammable materials or volatile materials that may catch fire.

  A risk of fire exists.



- Do not place the product in a place exposed to water such as rain.

  A risk of fire and electric shock exists.

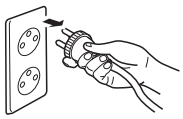
(2) When not Using the Product for a long time

⚠WARNING



- When the product is not to be used for an extended period of time (for holidays, for example), instruct the user to turn OFF the power switch and unplug the power cord from the power outlet.

  Dust collected around the power plug and outlet may cause fire.



(3) Ventilation

⚠CAUTION



- The product generates ozone gas during operation.

  If the smell of ozone is present in the following cases, ventilate the room.

  a. When the product is used in a poorly ventilated room

  b. When making a lot of copies

  c. When using multiple products at the same time



(4) Stability

⚠CAUTION



- Be sure to lock the caster stoppers.

  In the case of an earthquake, the product may slide, leading to an injury.

3.3.3 After Service

(1) Inspection before Servicing

⚠WARNING



- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure using the recommended personal safety equipment and using only the prescribed tools.

  Do not make any adjustment not described in the documentation.

  If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

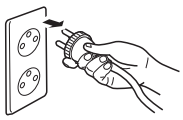




- Before conducting an inspection, be sure to disconnect the power plugs from the Main Body and Accessories (Options).

  When the power plug is inserted into the wall outlet, some units are still powered even if the POWER switch is turned OFF.

  A risk of electric shock exists.

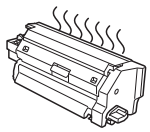


⚠CAUTION



- The area around the fixing unit is hot.

  You may get burned.



⚠CAUTION

- Do not leave the machine unattended during transportation, installation, and/or inspection.

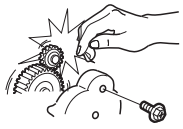
  If the machine is left unattended, face protrusions toward the wall or take other necessary precautions to prevent a user or other person in the area from stumbling over a protrusion of the machine or being caught by a cable, possibly causing a fall to the floor or other personal injury.

(2) Work Performed with the Product Powered On

⚠WARNING

- Take every care when making adjustments or performing an operation check with the product powered.

  If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.



- Take every care when servicing with the external cover detached.

  High-voltage exists around the drum unit. A risk of electric shock exists.

- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.

  A normally protected part may cause unexpected hazards.

⚠CAUTION

- Do not keep gazing at a lamp light during the service procedure with the product powered ON.
  Eyestrain may result.

(3) Safety Checkpoints

⚠WARNING

- When a product fault is reported from a user, check parts and repair the fault appropriately with safety in mind.
  A damaged product, personal injury, or fire may result.

- Whenever mounting an option on the machine, be attentive to the motion of the other workers performing the task.
  Another worker may be injured by a pinch point between the machine and the option.

- When mounting an option on the machine, be careful about the clearance between the machine and the option.
  You may be injured with your finger or hand pinched between the machine and the option.

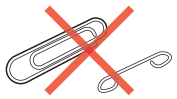
- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit.
  You may be injured by a falling part or unit.

⚠WARNING

- Check the external covers and frame for possible sharp edges, burrs, and damage.
  They can be a cause of injury during use or servicing.

- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs on the frame and parts.
  They may injure your hands or fingers.

- Do not allow any metal parts such as clips, staples, and screws to fall into the product.
  They can short internal circuits and cause electric shock or spark bursting into flame.



- Check wiring for pinched and any other damage.
  Current can leak, leading to a risk of electric shock or fire.

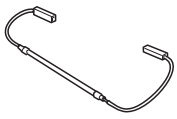
- Check high-voltage cables and sheaths for any damage.
  Damage may lead to product failure and/or the risk of fire.



- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.
  The laser light can enter your eye, leading to a risk of loss of eyesight.

- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.
  The laser light can enter your eye, leading to a risk of loss of eyesight.

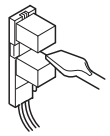
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.
  A risk of fire exists.



⚠WARNING

- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.

  If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.

  Damage may lead to the risk of electric shock or fire.



- Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)

  A risk of product trouble, personal injury, electric shock, and fire exists.



- Never use any flammable or combustible spray, fluid, gas, or similar substance in and around the product.

  Do not use any flammable or combustible dust spray, in particular, to clean the interior of the product.

  Fire or explosion may result.

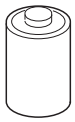


⚠CAUTION

- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.
  Toner remnants and dust may lead to product failure and/or the risk of fire.

- Check electrode units such as a charging corona unit for deterioration and signs of leakage.
  Damage may lead to product failure and/or the risk of fire.

- When replacing a battery, replace it with a new one as specified.
  Dispose of the used battery as instructed on its packaging or by local ordinance.
  There is a risk of explosion if the battery is replaced with an incorrect type.



(4) Handling of Consumables

⚠WARNING

- For handling of consumables (toner, developer, photoconductor, etc.) and their storage precautions, see MSDS.

(5) Handling of Service Materials

⚠CAUTION

- Handle with care according to MSDS.
  Use of solvent may involve explosion, fire, or personal injury.



3.4 FUSE

CAUTION
Double pole / neutral fusing

ATTENTION
Double pôle / fusible sur le neutre.

3.5 Used Batteries Precautions

3.5.1 ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

3.5.2 Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.
Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

3.5.3 France

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

3.5.4 Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

3.5.5 Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

3.5.6 Norway

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

3.6 Laser Safety

3.6.1 Laser Safety

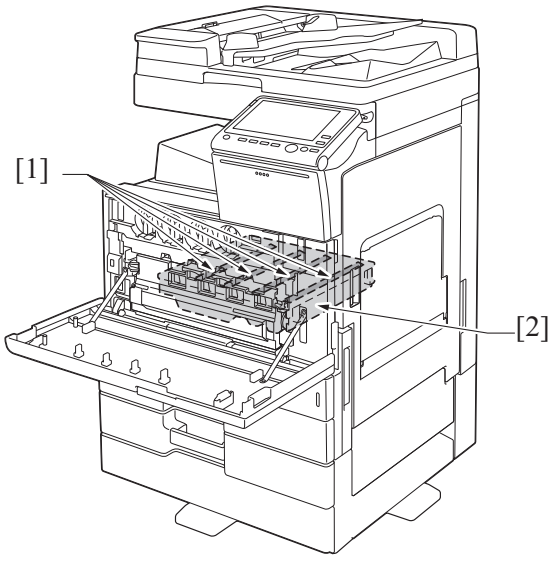
This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

3.6.2 Internal Laser Radiation

- This product employs a Class 3B laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the print head unit.
- The print head unit is NOT A FIELD SERVICEABLE ITEM. Therefore, the print head unit should not be opened under any circumstances.

semiconductor laser		
Maximum power of the laser diode	bizhub C658/C558/C458	25mW
	bizhub C368/C308/C258	15mW
Maximum average radiation power (*)	bizhub C658	15.1 µW
	bizhub C558	13.1 µW
	bizhub C458	10.1 µW
	bizhub C368	8.1 µW
	bizhub C308	7.1 µW
	bizhub C258	7.1 µW
Wavelength	bizhub C658/C558	775 to 800 nm
	bizhub C458/C368/C308/C258	770 to 800 nm

*at laser aperture of the Print Head Unit



[1]	Laser Aperture of the Print Head Unit	[2]	Print Head Unit

(1) U.S.A., Canada (CDRH Regulation)

- This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.
- The label shown on " A.3.6.3 Laser Safety Label" indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

⚠CAUTION

⚠ Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser		
Maximum power of the laser diode	bizhub C658/C558/C458	25 mW
	bizhub C368/C308/C258	15 mW
Wavelength	bizhub C658/C558	775 to 800 nm
	bizhub C458/C368/C308/C258	770 to 800 nm

(2) All Areas

⚠CAUTION

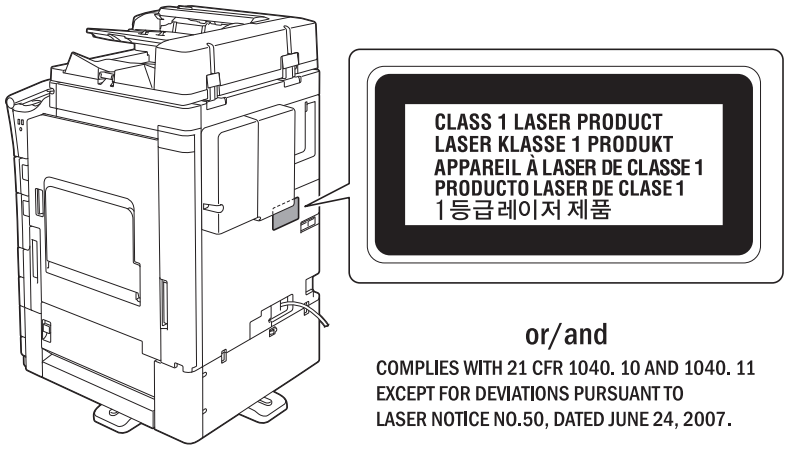
⚠ Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser		
Maximum power of the laser diode	bizhub C658/C558/C458	25 mW
	bizhub C368/C308/C258	15 mW
Wavelength	bizhub C658/C558	775 to 800 nm
	bizhub C458/C368/C308/C258	770 to 800 nm

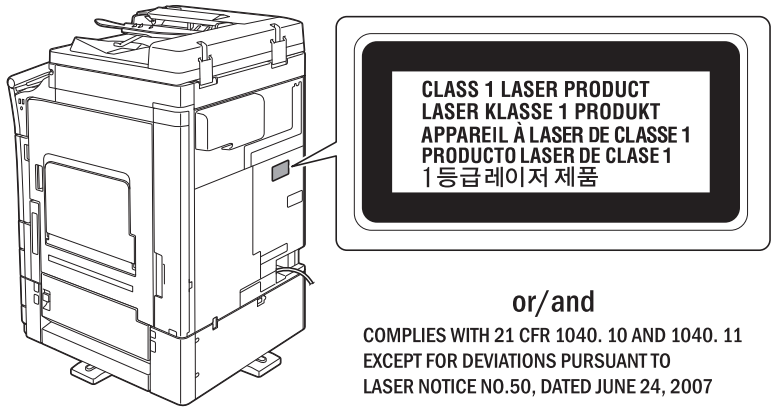
3.6.3 Laser Safety Label

A laser safety label is attached to the outside of the machine as shown below.

bizhub C658/C558/C458

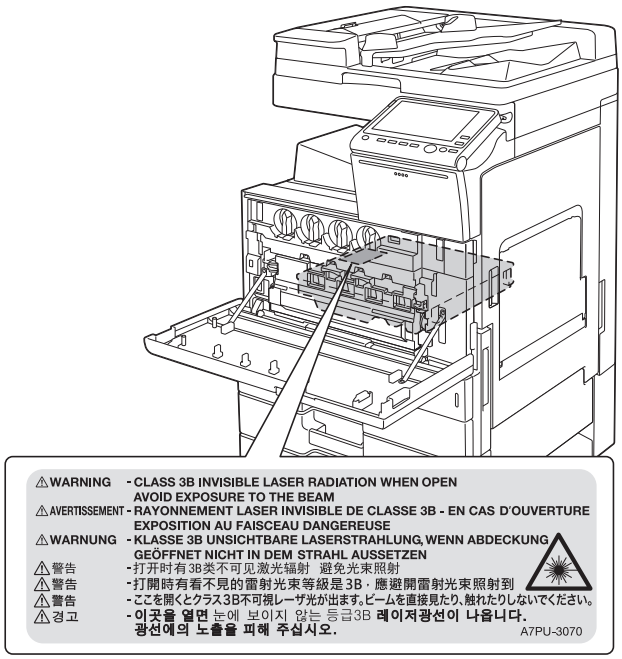


bizhub C368/C308/C258



3.6.4 Laser Caution Label

A laser caution label is attached to the inside of the machine as shown below.



3.6.5 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

- Be sure to unplug the power cord whenever performing a service job in the laser beam path (around the PH unit).
- If it is absolutely unavoidable to perform a service job with the power cord plugged in, strictly observe the following precautions:
  1. Before starting the service job, take off your watch, ring, and other reflective articles and be sure to wear laser protective goggles.
  2. Keep other personnel away from the work site.
  3. Do not bring any highly reflective tool into the laser beam path during the service procedure.

4. WARNING INDICATIONS ON THE MACHINE

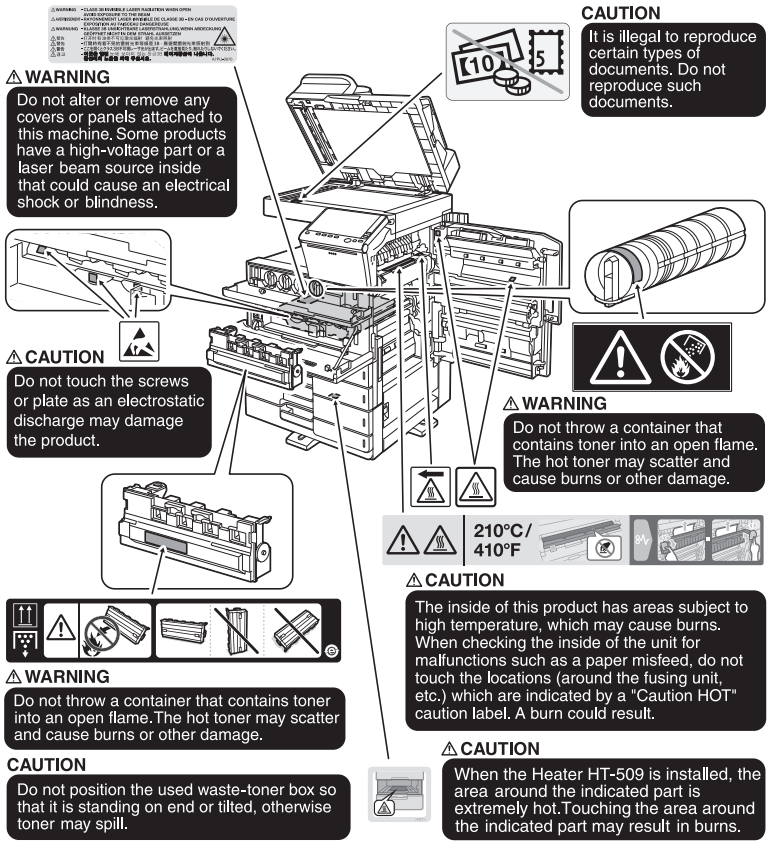
Caution labels shown are attached in some areas on/in the machine.
When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.

4.1 Warning indications inside the machine

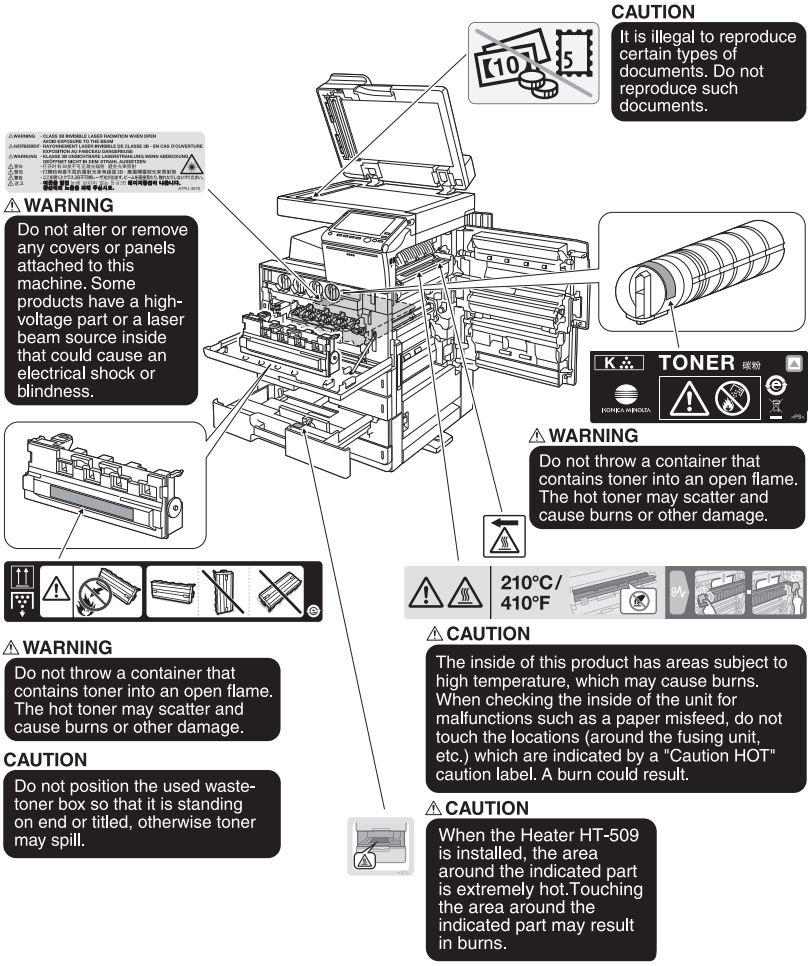
⚠CAUTION

You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our service office.

bizhub C658/C558/C458

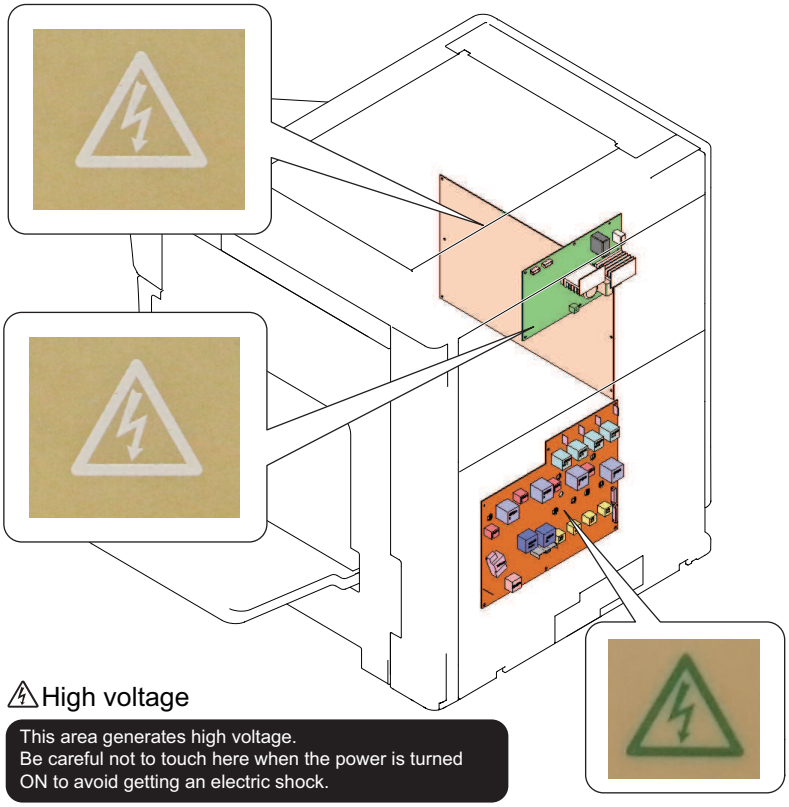


bizhub C368/C308/C258



4.2 Warning indications on the boards

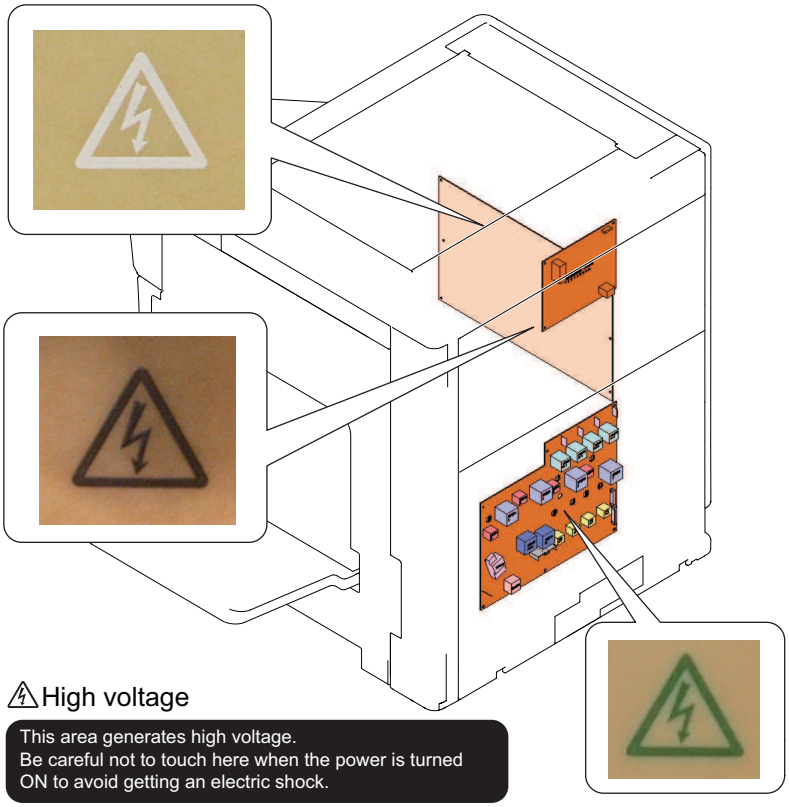
bizhub C658/C558



⚠High voltage

This area generates high voltage.
Be careful not to touch here when the power is turned ON to avoid getting an electric shock.

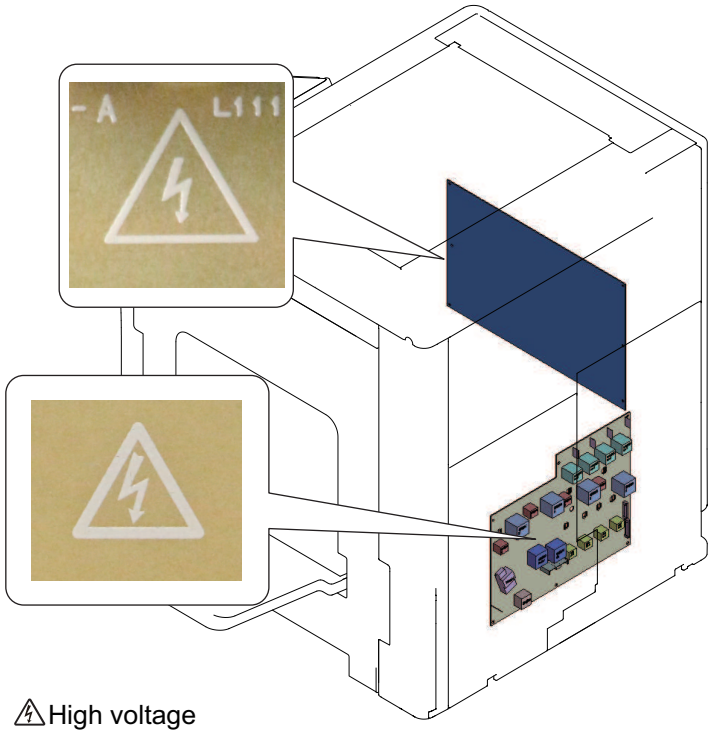
bizhub C458



⚠High voltage

This area generates high voltage.
Be careful not to touch here when the power is turned ON to avoid getting an electric shock.

bizhub C368/C308/C258



⚠High voltage

This area generates high voltage.
Be careful not to touch here when the power is turned ON to avoid getting an electric shock.

5. MEASURES TO TAKE IN CASE OF AN ACCIDENT

1. If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KM must be notified.
3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by KM.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

B NOTATION OF THE CONTENTS

1. PRECAUTION ON HANDLING THIS MANUAL

CAUTION

- **Use of this manual should be strictly supervised to avoid disclosure of confidential information.**

2. PRODUCT NAME

In this manual, each of the products is described as follows:

1	bizhub C658/C558/C458/C368/C308/C258	Main body
2	Microsoft Windows 7	Windows 7
3	Microsoft Windows 8.1	Windows 8.1
4	Microsoft Windows 10	Windows 10
5	When the description is made in combination of the OS's mentioned above	Windows 7/8.1/10

3. BRAND NAME

TRADEMARKS OF OTHER COMPANIES

- The company names and product names mentioned in this manual are the brand name or the registered trademark of each company.

OWN TRADEMARKS

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4. FEEDING DIRECTION

- When the long side of the paper is parallel with the feeding direction, it is called short edge feeding. The feeding direction which is perpendicular to the short edge feeding is called the long edge feeding.
- Short edge feeding will be identified with [S (abbreviation for Short edge feeding)] on the paper size. No specific notation is added for the long edge feeding. When the size has only the short edge feeding with no long edge feeding, [S] will not be added to the paper size.

Sample notation

Paper size	Feeding direction	Notation
A4	Long edge feeding	A4
	Short edge feeding	A4S
A3	Short edge feeding	A3

5. Note for the Specifications

- These specifications are subject to change without notice.

C PRODUCT SPECIFICATIONS

1. bizhub C368/C308/C258

1.1 Type

Type	Desktop/console * scanner/printer
Control panel	9-inch TFT color LCD WVGA (electrostatic touch panel)
Printing process	laser electrostatic process copying system
Photo conductor	OPC drum: KM-91A
Scanning resolution (Main scanning direction)	600 dpi
Scanning resolution (Sub scanning direction)	600 dpi
Exposure lamp	LED light (10W or under)
Original glass	Stationary (Mirror scan)
Original scanning	• Mirror scanning CCD optical system • Sheet through system when DF-629/DF-704 is used
Registration	Rear left edge
Paper feeding separation system (Manual bypass)	Small roller separation system with torque limiter
Paper feeding separation system (Tray 1)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 2)	Roller separation system with pick-up mechanism
Exposure system (Exposing system)	1-beam LD exposing system
Exposure system (Scan system)	Polygon mirror scan system
Exposure resolution (Main scanning direction)	Equivalent to 1800 dpi
Exposure resolution (Sub scanning direction)	600 dpi
Developing system	HMT developing system
Charging system	Roller charging system
Neutralizing system	Red LED system
Image transfer system	Belt transfer system (1st)/roller transfer system (2nd)
Paper separating system	Combination of curvature, separating claws, and bias needle system
Fusing system	Belt fusing
Heating system	Halogen lamp

*: Only when the optional paper feed cabinet/desk is installed.

1.2 Function

Types of original	Sheets, Books, Three-dimensional objects	
Max. original size	A3 or 11 x 17	
Max. original weight	Max. 2 kg	
Multiple copies	1 to 9999	
Warm-up time (at an ambient temperature of 23° C/73.4° F and rated source voltage)	Period from the time Main Power Switch was turned on to the time this machine is ready for printing.	
	bizhub C368	20 sec. or less
	bizhub C308	18 sec. or less
	bizhub C258	18 sec. or less
Image loss	Copy	• Leading edge: 4.2 mm (3/16 inches) (Thin Paper: 5 mm (3/16 inches)) • Trailing edge: 3 mm (1/8 inches) • Rear edge: 3 mm (1/8 inches) • Front edge: 3 mm (1/8 inches)
	PC print	• Leading edge: 4.2 mm (3/16 inches) • Trailing edge: 4.2 mm (3/16 inches) • Rear edge: 4.2 mm (3/16 inches) • Front edge: 4.2 mm (3/16 inches)
First copy time (Tray1/2 A4 or 8 $^{1}/_{2}$ x 11, full size)	bizhub C368	• 5.3 sec. or less (Black print) • 6.9 sec. or less (Color print)
	bizhub C308	• 5.6 sec. or less (Black print) • 7.3 sec. or less (Color print)
	bizhub C258	• 6.1 sec. or less (Black print) • 7.5 sec. or less (Color print)
Processing speed	Plain paper (black, full color)	bizhub C368: 166.4 mm/s

		bizhub C308: 145.8 mm/s
		bizhub C258: 145.8 mm/s
	Thick 1 to 4, Special paper	83.2 mm/s
Copying speed for multi-copy cycle (A4 or 8 1/2 x 11, plain paper)	Black, Full color	bizhub C368: 1-sided: 36 sheets/min., 2-sided: 36 sheets/min.
		bizhub C308: 1-sided: 30 sheets/min., 2-sided: 30 sheets/min.
		bizhub C308: 1-sided: 25 sheets/min., 2-sided: 25 sheets/min.
Fixed zoom ratios	Full Size	×1.000
	Reduction	×0.500, ×0.707, ×0.816, ×0.866 (Japan, Europe) ×0.500, ×0.647, ×0.733, ×0.785 (North America)
	Enlargement	×1.154, ×1.224, ×1.414, ×2.000 (Japan, Europe) ×1.214, ×1.294, ×1.545, ×2.000 (North America)
	Zoom ratios memory	3 memories
Variable zoom ratios	x0.250 to x4.000	in 0.001 increments
Paper size	Tray 1	A3 to B5, A5S, 16K, 8K 11×17 to $8^1/_2$×11, $8^1/_2$×11S, $5^1/_2$×$8^1/_2$S, 8×13
	Tray 2	A3 to B5, A5S, A3 Wide, SRA3, 16K, 8K $12^1/_4$×12 to $8^1/_2$×11, $8^1/_2$×11S, $5^1/_2$×$8^1/_2$S, 8×13
	Manual bypass tray	A3 to A6S, A3 Wide, SRA3, Postcard (100 mm×148 mm (4 inches × 6 inches)), 16K, 8K $12^1/_4$×18 to $5^1/_2$×$8^1/_2$, $5^1/_2$×$8^1/_2$S, 4×6S, 8×13
Copy exit tray capacity *1	Plain paper	250 sheets
	Thick paper	10 sheets
	OHP film	1 sheet
	Thin Paper	100 sheets
External memory function	Supported external memory devices	• USB flash memory compatible with the USB (1.1/2.0) interface • FAT32-formatted memory device • Not including security features (Possible to turn OFF security features) • Memory capacity of 32 GB or less recommended. *2 • A USB flash memory that appears as multiple drives on a computer cannot be used.
Memory capacity	Main memory	2 GB
	HDD	250 GB

- *1: Copy exit tray has no on-board sensor to detect paper capacity.
- *2: Possible to be non-operational products.

1.3 Paper

Type		Paper source (maximum tray capacity)		
		Tray 1	Tray 2	Manual bypass tray
Copy paper type	Thin paper (52 to 59 g/m^2, 13 13/16 to 15 11/16 lb) *1 *2	○ (500 sheets)	○ (500 sheets)	-
	Plain paper (60 to 90 g/m^2, 15 15/16 to 23 15/16 lb)	○ (500 sheets)	○ (500 sheets)	○ (150 sheets)
	Translucent paper	-	-	-
	OHP film *3	-	-	○ (20 sheets)
	Thick 1 (91 to 120 g/m^2, 24 3/16 to 31 15/16 lb)	○ (150 sheets)	○ (150 sheets)	
	Thick 1+ (121 to 157 g/m^2, 32 3/16 to 41 3/4 lb)			
	Thick 2 (158 to 209 g/m^2, 42 to 55 9/16 lb)			
	Thick 3 (210 to 256 g/m2, 55 7/8 to 68 1/8 lb) *2			
	Thick 4 (257 to 300 g/m2, 68 3/8 lb to 79 13/16 lb) *2 *4	-	-	
	Postcard	-	-	
	Envelope	-	-	○ (10 sheets)
	Label sheet	-	-	○ (20 sheets)
	Index paper	-	-	○ (20 sheets)

Type		Paper source (maximum tray capacity)		
		Tray 1	Tray 2	Manual bypass tray
	Long size paper (127 to 210 g/m2, 33 13/16 to 55 7/8 lb)	-	-	○ (10 sheets) *5
Copy paper dimensions	Width	139.7 mm to 297 mm (5 1/2 inches to 11 11/16 inches)	139.7 mm to 320 mm (5 1/2 inches to 12 5/8 inches)	90 mm to 320 mm (3 9/16 inches to 12 5/8 inches)
	Length	182 mm to 431.8 mm (7 3/16 inches to 17 inches)	182 mm to 457.2 mm (7 3/16 inches to 18 inches)	139.7 mm to 12000 mm (5 1/2 inches to 472 7/16 inches)
	Long size paper (Width x Length)	-	-	210 mm to 297 mm × 457.3 mm to 1200 mm (8 1/4 inches to 11 11/16 inches × 18 inches to 47 1/4 inches) *5

- *1: Thin paper smaller than A5 size cannot be conveyed.
- *2: Second side is an image guarantee out.*
- *3: Black print only.
- *4: Only for feeding landscape oriented A4/ Letter paper and A3/ Ledger
- *5: Only for PC print mode. And MK-730 is necessary for PC print.

NOTE

- **OHP film, thick 4, envelope, label sheet, index paper and long size paper cannot be fed for duplex printing.**

1.4 Material

Parts name		Number of field standard printed pages	Name
Toner cartridge/C	bizhub C368	26,000 sheets	TN324C
	bizhub C308		
	bizhub C258		
Toner cartridge/M	bizhub C368	26,000 sheets	TN324M
	bizhub C308		
	bizhub C258		
Toner cartridge/Y	bizhub C368	26,000 sheets	TN324Y
	bizhub C308		
	bizhub C258		
Toner cartridge/K	bizhub C368	28,000 sheets	TN324K
	bizhub C308		
	bizhub C258		
Drum unit (C/M/Y)	bizhub C368	90,000 sheets	DR313
	bizhub C308	75,000 sheets	
	bizhub C258	55,000 sheets	
Drum unit/K	bizhub C368	120,000 sheets	DR313K
	bizhub C308	120,000 sheets	
	bizhub C258	90,000 sheets	
Drum unit/K	bizhub C368	225,000 sheets	DR315K
	bizhub C308	225,000 sheets	
	bizhub C258	170,000 sheets	
Developing unit/C	bizhub C368	600,000 sheets	DV313C
	bizhub C308	600,000 sheets	
	bizhub C258	600,000 sheets	
Developing unit/M	bizhub C368	600,000 sheets	DV313M
	bizhub C308	600,000 sheets	
	bizhub C258	600,000 sheets	
Developing unit/Y	bizhub C368	600,000 sheets	DV313Y
	bizhub C308	600,000 sheets	
	bizhub C258	600,000 sheets	
Developing unit/K	bizhub C368	600,000 sheets	DV313K
	bizhub C308	600,000 sheets	
	bizhub C258	600,000 sheets	
Waste toner box	bizhub C368	33,000 sheets	WX-103
	bizhub C308	30,000 sheets	
	bizhub C258	30,000 sheets	

- This machine has the field standard yield which indicates the available print numbers estimated by the quantities and usage of the unit in the market standard job mode. Number of field standard printed pages is described as replacement timing of each consumable in this manual. Yields for each preventative maintenance unit will differ depending on actual usage.

1.5 Print volume

1.5.1 bizhub C368

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	1,160 prints/month	2,040 prints/month	2,670 prints/month
	Black	4,640 prints/month	4,760 prints/month	6,230 prints/month
Print volume (prints/month) Maximum	Color	5,000 prints/month	5,000 prints/month	5,000 prints/month
	Black	19,000 prints/month	19,000 prints/month	19,000 prints/month

1.5.2 bizhub C308

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	780 prints/month	1,325 prints/month	2,010 prints/month
	Black	3,120 prints/month	3,975 prints/month	4,690 prints/month
Print volume (prints/month) Maximum	Color	3,000 prints/month	3,000 prints/month	3,000 prints/month
	Black	11,000 prints/month	11,000 prints/month	11,000 prints/month

1.5.3 bizhub C258

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	520 prints/month	1,025 prints/month	1,530 prints/month
	Black	2,080 prints/month	3,075 prints/month	3,570 prints/month
Print volume (prints/month) Maximum	Color	2,000 prints/month	2,000 prints/month	2,000 prints/month
	Black	7,000 prints/month	7,000 prints/month	7,000 prints/month

1.6 Machine specification

Power requirement	Voltage:	AC 100 V	AC 110 V	AC 120 V	AC 220-240 V
	Current:	15 A	15 A	12 A	8 A
	Frequency:	50/60 Hz	60 Hz	60 Hz	50/60 Hz
Max. power consumption		1500 W			1580 W
Power consumption in each mode	Standby		126 W or less		
	Power save	Low power mode	100 W or less		
		Sleep mode	Typ 0.5 W *4		
	Sub power OFF mode		Typ 0.5 W		
	ErP auto power off mode		Typ 0.5 W		
Dimension	615 mm *1 (W) x 685 mm (D) x 779 mm (H) *2 (24 3/16 inches *1 (W) x 26 15/16 inches (D) x 30 11/16 inches (H) *2)				
Space requirement	937 mm (W) x 1,214 mm (D) x 779 mm (H) *3 (36 7/8 inches (W) x 47 13/16 inches (D) x 30 11/16 inches (H) *3)				
Weight	Main body	Approx. 85 kg (187 3/8 lb) (without toner cartridge)			

*1: Width when the manual bypass tray is closed
*2: Height up to the original glass
*3: Height up to the original glass with the manual bypass tray and paper trays pulled out
*4: When the following is selected: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode] -> [High].

1.7 Operating environment

Temperature	10 to 30° C / 50 to 86° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15 to 85% (Relative humidity with a fluctuation of 10%/h)
Levelness	Difference between front and back, right and left should be 1 degree or under.

1.8 Print function

First print time (Tray1/2, A4 or 8 $^{1}/_{2}$x11, full size)	bizhub C368	• 5.3 sec. or less (Black print) • 6.9 sec. or less (Color print)
	bizhub C308	• 5.6 sec. or less (Black print) • 7.3 sec. or less (Color print)
	bizhub C258	• 6.1 sec. or less (Black print) • 7.5 sec. or less (Color print)
Printing speed for multi-print cycle (A4 or 8 1/2 x 11, plain paper, Black mode, Full color mode)	bizhub C368: 1-sided: 36 sheets/min., 2-sided: 36 sheets/min.	
	bizhub C308: 1-sided: 30 sheets/min., 2-sided: 30 sheets/min.	
	bizhub C258: 1-sided: 25 sheets/min., 2-sided: 25 sheets/min.	

Print resolution	• Multivalued: Equivalent to 1,800 dpi in main scanning direction x 600 dpi in sub scanning direction • Binary: Equivalent to 1,200 dpi in main scanning direction x 1,200 dpi in sub scanning direction
Printer language	PCL5e/c Emulation, PCL 6 (XL Version 3.0) Emulation, PostScript 3 Emulation (3016), XPS ver.1.0, BMLinkS
Supported operating systems (server)	• Windows server 2008, Windows server 2008 64-bit, Windows server 2008 R2 • Windows Server 2012, Windows Server 2012 R2
Supported operating systems (client)	• Windows 7, Windows 7 64-bit, Windows 8, Windows 8 64-bit • Mac OSX 10.8, Mac OSX 10.9, Mac OSX 10.10, Mac OSX 10.11 • Red Hat Enterprise, Linux
Printer driver (PCL6)	• Windows 7, Windows 7 64-bit, Windows 8, Windows 8 64-bit, Windows 8.1, Windows 8.1 64-bit • Windows Server 2008, Windows Server 2008 64-bit, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2
Printer driver (PostScript 3)	• Windows 7, Windows 7 64-bit, Windows 8, Windows 8 64-bit, Windows 8.1, Windows 8.1 64-bit • Windows Server 2008, Windows Server 2008 64-bit, Windows Server 2008 R2, Windows Server 2012 • Mac OSX 10.8 PPD+PDE, Mac OSX 10.9 PPD+PDE, Mac OSX 10.10 PPD+PDE, Mac OSX 10.11 PPD+PDE • Red Hat Enterprise Linux PPD
Printer driver (XPS)	• Windows 7, Windows 7 64-bit, Windows 8, Windows 8 64-bit, Windows 8.1, Windows 8.1 64-bit • Windows Server 2008, Windows Server 2008 64-bit, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2
Work memory	2 GB
Host interface	Ethernet 10Base-T/100Base-TX/1000Base-T, USB1.1/2.0
Built-in fonts (PCL)	European 80 fonts
	Japanese: HGMinchoL, HGPMinchoL, HGGothicB, HGPGothicB
Built-in fonts (PostScript 3 Emulation)	European 137 fonts
	Japanese: HGMinchoL, HGGothicB

1.9 Scan function

Scannable scan range	Conforms to the copy function
Scanning resolution	• Push: 200 dpi/300 dpi/400 dpi/600 dpi • Pull: 100 dpi/200 dpi/300 dpi/400 dpi/600 dpi
Scanning speed	• DF-629: 80 pages/min *1 • DF-704: 80 pages/min *1
Scanning size (scanner glass) *3	Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) (Max.)
Scanning size (DF)*2, *3	• Width 297 mm x Length 1,000 mm (Width 11 11/16 inches x Length 39 3/8 inches) (Max.): 400 dpi or less • Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) (Max.): 600 dpi
Interface	Ethernet (1000Base-T/100Base-TX/10Base-T)
Communication protocol	TCP/IP (FTP, SMB, SMTP, WebDAV) (IPv4/IPv6)
Supported operating system	Windows 7, Windows 7 64-bit, Windows 8.1, Windows 8.1 64-bit, Windows 10, Windows 10 64-bit
Driver	• TWAIN Driver • HDD TWAIN Driver
Function	Scan to E-mail, Scan to SMB, Scan to FTP, Scan to WebDAV, Scan to Web service (WSD scan), TWAIN scan, Scan server sending, Panel link scan
Output method	TIFF, PDF, Compact PDF, PDF/A, Linearized PDF, JPEG, XPS Compact XPS, OOXML (pptx, xlsx, docx), Searchable PDF
Output page setting	Specified number of separate pages (1 to 999 pages), Multi page

• *1: When an optional unit is installed

1.10 Web browser function

• Main specifications of the web browser installed are as follows.

Browser engine	Chromium Browser
Supported protocol	• HTTP (HTTP 0.9/1.0/1.1) • HTTPS • TCP/IP
Supported markup language	• HTML 4.01 • A part of HTML 5.0 • XHTML 1.1/Basic
Style sheet	• CSS3
Script language	• JavaSrcript 1.7 • ECMAScript (3rd/5th/5.1) • Ajax*1
DOM	• Level 1

	• Level 2
File type	• JPEG • BMP • PNG • GIF • Animation GIF • PDF
Supported SSL/TLS version	• SSL3.0 • TLS1.0
Supported character code	• Japanese (Shift_JIS) • Japanese (ISO-2022-JP) • Japanese (EUC-JP) • Chinese Simplified (GB2312) • Chinese Traditional (Big5) • Western European (ISO-8859-1) • Unicode (UTF-8)
PDF viewer	• Adobe Reader LE • PDFium

- *1: Limited to the JavaScript-supported range only.

NOTE

- **Using the web browser function available with this machine, the contents on the Internet can be accessed from the control panel. Users are responsible for the contents that they access, download, or upload as well as the contents of other communication. Users shall follow the rules of their company and laws of their country. Konica Minolta, Inc. and its group companies accept no responsibility for the users' use of the Internet.**

NOTE

- **When using a web browser function, 26 dots from the perimeter of the touch panel area is not sensitive area. It is possible to narrow the non-sensitive area by using [Software Switch Setting] in Service Mode as with followings. However, the touch panel cannot detect touch operation correctly.**
  - **Switch No.143 [00000000] at Bit assignment/[00] at HEX assignment non-sensitive area: 26 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000001] at Bit assignment/[01] at HEX assignment non-sensitive area: 16 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000010] at Bit assignment/[02] at HEX assignment non-sensitive area: 9 dots from the perimeter of the touch panel**

2. bizhub C658/C558/C458

2.1 Type

Type	Desktop/console * scanner/printer
Printing process	Laser electrostatic process copying system
Photo conductor	OPC drum: KM-91A
Scanning resolution	600 dpi
Exposure lamp	LED light (10W or under)
Original glass	Stationary (Mirror scan)
Original scanning	• Mirror scanning CCD optical system • Sheet through system when DF is used
Registration	Rear left edge
Paper feeding separation system (Manual bypass)	Small roller separation system with torque limiter
Paper feeding separation system (Tray 1)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 2)	Roller separation system with pick-up mechanism
Exposure system (Exposing system)	• bizhub C658/C558: 2 beam LD exposing system • bizhub C458: 1 beam LD exposing system
Exposure system (Scan system)	Polygon mirror scan system
Exposure resolution (Main scanning direction)	Equivalent to 1800 dpi
Exposure resolution (Sub scanning direction)	600 dpi
Developing system	Dry 2 components developing method, HMT developing system
Charging system	Roller charging system
Neutralizing system	Red LED system
Image transfer system	Belt transfer system (1st)/roller transfer system (2nd)
Paper separating system	Combination of curvature, separating claws, and bias needle system
Fusing system	• bizhub C658/C558: IH fusing • bizhub C458: Belt fusing
Heating system	• bizhub C658/C558: IH heating • bizhub C458: Halogen lamp

*: Only when the optional paper feed cabinet/desk is installed.

2.2 Function

Types of original	Sheets, Books, Three-dimensional objects	
Max. original size	A3 or 11 x 17	
Max. original weight	Max. 2 kg	
Multiple copies	1 to 9999	
Warm-up time (at an ambient temperature of 23° C/73.4° F and rated source voltage)	Period from the time Main Power Switch was turned on to the time this machine is ready for printing.	
	bizhub C658	• 22 sec. or less (Black print) • 35 sec. or less (Color print)
	bizhub C558 (For Europe models)	• 22 sec. or less
	bizhub C558 (For North America models)	• 28 sec. or less
	bizhub C558 (For Japan and Taiwan models)	• 23 sec. or less (Black print) • 25 sec. or less (Color print)
	bizhub C458	• 25 sec. or less
Image loss	Copy	• Leading edge: 4.2 mm (3/16 inches) (Thin Paper: 5 mm (3/16 inches)) • Trailing edge: 3 mm (1/8 inches) • Rear edge: 3 mm (1/8 inches) • Front edge: 3 mm (1/8 inches)
	PC print	• Leading edge: 4.2 mm (3/16 inches) • Trailing edge: 4.2 mm (3/16 inches) • Rear edge: 4.2 mm (3/16 inches) • Front edge: 4.2 mm (3/16 inch)
First copy time (Tray1/2 A4 or 8 $^{1}/_{2}$ x 11, full size)	bizhub C658	• 3.0 sec. or less (Black print) • 4.0 sec. or less (Color print)
	bizhub C558	• 3.5 sec. or less (Black print) • 4.4 sec. or less (Color print)
	bizhub C458	• 4.0 sec. or less (Black print)

		• 5.1 sec. or less (Color print)
Process speed	Plain paper (Black print, Color print)	bizhub C658: 290 mm/s
		bizhub C558: 252.2 mm/s
		bizhub C458: 211.8 mm/s
Copying speed for multi-copy cycle (A4 or 8 1/2 x 11, plain paper)	Black print, Color print	bizhub C658: 1-sided: 65 sheets/min., 2-sided: 65 sheets/min.
		bizhub C558: 1-sided: 55 sheets/min., 2-sided: 55 sheets/min.
		bizhub C458: 1-sided: 45 sheets/min., 2-sided: 45 sheets/min.
Fixed zoom ratios	Full size	×1.000
	Reduction	×0.500, ×0.707, ×0.816, ×0.866 (Japan, Europe) ×0.500, ×0.647, ×0.733, ×0.785 (North America)
	Enlargement	×1.154, ×1.224, ×1.414, ×2.000 (Japan, Europe) ×1.214, ×1.294, ×1.545, ×2.000 (North America)
	Zoom ratios memory	3 memories
Variable zoom ratios	x0.250 to x4.000	in 0.001 increments
Paper size	Tray 1	A3 to B5, A5S, 16K, 8K 11×17 to $8^1/_2$×11, $8^1/_2$×11S, $5^1/_2$×$8^1/_2$S, 8×13
	Tray 2	A3 to B5, A5S, A3 wide, SRA3, 16K, 8K $12^1/_4$×12 to $8^1/_2$×11, $8^1/_2$×11S, $5^1/_2$×$8^1/_2$S, 8×13
	Manual bypass tray	A3 to A6S, A3 Wide, SRA3, Postcard (100 mm×148 mm (4 inches × 6 inches)), 16K, 8K $12^1/_4$×18 to $5^1/_2$×$8^1/_2$, $5^1/_2$×$8^1/_2$S, 4×6S, 8×13
Copy exit tray capacity	Plain paper	250 sheets
	Thick paper	10 sheets
	OHP film	1 sheet
	Thin paper	100 sheets
External memory function	Supported external memory devices	• USB flash memory compatible with the USB (1.1/2.0) interface • FAT32-formatted memory device • Not including security features (Possible to turn OFF security features) • Memory capacity of 1 GB to 2 GB recommended. * • A USB flash memory that appears as multiple drives on a computer cannot be used.
Memory capacity	Main memory	4GB
	HDD	250 GB

• *: Possible to be non-operational products.

2.3 Paper

Type		Paper source (maximum tray capacity)		
		Tray 1	Tray 2	Manual bypass tray
Copy paper type	Thin paper (52 to 59 g/m^2, 13 13/16 to 15 11/16 lb) *1 *2	○ (500 sheets)	○ (500 sheets)	-
	Plain paper (60 to 90 g/m^2, 15 15/16 to 23 15/16 lb)	○ (500 sheets)	○ (500 sheets)	○ (150 sheets)
	Translucent paper	-	-	-
	OHP film *3	-	-	○ (20 sheets)
	Thick 1 (91 to 120 g/m^2, 24 3/16 to 31 15/16 lb)	○ (150 sheets)	○ (150 sheets)	
	Thick 1+ (121 to 157 g/m^2, 32 3/16 to 41 3/4 lb)			
	Thick 2 (158 to 209 g/m^2, 42 to 55 9/16 lb)			
	Thick 3 (210 to 256 g/m2, 55 7/8 to 68 1/8 lb) *2			
	Thick 4 (257 to 300 g/m2, 68 3/8 lb to 79 13/16 lb) *2 *4	-	-	
	Postcard	-	-	
	Envelope	-	-	○ (10 sheets)
	Label sheet	-	-	○ (20 sheets)
	Index paper	-	-	○ (20 sheets)

Type		Paper source (maximum tray capacity)		
		Tray 1	Tray 2	Manual bypass tray
	Long size paper (127 to 210 g/m2, 33 13/16 to 55 7/8 lb)	-	-	○ (10 sheets) *5
Copy paper dimensions	Width	139.7 mm to 297 mm (5 1/2 inches to 11 11/16 inches)	139.7 mm to 320 mm (5 1/2 inches to 12 5/8 inches)	90 mm to 320 mm (3 9/16 inches to 12 5/8 inches)
	Length	182 mm to 431.8 mm (7 3/16 inches to 17 inches)	182 mm to 457.2 mm (7 3/16 inches to 18 inches)	139.7 mm to 1,200 mm (5 1/2 inches to 47 1/4 inches)
	Long size paper (Width x Length)	-	-	210 mm to 297 mm × 457.3 mm to 1,200 mm (8 1/4 inches to 11 11/16 inches × 18 inches to 47 1/4 inches) *5

- *1: Thin paper smaller than A5 size cannot be conveyed.
- *2: Second side is an image guarantee out.
- *3: Black print only.
- *4: Only for feeding landscape oriented A4/ Letter paper and A3/ Ledger
- *5: MK-730 is necessary

NOTE

- **OHP film, thick 4, envelope, label sheet, index paper and long size paper cannot be fed for duplex printing.**

2.4 Material

Parts name		Number of field standard printed pages	Name
Toner cartridge (C/M/Y)		26,000 sheets	TN514
Toner cartridge (K)		28,000 sheets	
Drum unit (C/M/Y)	bizhub C658	105,000 sheets	DR313
	bizhub C558	100,000 sheets	
	bizhub C458	85,000 sheets (JP), 100,000 sheets (US/ EU)	
Drum unit (K)	bizhub C658	150,000 sheets	DR313K
	bizhub C558	140,000 sheets	
	bizhub C458	135,000 sheets	
Drum unit (K)	bizhub C658	266,000 sheets	DR315K
	bizhub C558	251,000 sheets	
	bizhub C458	242,000 sheets	
Developing unit	bizhub C658/C558	595,000 sheets (JP), 950,000 sheets (US), 600,000 sheets (EU)	DV619
	bizhub C458	580,000 sheets (JP), 950,000 sheets (US), 600,000 sheets (EU)	
Waste toner box		40,000 sheets	WX-103

- This machine has the field standard yield which indicates the available print numbers estimated by the quantities and usage of the unit in the market standard job mode. Number of field standard printed pages is described as replacement timing of each consumable in this manual. Yields for each preventative maintenance unit will differ depending on actual usage.

2.5 Print volume

2.5.1 bizhub C658

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	3,500 prints/month	4,700 prints/month	4,800 prints/month
	Black	13,800 prints/month	9,600 prints/month	11,300 prints/month
Print volume (prints/month) Maximum *	Color	60,000 prints/month	99,000 prints/month	90,000 prints/month
	Black	240,000 prints/month	201,000 prints/month	210,000 prints/month

- *: Range of guaranteed performance for paper feeding

2.5.2 bizhub C558

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	2,900 prints/month	4,100 prints/month	4,200 prints/month
	Black	11,400 prints/month	8,200 prints/month	9,700 prints/month
Print volume (prints/month) Maximum *	Color	50,000 prints/month	83,000 prints/month	75,000 prints/month
	Black	200,000 prints/month	167,000 prints/month	175,000 prints/month

- *: Range of guaranteed performance for paper feeding

2.5.3 bizhub C458

Items		Japan	North America	Europe
Print volume (prints/month) Average	Color	1,900 prints/month	3,100 prints/month	3,200 prints/month
	Black	7,500 prints/month	6,200 prints/month	7,300 prints/month
Print volume (prints/month) Maximum *	Color	40,000 prints/month	66,000 prints/month	60,000 prints/month
	Black	160,000 prints/month	134,000 prints/month	140,000 prints/month

- *: Range of guaranteed performance for paper feeding

2.6 Machine specification

Power requirement	Voltage	AC 100 V		AC 110 V		AC 120 V		AC220 V to 240 V	
	Current	bizhub C658	20 A	bizhub C658	20 A	bizhub C658	16 A/12A	bizhub C658	10 A
		bizhub C558/ C458	15 A	bizhub C558/ C458	15 A	bizhub C558/ C458	12 A	bizhub C558/ C458	9 A
	Frequency	50/60 Hz		60 Hz		60 Hz		50/60 Hz	
Max. power consumption		bizhub C658	2,000 W or less	bizhub C658	2,200 W or less	bizhub C658	1,920 W or less	bizhub C658	2,100 W or less
		bizhub C558/ C458	1,500 W or less	bizhub C558/ C458	1,650 W or less	bizhub C558/ C458	1,650 W or less	bizhub C558/ C458	2,000 W or less
Power consumption in each mode		Standby				255 W or less *3			
		Power save	Low power mode			100 W or less *3			
			Sleep mode (not reduce) *1			7 W *3			
			Sleep mode (reduce) *1			0.7 W *3			
			Sleep mode (reduce in high volume) *1			0.5 W *3			
		Sub power OFF mode	Sleep mode (not reduce) *2			7 W *3			
			Sleep mode (reduce) *2			0.7 W *3			
			Sleep mode (reduce in high volume) *2			0.5 W *3			
		ErP auto power off mode				0.5 W			
Dimension		615 mm (W) *4 x 693 mm (D) x 961 mm (H) *5 (24 3/16 inches (W) *4 x 27 5/16 inches (D) x 37 13/16 inches (H) *5)							
Space requirement		937 mm (W) x 1,267 mm (D) x 1,314.5 mm (H) *6 (36 7/8 inches (W) x 49 7/8 inches (D) x 51 3/4 inches (H) *6)							
Weight (main body + DF)		Approx. 110 kg (242 1/2 lb) (main body 89 kg (196 3/16 lb) + DF 21 kg (42 1/2 lb), without toner cartridge)							

*1: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode]
*2: Even in sub power off mode, [Disable], [Enabled] and [High] are selectable in [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode].
*3: The value is only provided for reference. It varies depending on different operating environments.
*4: Width when the manual bypass tray is closed
*5: Height to top of DF
*6: Manual bypass tray and the tray are pulled out, and DF is open.

2.7 Operating environment

Temperature	10 to 30° C / 50 to 86° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15 to 85% (Relative humidity with a fluctuation of 10%/h)
Levelness	Difference between front and back, right and left should be 1 degree or under.

2.8 Print functions

First print time (Tray1/2, A4 or 8 $^1/_2$x11, full size)	bizhub C658	• 3.0 sec. or less (Black print) • 4.0 sec. or less (Color print)
	bizhub C558	• 3.5 sec. or less (Black print) • 4.4 sec. or less (Color print)
	bizhub C458	• 4.0 sec. or less (Black print) • 5.1 sec. or less (Color print)
Printing speed for multi-print cycle (A4 or 8 1/2 x 11, plain paper, except for the manual bypass tray)	Black print, Color print	bizhub C658: 1-sided: 65 sheets/min., 2-sided: 65 sheets/min.
		bizhub C558: 1-sided: 55 sheets/min., 2-sided: 55 sheets/min.
		bizhub C458: 1-sided: 45 sheets/min., 2-sided: 45 sheets/min.
Print resolution	• Multivalued: Equivalent to 1,800 dpi in main scanning direction x 600 dpi in sub scanning direction • Binary: Equivalent to 1,200 dpi in main scanning direction x 1,200 dpi in sub scanning direction	
Printer language	• PCL5c/e Emulation, PCL 6 (XL Version 3.0) Emulation • PostScript 3 Emulation (3016)	

	• XPS ver.1.0
Supported operating systems (server)	• Windows Server 2008, Windows Server 2008 64bit, Windows Server 2008 R2 64bit • Windows Server 2012 64bit
Supported operating systems (client)	• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit • Mac OSX 10.8, Mac OSX 10.9 Intel edition, Mac OSX 10.10 Intel edition, Mac OSX 10.11 Intel edition • Linux
Printer driver (PCL6)	• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit • Windows Server 2008, Windows Server 2008 64bit, Windows Server 2008 R2 64bit, Windows Server 2012 64bit
Printer driver (PostScript 3)	• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit • Windows Server 2008, Windows Server 2008 64bit, Windows Server 2008 R2 64bit, Windows Server 2012 64bit • Macintosh OSX 10.8 PPD+PDE, Macintosh OSX 10.9 PPD+PDE, Macintosh OSX 10.10 PPD+PDE, Macintosh OSX 10.11 PPD+PDE • Linux PPD
Printer driver (XPS)	• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit • Windows Server 2008, Windows Server 2008 64bit, Windows Server 2008 R2 64bit, Windows Server 2012 64bit
Work memory	4GB
Host interface	• Ethernet 10Base-T, 100Base-TX, 1000Base-T • USB2.0/1.1 • USB_Host
Built-in fonts (PCL)	European 80 fonts
	Japanese • HGMinchoL, HGPMinchoL, HGGothicB, HGPGothicB
Built-in fonts (PostScript 3 Emulation)	European 137 fonts
	Japanese • HGMinchoL, HGGothicB

2.9 Scan functions

Scanner	Scannable range		Same as the copier (Max. 11 x 17: inch area, A3: metric area)
	Scan speed (A4 or 8 1/2 x 11, DF scan, 1-side original resolution 300 dpi)		120 pages/min *
	Function		Scan to E-mail, Scan to FTP, Scan to SMB, Scan to WebDAV, Devices Profile for Web Services (DPWS), Scan to Box/USB memory, Scan server sending, Scan to Me, Scan to Home, Scan to Web service (WSD scan), Scan to URL
	Scanning resolution		• Push: 200 dpi/300 dpi/400 dpi/600 dpi • Pull: 100 dpi/200 dpi/300 dpi/400 dpi/600 dpi
TWAIN	Driver		TWAIN Driver, HDD TWAIN Driver
	Supported operating system		• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit
	PC		Conform to the specification of operating system
	Required memory		Conform to the specification of operating system
	Network		Computer to which TCP/IP protocol is correctly set
	Hard disk		Required 20 MB or more disk space
SMB	Supported operating system	Windows	• Windows 7, Windows 7 64bit, Windows 8.1, Windows 8.1 64bit, Windows 10, Windows 10 64bit, Windows Server 2008, Windows Server 2008 64bit, Windows Server 2008 R2 64bit, Windows Server 2012 64bit
			DFS function is supported only in the environment that structured with the following Windows server operating systems. • Windows Server 2008, Windows Server 2008 R2, Windows Server 2012
			Direct hosting functions apply to the following operating systems. • Windows 7, Windows 8.1, Windows 10 (IPv6 function is available only when the Windows Vista or later)
		Samba	2.2.x, 3.x
		Novell Netware	Netware 6.5 (SP6 or later)

- *: When an optional unit is installed

2.10 Web browser function

- Main specifications of the web browser installed are as follows.

Browser engine	Chromium Browser

Supported protocol	• HTTP (HTTP 0.9/1.0/1.1) • HTTPS • TCP/IP
Supported markup language	• HTML 4.01 • A part of HTML 5.0 • XHTML 1.1/Basic
Style sheet	• CSS3
Script language	• JavaSrcript 1.7 • ECMAScript (3rd/5th/5.1) • Ajax*1
DOM	• Level 1 • Level 2
File type	• JPEG • BMP • PNG • GIF • Animation GIF • PDF
Supported SSL/TLS version	• SSL3.0 • TLS1.0
Supported character code	• Japanese (Shift_JIS) • Japanese (ISO-2022-JP) • Japanese (EUC-JP) • Chinese Simplified (GB2312) • Chinese Traditional (Big5) • Western European (ISO-8859-1) • Unicode (UTF-8)
PDF viewer	• Adobe Reader LE • PDFium

- *1: Limited to the JavaScript-supported range only.

NOTE

- **Using the web browser function available with this machine, the contents on the Internet can be accessed from the control panel. Users are responsible for the contents that they access, download, or upload as well as the contents of other communication. Users shall follow the rules of their company and laws of their country. Konica Minolta, Inc. and its group companies accept no responsibility for the users' use of the Internet.**

NOTE

- **When using a web browser function, 26 dots from the perimeter of the touch panel area is not sensitive area. It is possible to narrow the non-sensitive area by using [Software Switch Setting] in Service Mode as with followings. However, the touch panel cannot detect touch operation correctly.**
  - **Switch No.143 [00000000] at Bit assignment/[00] at HEX assignment non-sensitive area: 26 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000001] at Bit assignment/[01] at HEX assignment non-sensitive area: 16 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000010] at Bit assignment/[02] at HEX assignment non-sensitive area: 9 dots from the perimeter of the touch panel**

3. Dual scan document feeder

3.1 Type

Name	Dual scan document feeder	
Type	Paper feed section	Paper feed from top of stack
	Image reading section	• Sheet-through system • Back side: Reading by CIS
	Exit section	Straight exit system
Installation	Screw clamp to the main body	
Document alignment	Center	
Document loading	Face up	

3.2 Function

Mode	Standard mode, Mixed original (same width/different width) detection mode, Scan/FAX mode, Index paper mode

3.3 Type of document

Type	Standard mode/thin paper mode	1-sided mode: 35 g/m^2 to 210 g/m^2 (9 5/16 to 55 7/8 lb)
		2-sided mode: 50 g/m^2 to 210 g/m^2 (13 5/16 to 55 7/8 lb)
	Mixed original detection mode	1-sided / 2-sided mode: 50 g/m^2 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
	Scan/FAX mode	1-sided mode: 35 g/m^2 to 210 g/m^2 (9 5/16 to 55 7/8 lb)
		2-sided mode: 50 g/m^2 to 210 g/m^2 (13 5/16 to 55 7/8 lb)
Detectable document size *1	Standard mode, Scan/FAX mode	PostcardS, B6S, B5/B5S, B4, A5/A5S, A4/A4S, A3
	Index paper mode	B5, A4, A4S, B4, A3
Capacity	300 sheets (64 g/m^2 (17 lb)) or stack of 19 mm (3/4 inches) and below (including paper curl)	

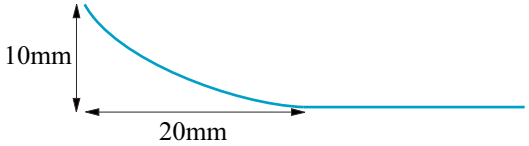
- *1: For the combined original detection mode, refer to the mixed original feed chart.

3.4 Particular original

- If fed, paper feed will be possible to some extent but trouble occurrence will be possible.

Type of original	Possible trouble
Sheets lightly curled (Curled amount: 10 to 15 mm (3/8 to 9/16 inches)) *1	Dog-eared, exit failure, transport failure
Thermal paper (Heat sensitive paper)	Edge folded, exit failure, transport failure
Paper immediately after paper exit from the main body	Paper feed failure, transport failure
Paper with many punched holes (e.g., loose leaf *2, CF paper *3)	Multi-page feed due to flashes from holes
Folded original (including half-folded and Z-folded originals) *4	Paper feed failure, transport failure, image distortion
Sheets with 2 to 4 holes	Transport failure
Coated paper (including inkjet paper)	Paper feed failure, transport failure

- *1: Limited to vertical feeding
  *2: No crease on perforation
  *3: Creases must be smoothed out. (amount of float: 15 mm (9/16 inches) or less)
  *4: Amount of curl: less than 10 mm (3/8 inches) in vertical and 20 mm (13/16 inches) in horizontal direction



3.5 Prohibited original

- Prohibited originals that cause trouble

Type of original
Sheets stapled or clipped together
Book original
Sheets with paper attached
Sheets clipped or notched
Torn paper
Original weighing less than 35 g/m^2 (9 5/16 lb) or 210 g/m^2 (55 7/8 lb) or more

Type of original
Significantly curled original (amount of curl exceeding 15 mm (9/16 inches))
OHP film
Label sheet
Offset master paper
Glossy photographic paper or glossy enamel paper

3.6 Mixed original feed chart

	Max. original size	297 mm		257 mm		210 mm		182 mm	148 mm	128 mm
Mixed original size adjustment		A3	A4	B4	B5	A4S	A5	B5S	A5S	B6S
297 mm	A3	◎	◎	-	-	-	-	-	-	-
	A4	◎	◎	-	-	-	-	-	-	-
257 mm	B4	○	○	◎	◎	-	-	-	-	-
	B5	○	○	◎	◎	-	-	-	-	-
210 mm	A4S	○	○	○	○	◎	◎	-	-	-
	A5	×	×	○	○	◎	◎	-	-	-
182 mm	B5S	×	×	○	○	○	○	◎	-	-
148 mm	A5S	×	×	×	×	×	×	○	◎	-
128 mm	B6S	×	×	×	×	×	×	×	○	◎

◎	Same size	Tilted with in 1.5 % or less
○	Mixed original feed available	No regulation of tilted degree
×	No. mixed original feed	
-	Can not set original	

3.7 Machine specification

Power requirement	Power supply:	DC 24 V, DC 12 V (for CIS), DC 5 V (for recovering from the sleep mode)
	Supplying method:	Supplied from the MFP main body
Max. power consumption	104.5 W or less	
Dimension	Width	618 mm (24 5/16 inches)
	Depth	575 mm (22 5/8 inches)
	Height	166 mm (6 9/16 inches) (180 mm (7 1/16 inches): Maximum at protrusion)
Weight	Approx. 15.1 kg (33 5/16 lb)	

3.8 Operating environment

- Conforms to the operating environment of the main body.

4. DF-629

4.1 Type

Name	Reverse automatic document feeder	
Type	Document feed section	Paper feed from top of stack
	Document reading section	Sheet-through system
	Document switchback section	Switchback system
	Document exit section	Straight exit system
Installation	Screw clamp to the main body	
Document alignment	Center	
Document loading	Face up	
Option	Stamp unit (SP-501)	

4.2 Function

Mode		Standard mode, Mixed original detection mode, Scan mode/FAX mode	
Original feeding speed (A4 or 8 1/2 x 11)	Copy	1-sided (600 dpi)	55 pages/min.
		2-sided (600 dpi)	26 pages/min.
	Scan/FAX mode	1-sided (300 dpi)	80 pages/min.
		2-sided (300 dpi)	37 pages/min.

4.3 Type of document

Type	Standard mode (Plain paper)	1-sided mode: 35 to 128 g/m^2 (9 5/16 to 34 1/16 lb)
		2-sided mode: 50 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
	Mixed original detection mode (Plain paper) *1	1-sided / 2-sided mode: 50 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
	Scan/FAX mode (Plain paper)	1-sided mode: 35 to 128 g/m^2 (9 5/16 to 34 1/16 lb)
		2-sided mode: 50 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
Document size	• Standard mode • Scan/FAX mode	• Japan: Postcard S, B6S to A3 • Europe: A6S to A3 • North America: 5 1/2 x 8 1/2 to 11 x 17 • Width: 100 mm to 297 mm (3 15/16 inches to 11 11/16 inches) • Length: 139.7 mm to 431.8 mm (5 1/2 inches to 17 inches) (FAX transmission mode: 139.7 mm to 1,000 mm (5 1/2 inches to 39 3/8 inches)
Capacity	• Standard mode • Mixed original detection mode *1 • Scan/FAX mode	• Japan: 130 sheets (68 g/m2 (18 1/16 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl) • Europe: 100 sheets (80 g/m2 (21 1/4 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl) • North America: 100 sheets (75 g/m2 (19 15/16 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl)

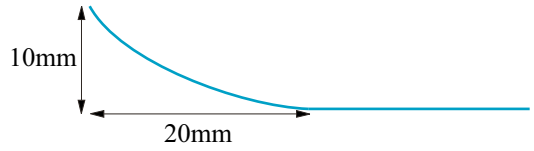
- *1: For the combined original detection mode, refer to the mixed original feed chart.

4.4 Particular original

- If fed, paper feed will be possible to some extent but trouble occurrence will be possible.

Type of original	Possible trouble
Sheets lightly curled (Curled amount: 10 to 15 mm (3/8 to 9/16 inches)) *1	Dog-eared, exit failure, transport failure
Thermal paper (Heat sensitive paper)	Edge folded, exit failure, transport failure
Paper immediately after paper exit from the main unit	Paper feed failure, transport failure
Paper with many punched holes (e.g., loose leaf *2, CF paper *3)	Multi-page feed due to flashes from holes
Folded original (including half-folded and Z-folded originals) *4	Paper feed failure, transport failure, image distortion
Sheets with 2 to 4 holes	Transport failure
Coated paper (including inkjet paper)	Paper feed failure, transport failure

- *1: When the original is less than 10 mm (3/8 inches) in vertical and 20 mm (13/16 inches) in horizontal direction and the amount of float of the folded original is less than 10 mm (3/8 inches), the feed and the image are guaranteed. When the amount of float of the folded original is less than 10 mm (3/8 inches), the feed and the image are guaranteed.
  *2: Limited to vertical feeding
  *3: No crease on perforation
  *4: Creases must be smoothed out. (amount of float: 15 mm (9/16 inches) or less)



4.5 Prohibited original

- Prohibited originals that cause trouble

Type of original
Sheets stapled or clipped together
Book original
Sheets with paper attached
Sheets clipped or notched
Torn paper
Original weighing less than 35 g/m^2 (9 5/16 lb) or 128 g/m^2 (34 1/16 lb) or more
Significantly curled original (amount of curl exceeding 15 mm (9/16 inches))
OHP film
Label sheet
Offset master paper
Glossy photographic paper or glossy enamel paper

4.6 Mixed original feed chart

◎	Same size	Tilted with in 1.5 % or less
○	Mixed original feed available	
×	No. mixed original feed	
-	Can not set original	

4.6.1 For metric area

			Max. original size								
			297 mm		257 mm		210 mm		182 mm	148 mm	128 mm
			A3	A4	B4	B5	A4S	A5	B5S	A5S	B6S
Mixed original size	297 mm	A3	◎	◎	-	-	-	-	-	-	-
		A4	◎	◎	-	-	-	-	-	-	-
	257 mm	B4	○	○	◎	◎	-	-	-	-	-
		B5	○	○	◎	◎	-	-	-	-	-
	210 mm	A4S	○	○	○	○	◎	◎	-	-	-
		A5	×	×	×	×	◎	◎	-	-	-
	182 mm	B5S	×	×	○	○	○	○	◎	-	-
	148 mm	A5S	×	×	×	×	×	×	○	◎	-
	128 mm	B6S	×	×	×	×	×	×	×	○	◎

4.6.2 For inch area

			Max. original size					
			11 inches		8 1/2 inches			5 1/2 inches
			11 x 17	8 1/2 x 11	8 1/2 x 14	8 1/2 x 11S	8 1/2 x 5 1/2	8 1/2 x 5 1/2S
Mixed original size	11 inches	11 x 17	◎	◎	-	-	-	-
		8 1/2 x 11	◎	◎	-	-	-	-
	8 1/2 inches	8 1/2 x 14	◎	◎	◎	◎	◎	-
		8 1/2 x 11S	◎	◎	◎	◎	◎	-
		8 1/2 x 5 1/2	×	×	◎	◎	◎	-
	5 1/2 inches	8 1/2 x 5 1/2S	×	×	×	×	×	◎

4.7 Machine specification

Power requirement	Power supply: DC 24 V, DC 5 V (for recovering from the sleep mode)
	Supplying method: Supplied from the MFP main body
Max. power consumption	60 W or less

Dimension	611.2 mm (W) x 503.6 mm (D) x 127.1 mm (H) (24 1/16 inches (W) x 19 13/16 inches (D) x 5 inches (H))
Weight	Approx. 9.0 kg (19 13/16 lb)

4.8 Operating environment

- Conforms to the operating environment of the main body.

5. DF-704

5.1 Type

Name	Reverse automatic document feeder	
Type	Document feed section	Paper feed from top of stack
	Document reading section	• Front side: Sheet-through system • Back side: Reading by CIS
	Document exit section	Straight exit system
Installation	Screw clamp to the main body	
Document alignment	Center	
Document loading	Face up	
Option	Stamp unit (SP-501)	

5.2 Function

Mode		Standard mode, Mixed original detection mode, Scan mode/FAX mode	
Original feeding speed (A4 or 8 1/2 x 11)	Copy	1-sided (600 dpi)	55 pages/min.
		2-sided (600 dpi)	110 pages/min.
	Scan/FAX mode	1-sided (300 dpi)	80 pages/min.
		2-sided (300 dpi)	160 pages/min.

5.3 Type of document

Type	Standard mode (Plain paper)	1-sided mode: 35 to 163 g/m^2 (9 5/16 to 34 1/16 lb)
		2-sided mode: 50 to 163 g/m^2 (13 5/16 to 34 1/16 lb)
	Mixed original detection mode (Plain paper) *1	1-sided / 2-sided mode: 50 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
	Scan/FAX mode (Plain paper)	1-sided mode: 35 to 163 g/m^2 (9 5/16 to 34 1/16 lb)
		2-sided mode: 50 to 163 g/m^2 (13 5/16 to 34 1/16 lb)
Document size	• Standard mode • Scan/FAX mode	• Japan: Postcard S, B6S to A3 • Europe: A6S to A3 • North America: 5 1/2 x 8 1/2 to 11 x 17 • Width: 100 mm to 297 mm • Length: 139.7 mm to 431.8 mm (5 1/2 inches to 17 inches) (FAX transmission mode: 139.7 mm to 1,000 mm (5 1/2 inches to 39 3/8 inches)
Capacity	• Standard mode • Mixed original detection mode *1 • Scan/FAX mode	• Japan: 130 sheets (68 g/m2 (18 1/16 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl) • Europe: 100 sheets (80 g/m2 (21 1/4 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl) • North America: 100 sheets (75 g/m2 (19 15/16 lb)) or stack of 12 mm (1/2 inches) and below (including paper curl)

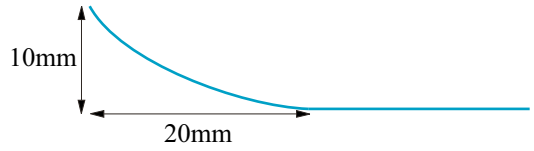
- *1: For the combined original detection mode, refer to the mixed original feed chart.

5.4 Particular original

- If fed, paper feed will be possible to some extent but trouble occurrence will be possible.

Type of original	Possible trouble
Sheets lightly curled (Curled amount: 10 to 15 mm (3/8 to 9/16 inches)) *1	Dog-eared, exit failure, transport failure
Thermal paper (Heat sensitive paper)	Edge folded, exit failure, transport failure
Paper immediately after paper exit from the main unit	Paper feed failure, transport failure
Paper with many punched holes (e.g., loose leaf *2, CF paper *3)	Multi-page feed due to flashes from holes
Folded original (including half-folded and Z-folded originals) *4	Paper feed failure, transport failure, image distortion
Sheets with 2 to 4 holes	Transport failure
Coated paper (including inkjet paper)	Paper feed failure, transport failure

- *1: When the original is less than 10 mm (3/8 inches) in vertical and 20 mm (13/16 inches) in horizontal direction and the amount of float of the folded original is less than 10 mm (3/8 inches), the feed and the image are guaranteed. When the amount of float of the folded original is less than 10 mm (3/8 inches), the feed and the image are guaranteed.
  *2: Limited to vertical feeding
  *3: No crease on perforation
  *4: Creases must be smoothed out. (amount of float: 15 mm (9/16 inches) or less)



5.5 Prohibited original

- Prohibited originals that cause trouble

Type of original
Sheets stapled or clipped together
Book original
Sheets with paper attached
Sheets clipped or notched
Torn paper
Original weighing less than 35 g/m^2 (9 5/16 lb) or 163 g/m^2 (43 5/16 lb) or more
Significantly curled original (amount of curl exceeding 15 mm (9/16 inches))
OHP film
Label sheet
Offset master paper
Glossy photographic paper or glossy enamel paper

5.6 Mixed original feed chart

◎	Same size	Tilted with in 1.5 % or less
○	Mixed original feed available	
×	No. mixed original feed	
-	Can not set original	

5.6.1 For metric area

			Max. original size								
			297 mm		257 mm		210 mm		182 mm	148 mm	128 mm
			A3	A4	B4	B5	A4S	A5	B5S	A5S	B6S
Mixed original size	297 mm	A3	◎	◎	-	-	-	-	-	-	-
		A4	◎	◎	-	-	-	-	-	-	-
	257 mm	B4	○	○	◎	◎	-	-	-	-	-
		B5	○	○	◎	◎	-	-	-	-	-
	210 mm	A4S	○	○	○	○	◎	◎	-	-	-
		A5	×	×	×	×	◎	◎	-	-	-
	182 mm	B5S	×	×	○	○	○	○	◎	-	-
	148 mm	A5S	×	×	×	×	×	×	○	◎	-
	128 mm	B6S	×	×	×	×	×	×	×	○	◎

5.6.2 For inch area

			Max. original size					
			11 inches		8 1/2 inches			5 1/2 inches
			11 x 17	8 1/2 x 11	8 1/2 x 14	8 1/2 x 11S	8 1/2 x 5 1/2	8 1/2 x 5 1/2S
Mixed original size	11 inches	11 x 17	◎	◎	-	-	-	-
		8 1/2 x 11	◎	◎	-	-	-	-
	8 1/2 inches	8 1/2 x 14	◎	◎	◎	◎	◎	-
		8 1/2 x 11S	◎	◎	◎	◎	◎	-
		8 1/2 x 5 1/2	×	×	◎	◎	◎	-
	5 1/2 inches	8 1/2 x 5 1/2S	×	×	×	×	×	◎

5.7 Machine specification

Power requirement	Power supply: DC 24 V, DC 5 V (for recovering from the sleep mode), DC 12 V (for CIS)
	Supplying method: Supplied from the MFP main body
Max. power consumption	74.5W or less

Dimension	611.2 mm (W) x 503.6 mm (D) x 142.1 mm (H) (24 1/16 inches (W) x 19 13/16 inches (D) x 5 5/8 inches (H))
Weight	Approx. 12.0 kg (26 7/16 lb)

5.8 Operating environment

- Conforms to the operating environment of the main body.

6. PC-110/PC-210

6.1 Type

Name	• 1 way paper feed cabinet (PC-110) • 2 way paper feed cabinet (PC-210)
Type	Front loading type • 1 way paper feed device (PC-110) • 2 way paper feed device (PC-210)
Installation	Desk type
Original alignment	Center

6.2 Paper

Type	Size	Capacity	
		Tray 3	Tray 4
Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) *1	• A3, B4, A4S, B5S, A4, B5, A5S *2 • Letter, LetterS, Legal, Ledger • Foolscap *3 • 16K, 8K	500 sheets	500 sheets
Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))			
Recycled paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))			
Thick 1 (91 g/m2 to 120 g/m2 (24 3/16 lb to 31 15/16 lb))		150 sheets	150 sheets
Thick 1+ (121 g/m2 to 157 g/m2 (32 3/16 lb to 41 3/4 lb))			
Thick 2 (158 g/m2 to 209 g/m2 (42 lb to 55 5/8 lb))			
Thick 3 (210 g/m2 to 256 g/m2 (55 7/8 lb to 68 1/16 lb)) *1			
Copy paper dimensions	Width	139.7 to 297.0 mm (5 1/2 to 11 11/16 inches)	
	Length	182.0 to 431.8 mm (7 3/16 to 17 inches)	

- *1: Second side is an image guarantee out.
- *2: See Invoice S for inch sizes.
- *3: There are 6 types to be selected from in the service mode; 8x13, 8.25x13, 8.5x13, 8.5x13.5, 8.125x13.25, 220x330mm.

6.3 Machine specification

Power requirement	Supplied from the main body	
Max. power consumption	15 W or less	
Dimension	615 mm (W) x 653 mm (D) x 304.1 mm (H) (24 3/16 inches (W) x 25 11/16 inches (D) x 12 inches (H))	
Weight	PC-110	Approx. 22 kg (48 1/2 lb)
	PC-210	Approx. 24 kg (52 15/16 lb)

6.4 Operating environment

- Conforms to the operating environment of the main body.

7. PC-115/PC-215

7.1 Type

Name	• 1 way paper feed cabinet (PC-115) • 2 way paper feed cabinet (PC-215)
Type	Front loading type • 1 way paper feed device (PC-115) • 2 way paper feed device (PC-215)
Installation	Desk type
Original alignment	Center

7.2 Paper

Type	Size	Capacity	
		Tray 3	Tray 4
Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) *1	• A3, B4, A4S, B5S, A4, B5, A5S *2 • Letter, LetterS, Legal, Ledger • Foolscap *3 • 16K, 8K	500 sheets	500 sheets
Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))			
Recycled paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))			
Thick 1 (91 g/m2 to 120 g/m2 (24 3/16 lb to 31 15/16 lb))		150 sheets	150 sheets
Thick 1+ (121 g/m2 to 157 g/m2 (32 3/16 lb to 41 3/4 lb))			
Thick 2 (158 g/m2 to 209 g/m2 (42 lb to 55 5/8 lb))			
Thick 3 (210 g/m2 to 256 g/m2 (55 7/8 lb to 68 1/16 lb)) *1			
Copy paper dimensions	Width	139.7 to 297.0 mm (5 1/2 to 11 11/16 inches)	
	Length	182.0 to 431.8 mm (7 3/16 to 17 inches)	

- *1: Second side is an image guarantee out.
- *2: See Invoice S for inch sizes.
- *3: There are 6 types to be selected from in the service mode; 8x13, 8.25x13, 8.5x13, 8.5x13.5, 8.125x13.25, 220x330mm.

7.3 Machine specification

Power requirement	Supplied from the MFP main body	
Max. power consumption	22 W or less	
Dimension	615 mm (W) x 653 mm (D) x 246 mm (H) (24 3/16 inches (W) x 25 11/16 inches (D) x 9 11/16 inches (H))	
Weight	PC-115	Approx. 26 kg (57 5/16 lb)
	PC-215	Approx. 28 kg (61 3/4 lb)

7.4 Operating environment

- Conforms to the operating environment of the main body.

8. PC-410

8.1 Type

Name	Large capacity cabinet
Type	Front loading type LCC
Installation	Desk type
Original alignment	Center

8.2 Paper

Type	Size	Capacity
Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) *1	A4/Letter, 8 1/2 x 11	2,500 sheets
Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))		
Recycled paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))		
Thick 1 (91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb))		1,000 sheets
Thick 1+ (121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb))		
Thick 2 (158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb))		
Thick 3 (210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/16 lb)) *1		

- *1: Second side is an image guarantee out.

8.3 Machine specification

Power requirement	Supplied from the main body
Max. power consumption	45 W or less
Dimension	615 mm (W) x 653 mm (D) x 304.1 mm (H) (24 3/16 inches (W) x 25 11/16 inches (D) x 12 inches (H))
Weight	Approx. 23 kg (50 11/16 lb)

8.4 Operating environment

- Conforms to the operating environment of the main body.

9. PC-415

9.1 Type

Name	Large capacity cabinet
Type	Front loading type LCC
Installation	Desk type
Original alignment	Center

9.2 Paper

Type	Size	Capacity
Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) *1	A4/Letter, 8 1/2 x 11	2,500 sheets
Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))		
Recycled paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))		
Thick 1 (91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb))		1,000 sheets
Thick 1+ (121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb))		
Thick 2 (158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb))		
Thick 3 (210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/16 lb)) *1		

- *1: Second side is an image guarantee out.

9.3 Machine specification

Power requirement	Supplied from the MFP main body
Max. power consumption	22 W or less
Dimension	615 mm (W) x 653 mm (D) x 246 mm (H) (24 3/16 inches (W) x 25 11/16 inches (D) x 9 11/16 inches (H))
Weight	Approx. 27 kg (59 1/2 lb)

9.4 Operating environment

- Conforms to the operating environment of the main body.

10. LU-207

10.1 Type

Name	2,500 sheets Large Capacity Unit
Type	External option attached to the right side of the main body
Document alignment	Center

10.2 Paper

Type	Size	Basis weight	Capacity
Plain paper	A3, B4, A4/A4S, A3 Wide (12 $^{1}/_{4}$ x 18), SRA3	52 g/m^2 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb)	2,500 sheets
Thick 1		91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)	2,000 sheets *2
Thick 1+		121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)	1,450 sheets *2
Thick 2		158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)	1,250 sheets *2
Thick 3		210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb)	1,000 sheets *1 *2

- *1: Images are out of guarantee.
- *2: Excluding damp paper, curled paper, and recycled paper.

10.3 Machine specification

Power requirement	All supplied from the MFP main body
Max. power consumption	22 W or less
Dimension	629 mm (W) x 556 mm (D) x 405 mm (H) (24 3/4 inches (W) x 21 7/8 inches (D) x 15 15/16 inches (H))
Weight	Approx. 25.0 kg (55 1/8 lb)

10.4 Operating environment

- Conforms to the operating environment of the main body.

11. LU-302

11.1 Type

Name	3,000 sheets Large Capacity Unit
Type	External option attached to the right side of the main body
Document alignment	Center

11.2 Paper

Type	Size	Basis weight	Capacity
Plain paper	A4 or Letter (8.5x11)	52 g/m^2 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb)	3,000 sheets
Thick 1		91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)	2,500 sheets *2
Thick 1+		121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)	1,750 sheets *2
Thick 2		158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)	1,550 sheets *2
Thick 3		210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb)	1,300 sheets *1 *2

- *1: Images are out of guarantee.
- *2: Excluding damp paper, curled paper, and recycled paper.

11.3 Machine specification

Power requirement	All supplied from the MFP main body
Max. power consumption	22 W or less
Dimension	367 mm (W) x 528 mm (D) x 405 mm (H) (24 3/4 inches (W) x 21 7/8 inches (D) x 15 15/16 inches (H))
Weight	Approx. 18.0 kg (39 11/16 lb)

11.4 Operating environment

- Conforms to the operating environment of the main body.

12. JS-506

12.1 Type

Type	Job separator with movable tray
Installation	Fixed at the paper exit section of the main body
Document alignment	Center

12.2 Function

Mode	• Non sort • Sort, group • Sort offset, group offset

12.3 Capacity

Exit tray	Mode	Paper size	Paper type		Capacity
Tray 1 *1*4	• Non sort • Sort • Group	• A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, A3 Wide, SRA3 • InvoiceS, Invoice, LetterS, Letter, Legal, Ledger, ExectiveS, Exective • 16KS, 16K, 8K • Postcard • Custom size paper (Width: 90 mm to 320 mm (3 9/16 inches to 12 5/8 inches)/ Length: 139.7 mm to 457.2 mm (5 1/2 inches to 18 inches))	Plain paper, Recycled paper (60 g/m² to 90 g/m² (15 15/16 lb to 23 15/16 lb))		100 sheets
			Thin paper (52 g/m² to 59 g/m² (13 13/16 lb to 15 11/16 lb))		50 copies
			Thick paper (91 g/m² to 300 g/m² (24 3/16 lb to 79 13/16 lb))		10 sheets
			Special paper	Postcard	
				Label sheet	
				OHP film	
				Index paper	
				Envelope	
Tray 2 *2	• Non sort • Sort • Group	• A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, A3 Wide, SRA3 • InvoiceS, Invoice, LetterS, Letter, Legal, Ledger, ExectiveS, Exective • 16KS, 16K, 8K • Postcard, Long size paper • Custom size paper (Width: 90 mm to 320 mm (3 9/16 inches to 12 5/8 inches)/ Length: 139.7 mm to 1200 mm (5 1/2 inches to 47 1/4 inches))	Plain paper, Recycled paper (60 g/m² to 90 g/m² (15 15/16 lb to 23 15/16 lb))		150 sheets
			Thin paper (52 g/m² to 59 g/m² (13 13/16 to 15 11/16 lb))		
			Thick paper (91 g/m² to 300 g/m² (24 3/16 lb to 79 13/16 lb))		20 sheets
			Special paper	Postcard	
				Label sheet	
				OHP film	
				Index paper	
				Envelope	10 sheets
			Long size paper		Not specified *3
	• Sort offset • Group offset	• B5S, B5, A4S, A4, B4, A3 • LetterS, Letter, Legal, Ledger, ExectiveS, Exective, 16KS, 16K, 8K • Custom size paper (Width: 182 mm to 297 mm (7 3/16 inches to 11 11/16 inches) / Length: 182 mm to 431.8 mm (7 3/16 inches to 17 inches))	Plain paper, Recycled paper (60 g/m² to 90 g/m² (15 15/16 lb to 23 15/16 lb))		150 sheets
			Thin paper (52 g/m² to 59 g/m² (13 13/16 to 15 11/16 lb))		
			Thick paper (91 g/m² to 300 g/m² (24 3/16 lb to 79 13/16 lb))		20 sheets

- *1: 22.5 mm (7/8 inches) in stack height (stacked height is determined by a sensor)
- *2: 49.9 mm (1 15/16 inches) in stack height (no sensor detection mechanism for stacked height)
- *3: Includes falling off the tray
- *4: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.

12.4 Offset function

Exit tray	Tray 2
Shift amount	30 mm (1 3/16 inches)

12.5 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the MFP main body)
Max. power consumption	24 W or less
Dimension	Tray 1: 412.0 mm (W) x 469.0 mm (D) x 130.0 mm (H) (16 1/4 inches (W) x 18 7/16 inches (D) x 5 1/8 inches (H))
	Tray 2: 451.0 mm (W) x 386.0 mm (D) x 127.0 mm (H) (17 3/4 inches (W) x 15 3/16 inches (D) x 5 inches (H))
Weight	1.5 kg (3 5/16 lb)

12.6 Operating environment

- Conforms to the operating environment of the main body.

13. FS-533

13.1 Type

Type	Multi staple finisher built into the main body
Installation	Installed in main body
Original alignment	Center
Consumable	Staples (5,000 staples / cartridge)

13.2 Function

Mode	• Non sort • Sort, group • Sort offset, group offset • Sort staple

13.3 Paper process ability

13.3.1 Non sort/sort/group

(1) Capacity

Paper type	Basis weight	Max. capacity (Number of stacked sheets/Height of stacked sheets)*	
		A4S or less	B4 or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets / 73 mm	250 sheets / 36 mm
Plain paper			
Recycled paper			
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	10 sheets / 73 mm	10 sheets / 36 mm
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)		
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)		
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)		
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)		
Postcard	190 g/m^2 (50 9/16 lb)		
OHP film	-		
Envelope	-		
Label sheet	-		
Letterhead	-		
Tab paper	-		
Long size paper	-	Not specified	

- *: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.

(2) Paper size

Type	Size
Regular size paper	• A6S, A5S, A5, B6S, B5S, B5, A4S, A4, B4, A3, A3 wide, SRA3 • Invoice S, Invoice, Letter S, Letter, Legal, Ledger, Exective S, Exective • 16KS, 16K, 8KS, 8K • Postcard S, Long size paper
Custom size paper	• Max.: Width 320 mm x Length 1,200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

13.3.2 Sort offset/group offset

(1) Capacity

Paper type	Basis weight	Paper capacity (Number of stacked sheets/ Height of stacked sheets) *	
		A4S or less	B4 or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets / 73 mm	250 sheets / 36 mm
Plain paper			
Recycled paper			
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	10 sheets / 73 mm	10 sheets / 36 mm
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)		
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)		

Paper type	Basis weight	Paper capacity (Number of stacked sheets/ Height of stacked sheets) *	
		A4S or less	B4 or greater
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)		
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)		

- *: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.

(2) Paper size

Type	Size
Regular size paper	• B5, A4S, A4, B4, A3 • Letter S, Letter, Legal, Ledger, Exective • 16K, 8K
Custom size paper	• Max.: Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) • Min.: Width 210 mm x Length 182 mm (Width 8 1/4 inches x Length 7 3/16 inches)

13.3.3 Sort staple

(1) Capacity

Paper type	Basis weight	Max. capacity (Number of stacked sheets/Height of stacked sheets)*1	
		A4S or less	B4 or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	• 500 sheets • 50 sets • 73 mm (2 7/8 lb)	• 250 sheets • 30 sets • 36 mm (1 7/16 lb)
Plain paper			
Recycled paper			
Thick 1 *2	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	Not specified	
Thick 1+ *2	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)		
Thick 2 *2	158 to 209 g/m^2 (42 to 55 5/8 lb)		

- *1: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.
- *2: Thick papers can be used only in "Front Cover/ Back Cover" in Cover sheet mode.

(2) Basis weight

Mode	Basis weight
Normal mode	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)
Cover sheet mode	52 to 209 g/m^2 (13 13/16 to 55 5/8 lb) (2 sheets or under for thick paper)

(3) Paper size

Type	Size
Regular size paper	• B5, A4S, A4, B4, A3 • Letter S, Letter, Legal, Ledger, Exective • 16K, 8K
Custom size paper	• Max.: Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) • Min.: Width 210 mm x Length 182 mm (Width 8 1/4 inches x Length 7 3/16 inches)

(4) No. of sheets to be stapled

Modes	Max. No. of sheets to be stapled	
	A4S or less	B4 or greater
Normal mode	50 sheets	30 sheets
Cover sheet mode *	48 sheets (Thin paper/ Plain paper / Recycled paper) + 2 sheets (Thick paper)	28 sheets (Thin paper/ Plain paper / Recycled paper) + 2 sheets (Thick paper)

- *: Thick paper can be used only in "Front Cover/ Back Cover".

(5) Stapling position

Stapling position	• Back of the corner (Parallel) • Front of the corner (Parallel) • Center two points (parallel)

13.4 Machine specification

Power requirement	DC 24 V ± 10% (supplied from the MFP main body)
Max. power consumption	40 W or less
Dimension	472.5 mm* (W) x 583.5 mm* (D) x 194.7 mm (H) (18 5/8 inches* (W) x 23 inches* (D) x 7 11/16 inches (H))

Weight	12.0 kg (26 7/16 lb)

- *: Includes mounting part

13.5 Operating environment

- Conforms to the operating environment of the main body.

14. PK-519

14.1 Type

Name	Punch kit
Type	FS-integrated type punching operation device

14.2 Function

Punching method	Stops and punches every paper
No. of holes	• Japan: 2 holes • North America: 2-3 holes switching • Europe: 2-4 holes switching • Sweden: 4 holes
Supported mode	Punch mode
Applicable post processing mode	Sort, Group, Staple

14.3 Paper

Size	• B5S, B5, A4S, A4, B4, A3 • Letter S, Letter, Legal, Ledger, Exective S, Exective • 6KS, 16K, 8K
Supported paper	• Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) • Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)) • Thick 1 (91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)), Thick 1+ (121 to 157 g/m^2 (32 3/16 to 41 3/4 lb))
Punch prohibited paper	• Label paper, Tab paper, OHP film, Translucent paper, Holed paper • Other paper that may interfere with the operation of the punch kit or the punch blade

14.4 Machine specification

Power requirement	DC 24 V (supplied from the finisher)
	DC 5 V (supplied from the finisher)
Max. power consumption	Included in the max. power consumption of finisher
Dimension	110.2 mm (W) x 483.5 mm (D) x 203.2 mm (H) (4 5/16 inches (W) x 19 1/16 inches (D) x 8 inches (H))
Weight	Approx. 3.2 kg (7 1/16 lb)

14.5 Operating environment

- Conforms to the operating environment of the main body.

15. FS-534/FS-534SD

15.1 Type

Name	Multi staple finisher
Type	Freestanding
Original alignment	Center
Consumable	Staples • FNS section 1 cartridge (5,000 staples / cartridge) • Saddle section two cartridges (5,000 staples / cartridge)

• *: FS-534SD only

15.2 Function

Mode	• Non sort • Sort, group • Sort offset, group offset • Sort staple • Saddle stitching (Normal mode, Cover mode, Thick paper mode)* • Folding (Normal mode, Thick paper mode)* • Tri-folding*

• *: FS-534SD only

15.3 Paper process ability

15.3.1 Non sort/sort/group

(1) Sub tray

NOTE

▪ **Non sort only**

(a) Paper capacity

Paper type	Basis weight	Max. capacity (Number of stacked sheets/ Height of stacked sheets)
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	200 sheets /35 mm *1
Plain paper		
Recycled paper		
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	20 sheets /35 mm *1
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)	
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)	
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)	
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)	
Postcard	190 g/m^2 (50 9/16 lb)	
OHP film	-	
Envelope	-	
Label sheet	-	
Letterhead	-	
Index paper	-	
Long size paper	127 to 210 g/m^2 (33 13/16 to 55 7/8 lb)	Not specified *2

• *1: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.
• *2: Includes falling off the tray

(b) Paper size

Type	Size
Regular size paper	• A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 Wide, Postcard S • Invoice S, Invoice, Letter S, Letter, Legal, Ledger • 16K S, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 1,200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

(2) Main tray

(a) Number of stacked sheets

Paper type	Basis weight	Max. capacity (Number of stacked sheets/Height of stacked sheets)		
		A5/A5S or less	B5/B5S or greater, A4S or less	B4 or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	• 500 sheets/ 375 mm *1	• 3,000 sheets/ 375 mm *1	1,500 sheets/ 187.5 mm *1

Paper type	Basis weight	Max. capacity (Number of stacked sheets/Height of stacked sheets)		
		A5/A5S or less	B5/B5S or greater, A4S or less	B4 or greater
Plain paper		• 500 sheets/ 250 mm *1, *2	• 2,000 sheets/ 250 mm *1, *2	
Recycled paper				
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	• 20 sheets/ 375 mm *1 • 20 sheets/ 250 mm *1, *2		
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)			
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)			
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)			
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)			
OHP film	-			
Envelope	-			
Label sheet	-			
Letterhead	-			

- *1: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.
- *2: FS-534SD

(b) Paper size

Type	Size
Regular size paper	• A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 Wide, Postcard S • Invoice S, Invoice, Letter S, Letter, Legal, Ledger • 16K S, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 130 mm x Length 139.7 mm (Width 5 1/8 inches x Length 5 1/2 inches)

(3) 3rd tray

NOTE

- **Non sort only**

(a) Paper capacity

Paper type	Basis weight	Max. capacity (Number of stacked sheets/ Height of stacked sheets)*
Thin paper	52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)	100 sheets/ 22.5 mm
Plain paper	60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)	
Recycled paper		
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	20 sheets/ 22.5 mm
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)	
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)	
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)	
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)	
Postcard	190 g/m^2 (50 9/16 lb)	
OHP film	-	
Envelope	-	
Label sheet	-	
Letterhead	-	

- *: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.

(b) Paper size

Type	Size
Regular size paper	• A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 Wide, Postcard S • Invoice S, Invoice, Letter S, Letter, Legal, Ledger • 16K S, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

15.3.2 Sort offset/group offset

(1) Main tray

(a) Offset function

Exit tray	Main tray
Shift amount	20 mm (13/16 inches)

(b) Number of stacked sheets

Paper type	Basis weight	Max. capacity (Number of stacked sheets/Height of stacked sheets)*1		
		less than B5	A4/A4S, B5	B4 or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	• 500 sheets/ 375 mm • 500 sheets/ 250 mm *2	• 3,000 sheets/ 375 mm • 2,000 sheets/ 250 mm *2	1,500 sheets/ 187.5 mm
Plain paper				
Recycled paper				
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	• 20 sheets/ 375 mm • 20 sheets/ 250 mm *1, *2		
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)			
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)			
Thick 3	210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)			
Thick 4	257 to 300 g/m^2 (68 3/8 to 79 13/16 lb)			

- *1: If either the number or height of stacked sheets reaches the specified value, “Tray paper full” is determined.
- *2: FS-534SD

(c) Paper size

Type	Size
Regular size paper	• A5, B5S, B5, A4S, A4, B4, A3, SRA3, A3 Wide • Letter S, Letter, Legal, Ledger, Exective S, Exective • 16K S, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

15.3.3 Sort staple

(1) Main tray

(a) Paper capacity

Paper type	Basis weight	Max. capacity (Number of stacked copy sets/Height of stacked sheets)*1	
		A4S or less	B4 or less
• Thin paper • Plain paper • Recycled paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	• 100 sets / 375 mm • 100 sets/ 250 mm *2	100 sets/ 187.5 mm
		• 50 sets/ 375 mm • 50 sets/ 250 mm *2	50 sets/ 187.5 mm
		• 30 sets/ 375 mm • 30 sets/ 250 mm *2	30 sets/ 187.5 mm
		• 25 sets/ 375 mm • 25 sets/ 250 mm *2	25 sets/ 187.5 mm
		• 20 sets/ 375 mm • 20 sets/ 250 mm *2	20 sets/ 187.5 mm
Thick 1	91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)	• 20 sets/ 375 mm • 20 sets/ 250 mm *2	20 sets/ 187.5 mm
Thick 1+	121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)		
Thick 2	158 to 209 g/m^2 (42 to 55 5/8 lb)		

- *1: A "tray paper full" condition is determined to exist when either the number of stacked copy sets or the height of stacked sheets reaches a predetermined value.
- *2: FS-534SD

(b) Paper size

Type	Size
Regular size paper	• A5, B5S, B5, A4S, A4, B4, A3 • Letter S, Letter, Legal, Ledger, Exective S, Exective • 16K S, 16K, 8K
Custom size paper	• Max.: Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

(c) No. of sheets to be stapled

Modes	Max. No. of sheets to be stapled
Normal mode*	• Thin paper / Plain paper / Recycled paper: 50 sheets • Thick 1: 30 sheets • Thick 1+/ Thick 2: 15 sheets
Cover sheet mode	48 sheets (Thin paper/ Plain paper / Recycled paper) + 2 sheets (Thick paper)

- *: Maximum stapling sheets/ sets for printing high image density is 20 x 20 sets.

(d) Stapling position

Stapling position	Paper size
Back/Front of the corner (45 degree)	• A4, A3, B5, B4 • Letter, Ledger
Back/Front of the corner (Parallel)	• A4S, B5S, A5 • Letter S, Legal
Side: Parallel 2 point	• A4S, A4, A3, B5S, B5, B4, A5 • Letter S, Letter, Legal, Ledger

15.3.4 Saddle stitching/folding

NOTE

- **FS-534SD saddle tray only**

Supported paper in saddle stitching/ folding	• Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb)) • Thick 1 (91 g/m2 to 120 g/m2 (24 3/16 lb to 31 15/16 lb)) *1, *2 • Thick 1+ (121 g/m2 to 157 g/m2 (32 3/16 lb to 41 3/4 lb)) *1, *2 • Thick 2 (158 g/m2 to 209 g/m2 (42 lb to 55 5/8 lb)) *1, *2
Supported paper sizes	• A4S, B4, A3, A3 Wide, SRA3 • Letter S, Legal, Ledger • 8K • Custom size paper (Width: 210 mm to 320 mm (8 1/4 inches to 12 5/8 inches), Length: 279.4 mm to 457.2 mm (11 inches x 18 inches))
Supported mode and basis weight	• Normal mode: 52 g/m2 to 90 g/m2 (13 13/16 lb to 23 15/16 lb) • Cover mode: 52 g/m2 to 209 g/m2 (13 13/16 lb to 55 5/8 lb) *3 • Thick paper mode: 91 g/m2 to 209 g/m2 (24 3/16 lb to 55 5/8 lb)
Number of sheets stacked on the saddle tray	• 1 sheet to 3 sheets: 20 sets • 4 sheets to 10 sheets: 10 sets • 11 sheets to 20 sheets: 5 sets
Number of stitching sheets	• Normal mode: 2 sheets to 20 sheets (maximum 80 pages) • Cover mode: 2 sheets to 20 sheets (maximum 80 pages) *4
Stapling position	Saddle stitching (2 staples)
Number of folding sheets	• Normal mode: 5 sheets • Thick paper mode: 1 sheet

- *1: For saddle stitching, available only with 1 cover sheet of cover mode
- *2: For folding, available only with 1 cover sheet
- *3: Use only 1 sheet as a cover sheet for cover mode
- *4: Cover sheet: 1 sheet (52 g/m2 to 209 g/m2 / 13 13/16 lb to 55 5/8 lb) + body page: 19 sheets (52 g/m2 to 90 g/m2 / 13 13/16 lb to 23 15/16 lb)

15.3.5 Tri-folding

NOTE

- **FS-534SD saddle tray only**

Supported paper in tri-folding	• Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb))
Supported paper sizes	• A4S • LetterS • 16KS
Number of tri-folding sheets and sets *	• 1 sheet folding: 30 sets • 2 sheet foldings: 10 sets • 3 sheet foldings: 10 sets

- *: Up to 3 sheets in tri-folding

15.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the main body)
Max. power consumption	56 W or less
Dimension	• 528 mm (W) x 641 mm (D) x 1,023 mm (H) (20 13/16 inches (W) x 25 1/4 inches (D) x 40 1/4 inches (H))

	• 658 mm (W) x 641 mm (D) x 1,065 mm (H) (25 7/8 inches (W) x 25 1/4 inches (D) x 41 15/16 inches (H)) * 1
Weight	• 40.0 kg (88 3/16 lb) • 64.0 kg (141 1/8 lb) *2

- *1: Size when the paper output tray is pulled out
- *2: FS-534SD

15.5 Operating environment

- Conforms to the operating environment of the main body.

16. FS-536/FS-536SD

16.1 Type

Name	Multi staple finisher (FS-536) Finisher-contained center-staple and tri-fold device (FS-536SD)
Type	Freestanding
Document alignment	Center
Stapling function	Center 2-point stapling method by fixed stapler (FS-536SD)
Consumable	Staples (5,000 staples / cartridge)

16.2 Function

Mode	• Sort • Group • Sort offset • Group offset • Sort staple • Center staple (FS-536SD) • Center fold (FS-536SD) • Tri-folding (FS-536SD)

16.3 Paper process ability

16.3.1 Non sort/sort/group

(1) Main tray

NOTE

- **If either the number or height of stacked sheets reaches the specified value, "Tray paper full" is determined.**

(a) Number of stacked sheets

Paper type	Basis weight	Maximum number of stacked sheets		
		A5/A5S/InvoiceS or less	B5/B5S or greater, A4S/ LetterS or less	B4/Legal or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets	• 3,000 sheets (FS-536) • 2,000 sheets (FS-536SD)	1,500 sheets
Plain paper				
Recycled paper				
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets		
Postcard	-			
Envelope	-			
OHP film	-			
Label sheet	-			
Letterhead	-			

(b) Height of stacked sheets

Paper length	Maximum height of stacked sheets
A4S/LetterS or less	375 mm (14 3/4 inches) (FS-536), 250 mm (9 13/16 inches) (FS-536SD)
B4/Legal or greater	187.5 mm (7 3/8 inches)

(c) Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 130 mm x Length 139.7 mm (Width 5 1/8 inches x Length 5 1/2 inches)

(2) Sub tray

(a) Paper capacity

Paper type	Basis weight	Maximum capacity
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	200 sheets
Plain paper		
Recycled paper		
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets
Postcard	-	
Envelope	-	

Paper type	Basis weight	Maximum capacity
OHP film	-	
Label sheet	-	
Letterhead	-	
Tab paper	-	

(b) Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 1,200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

16.3.2 Sort offset/group offset

(1) Main tray

NOTE

- **If either the number or height of stacked sheets reaches the specified value, "Tray paper full" is determined.**

(a) Number of stacked sheets

Paper type	Basis weight	Maximum number of stacked sheets		
		less than B5	A4/A4S/Letter/LetterS/B5	B4/B5S/Legal or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets	• 3,000 sheets (FS-536) • 2,000 sheets (FS-536SD)	1,500 sheets
Plain paper				
Recycled paper				
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets		

(b) Height of stacked sheets

Paper length	Maximum height of stacked sheets
A4S/LetterS or less	375 mm (14 3/4 inches) (FS-536), 250 mm (9 13/16 inches) (FS-536SD)
B4/Legal or greater	187.5 mm (7 3/8 inches)

(c) Paper size

Type	Size
Regular size paper	A5, B5S, B5, A4S, A4, B4, A3, SRA3, A3 Wide Letter, LetterS, Legal, Ledger, Exective, ExecticeS, 16KS, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

16.3.3 Sort staple

(1) Main tray

(a) Paper capacity

Paper type	Basis weight	No. of sheets to be stapled	Max. capacity (Number of stacked sheets/Height of stacked sheets)		
			A4/B5/Letter	A4S/LetterS or less	B4/Legal or greater
• Thin paper • Plain paper • Recycled paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	2 sheets to 9 sheets	200 sets *	100 sets	
		10 sheets to 20 sheets	50 sets		
		21 sheets to 30 sheets	30 sets		
		31 sheets to 40 sheets	25 sets		
		41 to 50 sheets	20 sets		

- *: 100 sets for thin paper or recycled paper

(b) Paper size

Type	Size
Regular size paper	A5, B5S, B5, A4S, A4, B4, A3 LetterS, Letter, Legal, Ledger, ExectiveS, Exective, 16KS, 16K, 8K
Custom size paper	• Max.: Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

(c) No. of sheets to be stapled

Mode	Max. No. of sheets to be stapled
Normal mode *1	Thin paper / Plain paper / Recycled paper: 50 sheets *2

Mode	Max. No. of sheets to be stapled
	Thick paper (91 to 120g/m2 (24 3/16 to 31 15/16 lb)): 30 sheets *2
	Thick paper (121 to 209 g/m2 (32 3/16 to 55 5/8 lb)): 15 sheets *2
Cover sheet mode	48 sheets (75 g/m^2 (19 15/16 lb), 80 g/m^2 (21 1/4 lb), 90 g/m^2 (23 15/16 lb)) + 2 sheets (163 g/m^2 (43 3/8 lb), 200 g/m^2 (53 3/16 lb))

- *1: Maximum stapling sheets/ sets for printing high image density is 20 x 20 sets.
- *2: For an original including different size of paper, the number of sheets to be stapled indicates the maximum number of sheets of the stapled largest paper.

(d) Stapling position

Stapling position	Paper size
Back/Front of the corner (45 degree)	A4, A3, B5, B4, Letter, Ledger
Back of the corner (Parallel)	A4, A3, Letter, Ledger
Back/Front of the corner (Parallel)	A4S, 5S, A5, LetterS, Legal
Side: Parallel 2 point	A4S, A4, A3, B5S, B5, B4, A5, LetterS, Letter, Legal, Ledger

16.3.4 Center staple/folding

Supported paper in center staple /folding	• Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb)) • Thick 1 (91 g/m2 to 120 g/m2 (24 3/16 lb to 31 15/16 lb)) *1, *2 • Thick 1+ (121 g/m2 to 157 g/m2 (32 3/16 lb to 41 3/4 lb)) *1, *2 • Thick 2 (158 g/m2 to 209 g/m2 (42 lb to 55 5/8 lb)) *1, *2
Supported paper sizes	A4S, B4, A3, A3 wide, LetterS, Legal, Ledger, 8K, Custom size paper (Width: 210 mm to 320 mm (8 1/4 lb to 12 5/8 lb), length: 279.4 mm to 457.2 mm (11 lb to 18 lb))
Supported mode and basis weight	Normal mode: 52 g/m2 to 90 g/m2 (13 13/16 lb to 23 15/16 lb)
	Cover mode: 52 g/m2 to 209 g/m2 (13 13/16 lb to 55 5/8 lb) *3
	Thick paper mode: 91 g/m2 to 209 g/m2 (24 3/16 lb to 55 5/8 lb)
Number of sheets stacked on the saddle tray	1 sheet to 3 sheets: 20 sets
	4 sheets to 10 sheets: 10 sets
	11 sheets to 20 sheets: 5 sets
Number of center staple sheets	Normal mode: 2 sheets to 20 sheets (maximum 80 pages)
	Cover mode: 2 sheets to 20 sheets (maximum 80 pages) *4
Number of folding sheets	Normal mode: 5 sheets
	Thick paper mode: 1 sheet

- *1: For center staple, available only with 1 cover sheet of cover mode
- *2: For folding, available only with 1 cover sheet
- *3: Use only 1 sheet as a cover sheet for cover mode
- *4: Cover sheet: 1 sheet (52 g/m2 to 209 g/m2 (13 13/16 lb to 55 5/8 lb)) + body page: 19 sheets (52 g/m2 to 90 g/m2 (13 13/16 lb to 23 15/16 lb))

16.3.5 Tri-folding

Supported paper in tri-folding	Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb))	
Supported paper sizes	A4S, LetterS, 16KS	
Number of tri-folding sheets and sets *	1 sheet folding	30 sets
	2 sheets folding	10 sets
	3 sheets folding	

- *: Up to 3 sheets in tri-folding

16.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the main body)
Power consumption	105 W or less
Dimension	528 mm (W) x 635 mm (D) x 1,023 mm (H) (20 13/16 inches (W) x 25 inches (D) x 40 1/4 inches (H))
	658 mm (W) x 635 mm (D) x 1,065 mm (H) (25 7/8 inches (W) x 25 inches (D) x 41 15/16 inches (H)) *1
Weight	FS-536: 36 kg (79 3/8 lb)/FS-536SD: 60 kg (132 1/4 lb)

- *1: Size when the paper output tray is pulled out

16.5 Operating environment

- Conforms to the operating environment of the main body.

17. PK-520

17.1 Type

Name	Punch kit
Type	FS-integrated type punching operation device

17.2 Functions

Punching method	Stops and punches every paper
No. of holes	• Japan: 2 holes • North America: 2-3 holes switching • Europe: 2-4 holes switching • Sweden: 4 holes
Supported mode	Punch mode
Applicable post processing mode	Sort, Group, Staple

17.3 Paper

Size	• B5S, B5, A4S, A4, B4, A3 • Letter S, Letter, Legal, Ledger, Exective S, Exective • 16KS, 16K, 8K
Supported paper	Conforms to the operating environment of the main body. • Thin paper (52 g/m^2 to 59 g/m^2(13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m^2 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)) • Thick 1 (91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)) • Thick 1+ (121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)) • Thick 2 (158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)) • Thick 3 (210 g/m^2 to 256g/m^2(55 7/8 lb to 68 1/8 lb)) • Thick 4 (257 g/m^2 to 300g/m^2(68 3/8 lb to 79 13/16 lb))
Punch prohibited paper	• Label paper, Tab paper, OHP film, Translucent paper, Holed paper • Other paper that may interfere with the operation of the punch kit or the punch blade

17.4 Machine specification

Power requirement	DC 24 V (supplied from the finisher)
	DC 5 V (supplied from the finisher)
Max. power consumption	Included in the max. power consumption of finisher
Dimension	61 mm (W) x 492 mm (D) x 142 mm (H) (2 3/8 inches (W) x 19 3/8 inches (D) x 5 9/16 inches (H))
Weight	Approx. 1.8 kg (3 15/16 lb)

17.5 Operating environment

- Conforms to the operating environment of the main body.

18. FS-537/FS-537SD

18.1 Type

Name	Multi staple finisher (FS-537) Finisher-contained center-staple and tri-fold device (FS-537SD)
Type	Freestanding
Document alignment	Center
Stapling function	Center 2-point stapling method by fixed stapler (FS-537SD)
Consumable	Staples (5,000 staples / cartridge)

18.2 Function

Mode	• Non sort • Sort • Sort offset • Group offset • Sort staple • Center staple (FS-537SD) • Center fold (FS-537SD) • Tri-folding (FS-537SD)

18.3 Staple

Exit tray	Main tray		
Supported paper sizes in stapling	A5, B5S/B5, B6S, A4S/A4, B4, A3 LetterS/Letter, Legal, Ledger, ExectiveS/Exective, 16KS/16K, 8K Custom size paper (Width: 182.0 mm to 297 mm (7 3/16 inches to 11 11/16 inches), Length: 148.5 mm to 431.8 mm (5 7/8 inches to 17 inches))		
Number of sheets stapled by paper type and size	Defined condition		No. of sheets to be stapled
	Paper type	Paper size	
	Plain paper / Thin paper / Recycled paper	A4, Legal	100 sheets *1, *2
		B4, Ledger FD: 298 to 389 mm (11 47/64 to 15 5/16 inches)	65 sheets *1, *2
		A3, A5, Ledger FD: 150 mm or less, 390 mm or greater (5 7/8 inches or less, 15 3/8 inches or greater)	50 sheets *1, *2
	81 to 90 g/m^2 (21 9/16 lb to 23 15/16 lb)	-	30 sheets *1, *2
	Cover sheet mode (maximum)		98 sheets (75 g/m^2 (19 15/16 lb): Plain paper) + 2 sheets (163 g/m^2 (43 3/8 lb))
Staple positions	Front/back of the corner (45 degrees)	A4, A3, B4, B5, Letter, Ledger	
	Front/back of the corner (parallel)	A4S, B5S, A5, LetterS, Legal	
	Center staple two points	A4S/A4, A3, B5S/B5, B4, A5, LetterS/Letter, Legal, Ledger	

- *1: For an original including different size of paper, the number of sheets to be stapled indicates the maximum number of sheets of the stapled largest paper.
- *2: The number of sheets can be stapled in a booklet including Z-folded pages is shown below.
- X+10Z ≦ number of sheets can be stapled (A4: 100 sheets)
- X: Paper not Z-folded
- Z: Z-folded paper
- Example) Paper not Z-folded: 40 sheets / Z-folded paper: 5 sheets
  - 40 + 10 x 5 = ≦ 100 sheets (number of sheets can be stapled) -> Can be stapled

18.4 Capacity

Exit tray	Mode	Paper type		Paper size	Number of stacked sheets
Sub tray *1	Normal ejection	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		-	200 sheets
		Special paper	Postcard		20 sheets
			Envelope		
			OHP film		
			Label sheet		
		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))			

Exit tray	Mode	Paper type		Paper size	Number of stacked sheets
Main tray *2	Sort, group	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		A4S/LetterS or less *2 B5/B5S or greater	FS-537: 3000 sheets/ FS-537SD: 2500 sheets
				B4/Legal or greater	1500 sheets *3
				A5S/Invoice or less	500 sheets
		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))		-	20 sheets
	Sort offset, group offset	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		A/4A4S/B5/Letter/ LetterS	FS-537: 3000 sheets/ FS-537SD: 2500 sheets
				B4/B5S/ Legal or greater	1500 sheets *3
				less than B5	500 sheets
		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))		-	20 sheets
	Staple	Paper type	Number of sheets stapled	Paper size	Number of sets stacked
		Plain paper, Recycled paper (60 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb))	2 to 9 sheets	A4/B5/Letter	200 sets
				A4S/LetterS or less	100 sets
				B4/ Legal or greater	100 sets *3
		Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb))	10 to 20 sheets	-	50 sets
			21 to 30 sheets		30 sets
			31 to 40 sheets		25 sets
			41 to 50 sheets		20 sets
			51 to 60 sheets		15 sets
			61 to 100 sheets		10 sets

- *1: 35 mm (1 3/8 inches) in stack height
- *2: 375 mm (143/4 inches) in stack height (A4S, LetterS, or smaller sizes)(FS-537), 250 mm (913/16 inches) in stack height (A4S, LetterS, or smaller sizes)(FS-537SD)
- *3: Protection used depending on the stacked number for B4 or larger sizes.

18.5 Center Fold

Supported paper in center folding	Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) Plain paper (60 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)) Thick 1 (91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)) *1 Thick 1+ (121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)) *1 Thick 2 (158 to 209 g/m^2 (42 to 55 5/8 lb)) *1	
Supported paper sizes	A4S, B4, A3, A3 wide (12 $^1/_4$ x 18), SRA3, LetterS, Legal, Ledger, 8K Custom size paper (Width: 210 mm to 320 mm (8 1/4 inches to 12 5/8 inches), Length: 279.4 mm to 457.2 mm (11 inches x 18 inches))	
Number of sets stacked on the exit tray by paper type and size	1 to 5 sheets folding *2	All sizes of supported paper: 35 sets (except thick paper)

- *1: Available only with 1 sheet
- *2: Up to 5 sheets in center folding

18.6 Tri-folding

Supported paper in tri-folding	Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))	
Supported paper sizes	A4S, LetterS, 16KS	
Number of sets stacked on the exit tray by paper type and size *	1 sheet folding	50 sets
	2 sheets folding	40 sets
	3 sheets folding	30 sets

- *: Up to 3 sheets in tri-folding

18.7 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the main body)
	DC 5 V ± 3 %, 3.3 V ± 3 % (generated inside FS-537)
Power consumption	140 W or less (95 ppm), 110 W or less (75 ppm)
Dimension	FS-537: 622 mm / FS-537SD: 635 mm (W) x 692 mm (D) x 1,031 mm (H) (FS-537:24 1/2 inches / FS-537SD: 25 inches (W) x 27 1/4 inches (D) x 40 9/16 inches (H))
	FS-537: 752 mm / FS-537SD: 776 mm (W) x 692 mm (D) x 1,077mm (H) (FS-537: 29 39/64 inches / FS-537SD: 30 9/16 inches (W) x 27 1/4 inches (D) x 42 3/8 inches (H)) *
Weight	FS-537: 47 kg (103 5/8 lb)/FS-537SD: 73 kg (160 15/16 lb)

- ***: Size when the paper output tray is pulled out**

18.8 Operating environment

- Conforms to the operating environment of the main body.

19. PK-523

19.1 Type

Name	PK-523
Type	Finisher-contained hole punch device with auto paper alignment mechanism

19.2 Function

Punching method	Slide cam method by DC brush motor
No. of holes	2-3 holes, 2-4 holes, Sweden 4 holes
Hole diameter	2 holes / φ 8.0 mm - 3 holes /φ 8.0 mm, 2 holes /φ 6.5 mm - 4 holes /φ 6.5 mm, 4 holes /φ 6.5 mm
Hole pitch	2 holes / 70 mm pitch - 3 holes / 108 mm pitch, 2 holes / 80 mm pitch - 4 holes / 80 mm pitch, 4 holes / 70 mm, 21 mm pitch
Supported mode	Punch mode, through mode
Applicable post processing mode	Sort, Group, Staple

19.3 Paper

Size	A5/A5S, B5/B5S, A4/A4S, B4, A3 Letter/LetterS, Legal, Ledger, Invoice/InvoiceS, Exective/ExectiveS, 16K/16KS, 8K, Foolscap, F4
Supported paper	Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)), Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)), Thick 1 (91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)), Thick 1+ (121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)), Thick 2 (158 to 209 g/m^2 (42 to 55 5/8 lb)), Thick 3 (210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)), Thick 4 (257 to 300 g/m^2 (68 3/8 to 79 13/16 lb))
Basis weight	52 to 300 g/m^2 (13 13/16 to 79 13/16 lb)
Punch prohibited paper	Long size paper, post card (190 g/m^2 (50 9/16 lb)), envelope, OHP film, label sheet, letter head, index paper, and the other paper that may interfere with the operation of the punch unit or the punch blade

19.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the FS-537)
	DC 5.1 V ± 3 % (supplied from the FS-537)
Max. power consumption	17 W or less
Dimension	146.2 mm (W) x 639.2 mm (D) x 233.8 mm (H) (5 3/4 inch (W) x 25 3/16 inch (D) x 9 3/16 inch (H))
Weight	4.5 kg (9 15/16 lb)

19.5 Operating environment

- Conforms to the operating environment of the main body.

20. ZU-609

20.1 Type

Name	Z folding unit
Type	Finisher-contained
Document alignment	Center

20.2 Function

Mode	• Through (no folding) • Z-folding • Double-folding • Z-folding+punch (PK is installed) • Double-folding+punch (PK is installed)

20.3 Paper process ability

20.3.1 Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 1200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

20.3.2 Number of sets stacked of the Z-folding

Number of sheets being Z-folded per one job	Number of sheets without being Z-folded: Number of sets stacked in main tray *
1 sheet	1 to 40 sheets: 20 sets / 41 to 90 sheets: 10 sets
2 sheets	1 to 80 sheets: 10 sets
3 sheets	1 to 70 sheets: 4 sets
4 sheets	1 to 60 sheets: 3 sets
5 sheets	1 to 50 sheets: 2 sets
6 to 10 sheets	No dropping

- *: Paper size (52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)) B4, A3, Legal, Ledger, 8K

20.3.3 Number of stacked sheets of double-folding

Number of sheets being double-folded per one job	Number of sheets without being double-folded: Number of sets stacked in main tray *
1 sheet	1 to 40 sheets: 20 sets / 41 to 90 sheets:10 sets
2 sheets	1 to 80 sheets: 10 sets
3 sheets	1 to 70 sheets: 4 sets
4 sheets	1 to 60 sheets: 3 sets
5 sheets	1 to 50 sheets: 2 sets
6 to 10 sheets	No dropping

- *: Paper size (52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)) Legal

20.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the finisher) DC 5 V ± 3 % (supplied from the finisher)
Power consumption	Regulated on finisher system
Dimension	101 mm (W) x 506 mm (D) x 186 mm (H) (3 inches (W) x 19 15/16 inches (D) x 7 5/16 inches (H))
Weight	Approx. 4.5 kg (9 15/16 lb)

20.5 Operating environment

- Conforms to the operating environment of the main body.

21. JS-602

21.1 Type

Name	Job Separator
Type	Add-on finishing device externally mounted on top of finisher
Installation	Fixed to finisher
Document alignment	Center

21.2 Function

Mode	Group, Sort (during copy, print, or fax mode)

21.3 Paper

Type	Size	Basis weight	Maximum capacity	
Plain paper	A3, B4, A4/A4S, B5/B5S, A5S	60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)	100 sheets	A4, 8 1/2 x 11 (80 g/m^2(21 1/4 lb))
			50 sheets	Except A4, 8 1/2 x 11 (80 g/m^2(21 1/4 lb)) (Height: up to 28 mm (1 1/8 inches))

21.4 Machine specification

Power requirement	DC 24 V (supplied from the finisher)
	DC 5 V (supplied from the finisher)
Dimension	341 mm (W) x 537 mm (D) x 149 mm (H) (13 7/16 inches (W) x 21 1/8 inches (D) x 5 7/8 inches (H))
Weight	1.75 kg (9 15/16 lb)

21.5 Operating environment

- Conforms to the operating environment of the main body.

22. PI-507

22.1 Type

Name	Post inserter unit
Type	External type finisher

22.2 Function

Auto sheet feeding (online operation)	Feeds the sheet to finisher automatically under the instruction from the main body.
Manual sheet feeding (offline operation)	Feeds the sheet to finisher under the instruction from the operation panel of PI.
	You can select the following processing modes.
	• Staple mode • Punch mode (when PK-523 is installed on finisher) • Center staple mode (FS-537SD) • Double-folding mode (FS-537SD)

22.3 Paper

Size	Tray /Up	• A4/A4S, B5/B5S, A5 • Incoice/InvoiceS, Lettter/LetterS, Exective/ Exective S, 16K/16KS • Custom paper (Max. 320 x 297 mm (12 5/8 x 11 11/16 inches), Min. 182 x 139 mm (7 3/16 x 5 1/2 inches))
	Tray /Lw	• A3, B4, A4/A4S, B5/B5S, A5, SRA3, A3 wide • Incoice/InvoiceS, Lettter/LetterS, Exective/Exective S, Legal, Leger, 16K/16KS, 8K • Custom paper (Max. 320 x 457.2 mm (12 5/8 x 18 inches), Min. 182 x 139 mm (7 3/16 x 5 1/2 inches))
Paper type	Plain paper, Thick paper (91 to 209 g/m^2 (24 3/16 to 55 9/16 lb)), label paper	
Basis weight	60 g/m^2 to 209 g/m^2 (15 15/16 lb to 55 9/16 lb)	
Capacity	Tray /Up	200 sheets (80 g/m^2 (12 1/4 lb)) or 30 mm (1 3/16 inches) or less in height
	Tray /Lw	200 sheets (80 g/m^2 (12 1/4 lb)) or 30 mm (1 3/16 inches) or less in height

22.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the finisher)
Max. power consumption	Regulated on finisher system
Dimension	513 mm (W) x 635 mm (D) x 222 mm (H) (20 3/16 inches (W) x 25 inches (D) x 8 3/4 inches (H))
Weight	Approx. 12 kg (26 7/16 lb)

22.5 Operating environment

- Conforms to the operating environment of the main body.

23. CU-101

23.1 Type

Name	Clean unit	
Type	Exhaust scrubber	
Suction system	Dual inline fan + suction fan (MK-745)	
Trapping system	UFP trap	UFP filter
	Deodorant trap	Deodorant filter
UFP collection efficiency	UFP filter collection capacity: More than 99 %	
Maximum suction air volume	0.8 m^3/min (Avg. flow velocity: 0.1 m/sec)	
Exhaust direction	Exhaust downflow	

23.2 Machine specification

Power requirement	DC 24 V (supplied from the MFP main body)
Max. power consumption	12 W or less (CU-101 + MK-745)
Dimension	450 mm (W) x 106 mm (D) x 320 mm (H) 17 11/16 inches (W) x 4 3/16 inches (D) x 12 5/8 inches (H)
Weight	Approx. 2.0 kg (4 7/16 lb)

23.3 Operating environment

- Conforms to the operating environment of the MFP main body.

23.4 Note for the Specifications

- **These specifications are subject to change without notice.**

24. CU-102

24.1 Type

Name	Clean unit	
Type	Exhaust scrubber	
Suction system	Dual parallel fan	
Trapping system	UFP trap	UFP filter
UFP collection efficiency	UFP filter collection capacity: More than 99 %	
Maximum suction air volume	1.2 m^3/min (Avg. flow velocity: 0.1 m/sec)	
Exhaust direction	Exhaust downflow	

24.2 Machine specification

Power requirement	DC 24 V (supplied from the MFP main body)
Max. power consumption	17 W or less
Dimension	480 mm (W) x 75 mm (D) x 314 mm (H) 18 7/8 inches (W) x 3 1/16 inches (D) x 12 3/8 inches (H)
Weight	Approx. 2.0 kg (4 7/16 lb)

24.3 Operating environment

- Conforms to the operating environment of the MFP main body.

24.4 Note for the Specifications

- **These specifications are subject to change without notice.**

25. FK-514/FK-515

25.1 Basic specifications

25.1.1 General specifications

Applicable lines	PSTN, PBX	
Protocol	Group 3 (compliant to ITU-T T.30) • ECM • F-code communication • Konica Minolta non-standard protocol: No • Group 4: No	
Maximum data rate	33,600 bps	
Coding method	• MH • MR • MMR • JBIG	
Modulation method	• V.27ter • V.29 • (V.33): V.33 is for reception only. • V.17 • V.8 • V34	
Communication resolution	Normal	8 x 3.85 lines / mm
	Fine	• 8 x 7.7 lines / mm • 200 x 200 pixels / inch
	Super fine	• 8 x 15.4 lines / mm (Reception only) • 16 x 15.4 lines / mm • 400 x 400 pixels / inch
	Ultra fine	600 x 600 pixels / inch
	• Fixed to mm at transmission (except 600 dpi) • mm and inch are available at reception. • Selection by using the [Resolution] key. • You can not change settings on every page.	
Fax memory size	• 128 GB (128 GB in the main body HDD 250 GB is used as a memory.) • 10000 pages can be stored including all Scan/Box/Printer/Fax documents.	
FAX memory backup	Image data is saved in HDD.	
Multiple line connection	Four lines can be connected by installing four fax kit. (FK-514 x 2units and FK-515 x 2units)	
Communication time	Level of 2 seconds (Konica Minolta standard A4 chart, 33,600 bps)	
Resolution conversion	At sending: • Scanner: inch • Density conversion: inch -> mm • Communication: mm / inch (600 dpi only)	
	At receiving (mm): • Density conversion: mm -> inch • Print: inch	
	At receiving (inch): • Density conversion: inch -> inch • Print: inch	

25.1.2 Scanning section

Scanning method	Platen documents	Impossible to scan book documents (book mode)
	DF book documents	• Scanning mode: 1-Sided, 2-Sided and cover + 2-Sided • Possible to scan the DF mixed size documents.
Scanning resolution	Normal	8 x 3.85 lines / mm
	Fine	8 x 7.7 lines / mm
	Super fine	16 x 15.4 lines / mm
	Ultra Super fine	600 x 600 dpi
	• Selection by using the [Resolution] key. • You can not change settings on each page.	
Mixed original	Possible to mix documents of different sizes. • After rotation of images, sizes are changed by EOM every time the length of the scan line is changed at sending. • Possible to mix sizes (A and B).	
Density selection	Selection by using the [Density] key. [Light] / [Standard] / [Dark] • You can not change settings on each page.	
Maximum scanning document width	297 mm (A3 width) both for DF and Platen	
Maximum scanning document length	Regular mode	• 431.8 mm • 17 inches

	Long original mode	• 1000 mm • Originals with unlimited length are not available.
Effective scanning range	When a document is smaller than the effective scanning area, the area outside the document is erased. • DF scanning: left, right, head and bottom mask of 3mm each (0 to 5mm) • Platen scanning: left, right and head mask of 2mm each (fixed)	
Automatic reduction at sending	A3 -> B4, A3 -> A4 and B4 -> A4 • Automatically reduced and sent in accordance with the recording paper size of remote station.	
Rotation transmission	A4 / Letter size only. LEF documents are rotated by 90 degrees at sending to send it in SEF direction.	
Page division at sending	No	
Halftone	256 level error diffusion • Users can change settings by using the [Text], [Text/Photo, Printed], [Text/Photo, PhotoPaper], [Photo, Printed], [Photo, PhotoPaper], [Dot Matrix Original] or [Copied Paper] key.	
Automatic background control (ABC)	Yes	
Finished stamp	Yes	
Scanning time	80 sheets/min (When DF is installed, letter (81/2 x 11) or A4, scanning, 300dpi)	

25.1.3 Recording section

Recording	Laser electrostatic printing system
Recording paper size	• All sizes except for B6 and Postcard (See the copier basic specifications.) • Auto recording paper selection • Note: A5 and B5 paper is used only for A5 and B5 reception respectively
Recording paper cassette	• Tray 1 to Tray 4 • Manual bypass tray • LCT
Staple	No
Recording speed	Compliant to the copier standards
Recording size	A3 size maximum • A3 fix as reception record ability declaration in protocol.
Maximum reception length	1000 mm • In case of being larger than the maximum reception length, a communication error occurs. • When the memory over occurs during reception, the received data is printed.
Reduction record	When the received image information is larger than the recording paper, it is automatically reduced to the recording paper size and recorded.
Page separation record	Yes
Offset output at each communication	Yes (Job unit reception only)
Rotation reception	Yes • Images are rotated by 90 degrees and recorded on the recording paper in LEF direction.
Two-sided reception	Yes (Utility Mode)
2-in-1 reception	No
Smoothing	Yes (at converting the resolution)
Print/Fax output settings	Yes
Bypass print	Possible to use as an active tray in auto selection mode.
Total page counter	Yes
Monitor print	No (copy at sending)

25.1.4 Line connecting section

NCU type	A-A~, line control by silicon DAA
Connecting terminal	RJ11
Modem	Matsushita MMD-5020
Modem sending level	-10 to -15 dBm (Country spec)
DTMF sending level	-10 to -15 dBm (Country spec)
Receiving sensitivity	• G3 reception: up to -48 dB • Tone reception: up to -52 dB
Dialing signal	DP (10pps) and DTMF

25.1.5 Control panel section

FAX / copy / scan / box	Mode switching	by panel key selection • Possible to change modes during an operation of each mode. • No mode return by the auto reset.
	Initial screen after power-on	Screen at power off or facsimile screen. (depending on parameter setting)

Interruption during scanning	When pressing the interrupt key while scanning documents to be transmitted, INTERRUPT LED blinks. Copy screen appears after scanning is completed.
Interruption during recording in the FAX mode screen	Operations by using the interrupt key are invalid.
FAX start	by using the start key.
Stop	by using the stop key. • Possible to appoint to stop from the job list so as to stop during operations of the multi jobs.
FAX free memory display	RDH memory • % indication on LCD during scanning, recording and stand-by. File memory (RAM disk/HDD) • Display in the JOB LIST screen
File existence indication	In the following cases, the data Indicator (LED) on the control panel lights up. • Upon reception of FAX • When a document is saved in the bulletin board box, polling TX box, and memory RX user box.
Display during the FAX communications	No display by LCD panel icon. Icons are displayed on the FAX waiting screen and the FAX operation screen.
Error display	Displayed by LCD panel
Time display	Date and time displayed. • Present time is displayed on the sub-area.
Remote station ID display	Yes • The TSI/CSI display during communications
Other operation keys	[Application] key: Moves to the FAX application function setting screen. • Check Setting key: Valid • */# button: Yes • Help button: Yes

25.2 Functional specifications

25.2.1 Dial functions

Abbreviated dial	Yes • Possible to register 2000 stations. (1000 with no HDD installed) • 38 digits maximum • Possible to search the remote station list in the order of abbreviation numbers and Indexes. • The registration names must be 24 digits or less. • Registration name auto registration function: No • Second FAX No. registration function: No • Impossible to register the communication mode. • Possible to register Line Setting (Overseas TX, ECM Off, V.34 OFF, check destination, line selection (Only with four fax kit installed)). • There is no registration function provided of [Scan Setting], [Comm. Setting] except the line setting.
Program dial	400 dials (200 with no HDD installed)
Key pad dial	38 digits maximum
Group dial	Up to 100 groups. Possible to register group names. Up to 500 remote stations per each group by abbreviated numbers only.
Dialing of multiple remote stations	605 remote stations maximum (abbreviated 500 + key pad 100 + manual input e-mail destination 5)
Manual redial	Yes • Possible to select from five latest histories.
Automatic redial	Yes • Automatically redial when remote stations are busy or return no responses or transmission errors occur at the memory transmission • Possible to receive during redial waiting. • Another call is possible. (Not possible when there are two redial waiting jobs.)
JOB LIST redial	No
Pulse/tone switching	Possible to switch by using the [*] key on the key pad or [Tone] key on the Direct Input screen.
PBX mode setting	Yes • Possible to turn ON or OFF the PBX connection and to register the external access code. • There is the automatic removal function of external access code to registered abbreviated remote station No. Nothing is automatic addition function.
Pseudo off-hook	Yes • The manual start is possible by using the pseudo off-hook. • [Off-Hook] key on LCD
Call progress detection	DC loop (Depends on country spec). • Dial tone (Ditto) • Busy tone (Ditto) • Second dial tone (Ditto)
Dial parameters	Dialing signals DP (10 pps) and DTMF (Depends on country spec) • Pause between digits1 to 7 seconds (Users cannot set.) • Pause between digits 3 seconds (fixed)

Phone book dial (Abbr)	Yes • After appointing character to search, use up and down cursor keys.
External phone connection jack	Yes • Depends on specifications of each country.

25.2.2 Transmission

Timer transmission	24-hour (max.) timer setting is possible. (one station, sequential multi-stations transmission)		
Batch transmission	No		
Timer polling	24-hour (max.) timer setting is possible. (one remote station polling and sequential polling reception)		
No. of timers	21 transmissions and pollings in total. The number of sequential pollings is one.		
Memory transmission reservation	The memory transmission reservation is possible during communications. (memory registration of the DF memory transmission and platen memory transmission documents)		
DF transmission reservation	No		
Fold erase transmission	No		
Frame erase transmission	Yes • Platen documents and book documents • DF documents are possible as well. • The regular mode only		
Automatic layout transmission (Outside documents are erased.)	No		
Reverse-image transmission	No		
2in1 transmission	No		
Book transmission	No		
Scanning size appointment	Yes • Scans documents in the appointed size irrelevant to document sizes and sends them. Transmits documents in the appointed scanning width and length at the platen transmission and the DF transmission. • The effective image area is based on the center in the DF transmission. (Corner-base scanning in mixed-size document mode.)		
Document image quality appointment	Yes • Selected from [Text], [Text/Photo, Printed], [Text/Photo, PhotoPaper], [Photo, Printed], [Photo, PhotoPaper], [Dot Matrix Original] or [Copied Paper].		
Multi-stations	605 stations maximum (Abbr dial x 500 stations, keypad dial x 100 stations and E-Mail x 5) The timer appointment is possible.		
Memory transmission	The default is the memory transmission (△: Only the communication mode is possible)		
	Quick memory transmission	DF transmission	○
		Platen transmission	One page only
		Mixture of DF/platen documents	×
		Advanced communication function	△ Only the communication mode is possible
		Manual transmission	○
		Transmission when the printer is active	×
	Memory transmission	DF transmission	○
		Platen transmission	○ After the Separate Scan setting, the setting is read with the [Start] key and the communication is started up with the [Finish] key.
		Mixture of DF/platen documents	○ After the Separate Scan setting, the setting is read with the [Start] key and the communication is started up with the [Finish] key.
		Advanced communication function	○
		Manual transmission	×
		Transmission when the printer is active	○
Forwarding transmission	Yes • Automatic forward: Automatic forward of received documents to remote stations registered in advance. • Manual forward: No		
Interruption transmission	Single station transmission reservation automatically interrupts between stations of multiple station communications.		
International communication	Yes		

	• When the remote station is V17, communications start at TCM 7,200 bps. When the remote station is V34, they start at 28,800 bps.
V34-off transmission	Transmitted without V34 mode. The V34-off appointment can be registered in the abbreviated / program dials. This is used when the transmission error code related to V34 occurs frequently.
Long original transmission	Yes
DF irregular-size transmission	Possible to transmit irregular-size originals from DF. The main scanning is the max. document width set on DF, and the sub scanning depends on document length. • Width: 297 mm/11.69 inch at the maximum • Length: 1000 mm/39.37 inch at the maximum
Incomplete TX hold	Yes
Instant batch transmission (Bundled transmission)	No
Confidential transmission	Transmission to the confidential BOX of a remote station by using the F code (SUB/SID). Appoints the confidential BOX No. by using SUB. Set the communication password using SID as required.
Relay request	The relay request by using the F-code (SUB/SID). Appoints the relay BOX No. by using SUB.
Relay transmission	No
Transmission error prevention	• Check destination: When transmitting, compares the FAX No. specified with the FAX No. information (CSI) of the remote station and transmits only when both numbers are the same. • Destination check display function: When transmitting, displays the list of addresses to allow to check the address again and then transmit. • Restrict FAX broadcasting: Prohibits to specify multiple addresses for FAX transmission.
Confirm Address (at calling and registration)	During direct dialing, call is initiated only if the destination number inputted a first time matches with that inputted a second time.

25.2.3 Polling

Polled transmission	• There is one documents which allows the transmission setting. • Documents are deleted after transmission. • No additional scanning of documents. • No DF polled transmission reservation.
Polling reception	The sequential polling is possible. 600 stations maximum (abbreviated dial x 500 stations and key pad dialing x 100 stations)
Call turnaround polling	No
Called turnaround polling	Yes
Closed polling transmission	No
Selective polling	Transmission and reception. • The selective polling by using the F-code (SEP). • There is a bulletin board BOX polling reception. • No confidential BOX polling transmission.

25.2.4 Line seizure mode and telephone function

Line seizure mode switching	Possible to set the automatic reception and the manual reception. • When the memory is full and there are no polling transmission reservations, the automatic reception mode is cancelled. • No switching of the auto / manual mode by appointing data and time.
Ans. Machine mode	Yes • At the time of the CNG detection with the external phone off hook, a line is caught to start reception.
Automatic reception mode	Time and the number of rings. • No. of rings: 0 to 15 times (country spec) • Time: 0 to 15 secs (country spec)
Hold	No
Handset	No
One-piece phone	Country spec
Call to external telephone	No
Conversation reservation	No

25.2.5 Message reception and record

Confidential reception	Reception at the confidential BOX appointed at the F-code (SUB). When a transmission password (SID) has been set for the confidential box, the SID should be specified as the communication password. At the time of printing documents received at the confidential BOX, a password to access to the confidential BOX is required.
Closed reception	Closed reception by using the SID (PWD) (Junk FAX)

Adaptive (automatic) reduction	87 to 96 % in steps of 1 % Becomes the adaptive reduction when “Print Separate Fax Pages = OFF” is selected. In case of the adaptive reduction, if the reception image size is a little bigger than recording paper, the size is automatically reduced so that it becomes within the recording paper size and is recorded.
Fixed reduction	No
Page separation record	Yes. Does not overlap at the division.
Equal size recording	Records the received image at an equal size. When the reception size is larger than A3 form, excessive image is destructed.
Cassette selection	Appropriate paper size auto selection • When paper is running out, paper is provided from another cassette with the same size of paper. • Tray-fix mode available
2-in-1 reception	No

25.2.6 Memory function

Display of used memory space	Yes (Fax screen: RDH memory)
Memory RX	A password is required for printing received files. The password (up to 8 digits) is set when the memory RX mode is set in the utility mode. First page can be printed.
Memory substitute reception	Yes (when there is no paper / no toner)

25.2.7 Various communication function

Short protocol	No
ECM	Yes • Frame size: 64 byte / 256 byte
Communication timer	Yes • 24 hours maximum. 21 including one for sequential polling timer.
Redial waiting	Five redial timers maximum
Error page resending	No (becomes the error page redial.)
Error page redial	Effective to both quick memory transmission and memory transmission. Redial and retransmission in case of RTN or comm error. • Redial interval: follows the busy redial interval. • Num. of redials: 0 to 7 times (different counter from the busy redial)
Total page number print	Yes • Automatic print to the TTI in memory transmission. • Added when the number of document pages is appointed for quick memory transmission.
Header memo	No
TTI (Transmitting terminal ID)	Yes • 30 characters maximum • Added not to the original read image, but to the top of the transmission image while in the image rotation being specified. • The registration of up to 20 sender names is available. • It is possible to make a selection to decide whether or not the address is printed at the header position.
RTI (Receiving terminal ID)	Yes • After processing the enlargement and/or reduction operations, a record is made at the bottom position specified before conducting an image rotation. • Date, time and page no. are recorded.
Fax remote diagnosis	Yes
MH fix	Yes. Setting can be made from the service mode.
Document insertion after dialing	Yes • Document insertion is possible after dialing. Starts calling by using the [Start] button.
Communication history	Yes • The last 700 communication histories are recorded in the communication journal.
Electronic key counter	Yes • The number of transmitted pages to each user. Limit control is not done.
Key counter	Yes
Coin vendor	Yes (Support timing varies depending on models.) • It is possible to use with FAX.

25.2.8 User lists / reports

Activity report	• The total of 700 communications (sending and reception) can be recorded. • Automatic output: Daily / Every 100 Comm. / 100/ Daily • Manual output: Yes
Timer Reservation TX Report	Automatic output: Users can turn ON / OFF.
TX result report	• Automatic output (ON / If TX Fails / OFF)

	• Possible to output with images
Sync transmit reservation report	Automatic output: Users can turn ON / OFF.
Broadcast result report	
Polled Tx reserve report	
Polled Tx result report	
Polled Rx result report	
Sequential poll, Rx reservation report	
Sequential poll, Rx result report	
An address polling Rx reserved report	
Relay TX Result Report	
Relay Request Report	
PC-Fax TX Error Report	
Address Book List	Manual output (numeric order: output to be produced for each destination type)
Program List	Manual output
Group List	
Fax Setting List	
Bulletin TX Report	Automatic output: Users can turn ON / OFF.
Confidential RX Report	Auto output at the F code confidential reception. Automatic output: Users can turn ON / OFF.
Subject/Text list	Manual output

25.2.9 Other user functions

Fax ID	Number ID: 20 digits (max.)
Header note	No
Language Selection	Yes

25.3 Network fax specifications

25.3.1 Internet Fax

Image memory capacity	128 GB (128 GB of 250 GB of the hard disk is used as a memory.)	
Max. no. of stored pages	Approx. 10000 pages (numbers of pages in the case of storing standard A4-size pages containing approximately 700 characters at “fine” resolution)	
Scanning line density	Ultra fine	600 dpi x 600 dpi
	Super fine	400 dpi x 400 dpi
	Fine	200 dpi x 200 dpi
	Normal	200 dpi x 100 dpi
Transmission mode (File type)	monochrome (TIFF-FX)	
Transmission coding methods	• TIFF-S (MH) • TIFF-F (MR/MMR)	
Max. scanning size	• 420 mm x 297 mm (A3 size) • Width: 297 mm • Length: 1000 mm at the maximum	
Max. recording size	• 420 mm x 297 mm (A3 size) • Length: 1000 mm at the maximum • When receiving the data of an original that is longer than the paper sizes set in the paper trays, the data is printed according to the setting of [Print Separate Fax Pages].	
Treatment of transmission error	Mail transmitted again.	None
	Internet fax Rx error report	When documents cannot be sent to the SMTP server, transmission error report to be printed/not printed can be set.
		When MDN/DSN response is received, to be printed/not to be printed can be set.
		When MDN/DSN response is received, transmission result is indicated on the transmission control report.
		MDN/DSN response monitoring time can be set in the range from 0 to 99 hours.
Mail reception	Mail acquisition interval	Can be set to 1 to 60 minutes.
	Manual POP reception	Possible
	Reception by specifying a box	Not Available (except Memory RX)
	Received document size	width: A4 / B4 / A3
	Reception coding system	TIFF-S (MH), TIFF-F (MR/MMR)
List/report	Print DSN message	Output can be produced

	Print MDN message	Output can be produced
	Print receipt mail text	Output can be produced
	Network fax relay result report	Output can be produced
	Network fax activity report	• During automatic output: Shared with Fax Activity Report. Max. 100. • During manual output: Shared with Fax Activity Report. Max. 700.
	Network fax Rx error report	Output can be produced

25.3.2 IP Address Fax

Image memory capacity	128 GB (128 GB of 250 GB of the hard disk is used as a memory.)	
Max. no. of stored pages	Approx. 10000 pages (numbers of pages in the case of storing standard A4-size pages containing approximately 700 characters at “fine” resolution)	
Scanning line density	Ultra fine	600 dpi x 600 dpi
	Super fine	400 dpi x 400 dpi
	Fine	200 dpi x 200 dpi 300 dpi x 300 dpi (Color: Compact PDF only)
	Normal (Monochrome only)	200 dpi x 100 dpi
Transmission mode (File type)	• Color (PDF, Compact PDF, TIFF-C) / Monochrome (TIFF) • Capable of transmitting TIFF-C (JPEG) • Incapable of receiving TIFF-C (JPEG) (any receiving TIFF-C jobs are discarded)	
Coding method	MH/MR/MMR (applicable only to monochrome format)	
Max. scanning size	• 420 mm x 297 mm (A3 size) • Width: 297 mm • Length: 1000 mm at the maximum	
Max. recording size	• 420 mm x 297 mm (A3 size) • 1000 mm in the maximum recording size • Originals in excess of 1000 mm cannot be received. • In the color mode, the reception of an original in excess of 432 mm in length is unavailable. • When receiving the data of an original that is longer than the paper sizes set in the paper trays, the data is printed according to the setting of [Print Separate Fax Pages]. (Only available for monochrome reception)	
Treatment of transmission error	Retry	Retry when a transmission error occurs at SIP Direct SMTP transmission. Error codes subject to retry: N10, N12, N15 to 17 only
	TX error report	• TX error report printing ON/OFF can be set. • A TX error report is printed when a TX error occurs and the TX error is recorded in the activity.
Reception	Received document size	Max. document width to be received: A3
	Reception coding system	• TIFF-S (MH) • TIFF-F (MR/MMR) • PDF • Compact PDF • TIFF-C
	Received file size	• Unlimited (depends on the space available for use in the HDD) • The file is not received, if the space available for use in the HDD is 107 MB or less. • If the space available for use in the HDD runs out during reception, the session is abnormally terminated and the received file is deleted.
Report	Print receipt mail text	Possible
	IP address fax activity report	• During automatic output: Shared with Fax Activity Report. Max. 100. • During manual output: Shared with Fax Activity Report. Max. 700.
	IP address fax result report	In common use with fax reception result report
	IP Address Fax RX Error Report	Possible

26. i-Option

26.1 Available function for i-Option

- The functions available for i-Option are as follows.

NOTE

- **To use the i-Option functions, upgrade kit UK-211 must be installed. (Except LK-111, LK-115 v2 and My Panel) Not required for bizhub C658/C558/C458**

26.1.1 List of advanced functions

Function	Overview	Required option
PDF processing	Allows you to use features such as encryption of a PDF file, addition of an electronic signature, addition of file properties, creation of a PDF/A-based PDF file, and PDF linearization when sending a PDF file.	• LK-102 v4 or LK-110 v2
Voice guidance *	This function also helps people who have difficulty viewing the screen to carry out operations more smoothly via voice guidance. It is available on the Enlarge Display screen, Guidance screen, or Accessibility Settings screen. English and Japanese are available.	• LK-104 v3
Searchable PDF	Allows you to paste transparent text data into a PDF file when converting scanned original data into PDF files, and create a searchable PDF file. This function automatically creates text information from scanned images using OCR character recognition technology.	• LK-105 v4
Barcode font	Allows you to generate a bar code based on data sent to this machine from the ERP (Enterprise Resource Planning) system, and print it from this machine. You can directly print data without using the printer driver.	• LK-106
Unicode font	Allows you to print text information (unicode) of multiple languages sent to this machine from the ERP (Enterprise Resource Planning) system. You can directly print data without using the printer driver.	• LK-107
OCR font	OCR font can be used on this machine. OCR font is standardized font that enables text to be appropriately recognized when the OCR (Optical Character Recognition) is used.	• LK-108
Encryption PDF (Digital ID)	Allows you to encrypt the PDF using a user digital signature when sending a PDF file.	• LK-110 v2
Searchable PDF (Fax RX Document)	Allows you to create a text searchable PDF file when converting a received fax into a PDF file using the Forward TX function or TSI Routing function and sending it to PC.	
OOXML File Conversion	Allows you to send or store the scanned original data by converting it into an OOXML (DOCX or XLSX) file. Also allows you to paste transparent text data and create a text searchable OOXML file. This function automatically creates text information from scanned images using OCR character recognition technology.	
Compact PDF (Print RX Document)	Allows you to select a file type as Compact PDF when fetching the data stored in the box of this machine using the printer driver and sending it by E-mail or sending it to PC.	
High image quality compact PDF	This function improves the image processing accuracy when creating a Compact PDF data. This function improves the reproducibility of the colored characters or lines. Also, it allows you to set the reversed characters as the texts to be searched.	
E-mail RX Print	Allows you to print the file attached to an E-mail from this machine when the E-mail has been sent to the address of this machine.	
ThinPrint function	Allows you to enable the ThinPrint function on this machine. ThinPrint is such a function allows you to make a speedy print by compressing the data or controlling the marginal zone when sending a print job from ThinPrint Engine (.print Engine) to ThinPrint Client (.print Client). This machine operates as ThinPrint Client (.print Client).	• LK-111
Ubiquitous Printing	Ubiquitous printing is a function that executes print jobs, which are spooled in an MFP through the user's computer once, from any MFP in a ubiquitous group that consists of multiple MFPs.	• LK-114
TPM (Trusted Platform Module)	TPM (Trusted Platform Module) is a hardware chip used for processing such as information encryption and decryption. Security enhancement is realized by encrypting confidential information such as certificates and passwords of this machine. The TPM key used for encrypting confidential information on the machine is saved in a dedicated storage space mounted on the TPM chip. No external devices can access the storage space and the confidential information can be kept in utmost security. In addition, for future possible replacement of the TPM chip, information required for restoring the TPM key can be saved for backup in a USB memory device.	• LK-115 v2

Function	Overview	Required option
My Panel	Allows you to use the touch panel, which is customized only for you, through any MFP connected to the network. The touch panel customization settings are stored on the My Panel Manager server. If necessary, they can be changed on My Panel Manager.	• My Panel Manager Application license
My Address	Allows you to use a dedicated address book through any MFP connected to the network. The dedicated address book is stored on the My Panel Manager server. If necessary, it can be edited on My Panel Manager.	• My Panel Manager Device license

- *: To use voice guidance, in addition to LK-104 license activation, optional local interface kit EK-608 or EK-609 must be installed.

26.1.2 Activation procedures of i-Option

For details of the activation procedures, refer to the followings.

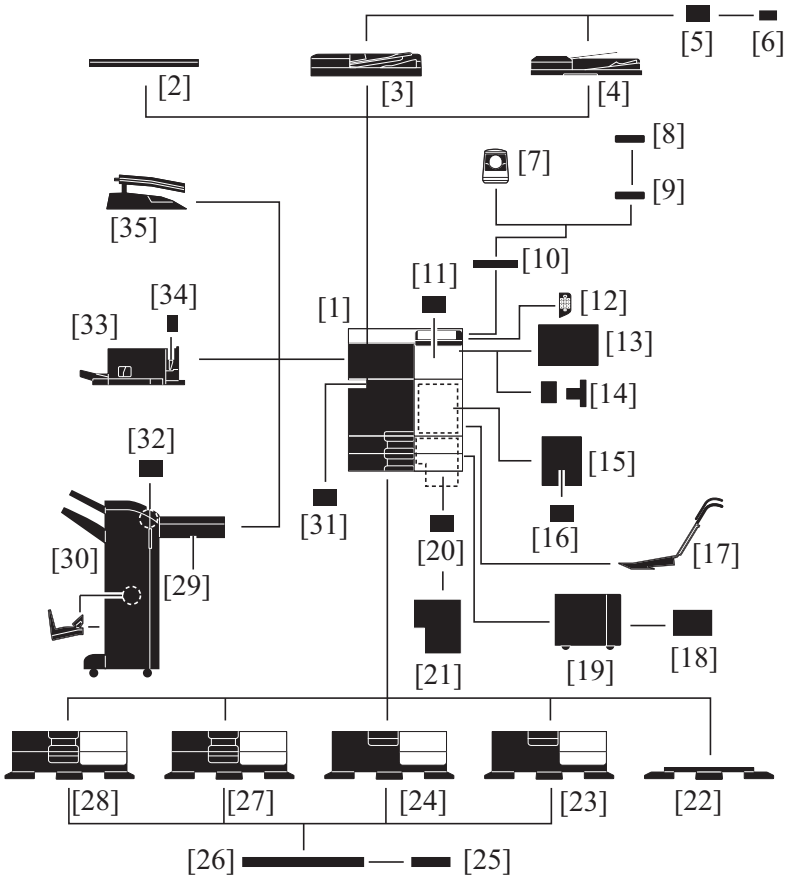
- Activation via Administrator Settings: License Settings
- Activation via Service Mode: I.8.3.10 License management - Activation

D OVERALL COMPOSITION

1. SYSTEM CONFIGURATION (bizhub C368/C308/C258)

1.1 System configuration

1.1.1 System front view 1



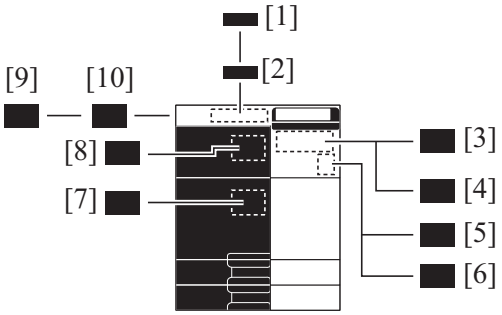
[1]	bizhub C368/C308/C258	[2]	Original Cover OC-511
[3]	Reverse Automatic Document Feeder DF-629	[4]	Dual Scan Document Feeder DF-704
[5]	Stamp Unit SP-501	[6]	Spare TX Marker Stamp 2
[7]	Authentication Unit AU-102	[8]	Authentication Unit AU-201S
[9]	Mount Kit MK-735	[10]	Working Table WT-506
[11]	Security Kit SC-508	[12]	Keypad KP-101
[13]	Clean Unit CU-101	[14]	Mount Kit MK-745
[15]	Fax Mount Kit MK-742 *1	[16]	Fax Kit FK-515 *1
[17]	Mount Kit MK-730	[18]	Transformer kit TK-101
[19]	Large Capacity Unit LU-302	[20]	Video Interface Kit VI-508
[21]	Image Controller IC-416	[22]	Desk DK-705 *2
[23]	Desk DK-510 *2*4	[24]	Paper Feed Cabinet PC-410
[25]	Power Supply BOX MK-734 *3	[26]	Heater HT-509
[27]	Paper Feed Cabinet PC-210	[28]	Paper Feed Cabinet PC-110
[29]	Relay Unit RU-513	[30]	Finisher FS-534/FS-534SD
[31]	Fax Kit FK-514	[32]	Punch Kit PK-520
[33]	Finisher FS-533	[34]	Punch Kit PK-519
[35]	Job Separator JS-506	-	-

- *1: Japan and North America only
- *2: Except for Europe area
- *3: Except for Japan
- *4: Large Capacity Unit LU-302 cannot be mounted when Desk DK-705 is installed.

NOTE

- **Use the desk or the paper feed cabinet without fail when installing on the floor in order to keep the function and quality of the unit.**

1.1.2 System front view 2



[1]	Condensation prevention heater power supply box MK-719 *1	[2]	Condensation prevention heater HT-510 *1
[3]	Local Interface Kit EK-608	[4]	Local Interface Kit EK-609
[5]	Upgrade Kit UK-212	[6]	Upgrade Kit UK-215
[7]	Keyboard Holder KH-102 *2	[8]	Hard Disk HD-524
[9]	i-Option LK-102 v3/104 v3/105 v4/106/107/108/110 v2/111/114/115 *3	[10]	Upgrade Kit UK-211

- *1: Japan only
- *2: Except for Japan
- *3: LK-115 v2 is to be soon mounted.

1.2 Optional configuration

1.2.1 Combination configuration of main body and document options

1	Main body	OC-511		
2	Main body	DF-629	SP-501	Spare TX Marker Stamp
3	Main body	DF-704	SP-501	Spare TX Marker Stamp

1.2.2 Combination configuration of main body and paper feed options

1	Main body	DK-705	
2	Main body	DK-510	
3	Main body	PC-110	LU-302
4	Main body	PC-210	LU-302
5	Main body	PC-410	LU-302

1.2.3 Combination configuration of main body and post-processing options

1	Main body	JS-506			
2	Main body	FS-533	PK-519		
3	Main body	RU-513	FS-534	PK-520	SK-602
4	Main body	RU-513	FS-534SD	PK-520	SK-602

1.2.4 Combination of main body and fax kit

(1) Japan, North America

1	Main body	FK-514 (main line)	FK-514 (line 2)	MK-742	FK-515 (line 3)	FK-515 (line 4)

(2) Europe

1	Main body	FK-514 (main line)	FK-514 (line 2)

1.2.5 Combination of main body (scanner section) and heater

(1) Japan

1	Main body (scanner section)	MK-719	HT-510

(2) International

- No optional settings

1.2.6 Combination configuration of paper feed options and dehumidifier heater

(1) Japan

1	DK-510 (standard equipment dehumidifier heater)	HT-509		
2	PC-110 (standard equipment dehumidifier heater)	HT-509	LU-302 (standard equipment dehumidifier heater)	TK-101
3	PC-210 (standard equipment dehumidifier heater)	HT-509	LU-302 (standard equipment dehumidifier heater)	TK-101
4	PC-410 (standard equipment dehumidifier heater)	HT-509	LU-302 (standard equipment dehumidifier heater)	TK-101

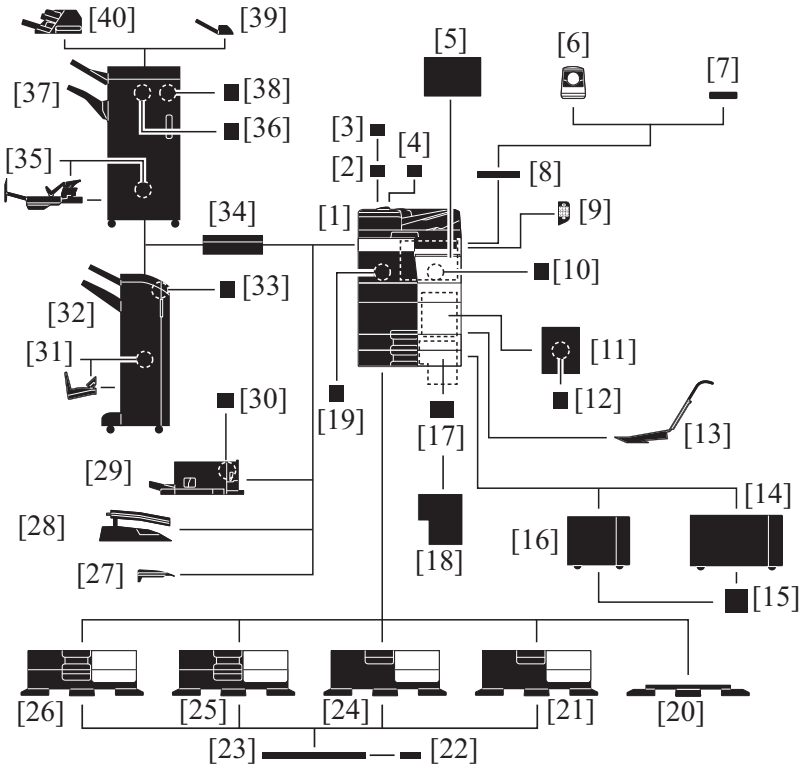
(2) International

1	DK-510	HT-509	MK-734		
2	PC-110	HT-509	MK-734	LU-302 (standard equipment dehumidifier heater)	TK-101
3	PC-210	HT-509	MK-734	LU-302 (standard equipment dehumidifier heater)	TK-101
4	PC-410	HT-509	MK-734	LU-302 (standard equipment dehumidifier heater)	TK-101

2. SYSTEM CONFIGURATION (bizhub C658/C558/C458)

2.1 System configuration

2.1.1 System front view 1



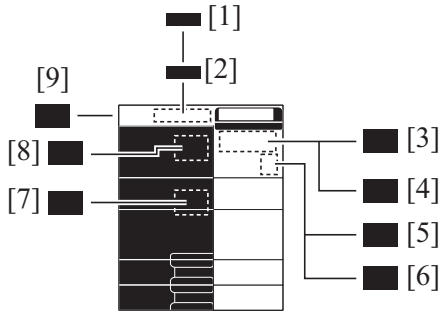
[1]	bizhub C658/C558/C458	[2]	Stamp Unit SP-501
[3]	Spare TX Marker Stamp 2	[4]	Double feed detection Kit UK-501
[5]	Clean Unit CU-102	[6]	Authentication Unit AU-102
[7]	Authentication Unit AU-201S	[8]	Working Table WT-506
[9]	Keypad KP-101	[10]	Security Kit SC-508
[11]	Fax Mount Kit MK-742 *1	[12]	Fax Kit FK-515 *1
[13]	Mount Kit MK-730	[14]	Large Capacity Unit LU-207
[15]	Transformer kit TK-101	[16]	Large Capacity Unit LU-302
[17]	Video Interface Kit VI-510	[18]	Image Controller IC-416
[19]	Fax Kit FK-514	[20]	Desk DK-705 *2*4
[21]	Desk DK-510 *2	[22]	Power Supply BOX MK-734 *3
[23]	Heater HT-509	[24]	Paper Feed Cabinet PC-415
[25]	Paper Feed Cabinet PC-215	[26]	Paper Feed Cabinet PC-115
[27]	Output Tray OT-506	[28]	Job Separator JS-506 *5
[29]	Finisher FS-533 *5	[30]	Punch Kit PK-519 *5
[31]	Saddle section (FS-536SD)	[32]	Finisher FS-536/FS-536SD
[33]	Punch Kit PK-520	[34]	Relay Unit RU-513
[35]	Saddle section (FS-537SD)	[36]	Z Folding Unit ZU-609
[37]	Finisher FS-537/FS-537SD	[38]	Punch Kit PK-523
[39]	Job Separator JS-602	[40]	Post Inserter PI-507

- *1: Japan and North America only
- *2: Except for Europe area
- *3: Except for Japan
- *4: Large Capacity Unit LU-302 and LU-207 cannot be mounted when Desk DK-705 is installed.
- *5: Can be equipped only to bizhub C558/C458

NOTE

- **Use the desk or the paper feed cabinet without fail when installing on the floor in order to keep the function and quality of the unit.**

2.1.2 System front view 2



[1]	Condensation prevention heater power supply box MK-719 *1	[2]	Condensation prevention heater HT-510 *1
[3]	Local Interface Kit EK-608	[4]	Local Interface Kit EK-609
[5]	Upgrade Kit UK-212	[6]	Upgrade Kit UK-215
[7]	Keyboard Holder KH-102 *2	[8]	Hard Disk HD-524
[9]	i-Option LK-102 v3/104 v3/105 v4/106/107/108/110 v2/111/114/115 v2		

- *1: Japan only
- *2: Except for Japan

2.2 Optional configuration

2.2.1 Combination configuration of main body and document options

1	Main body	Dual scan document feeder	UK-501	SP-501	Spare TX Marker Stamp

2.2.2 Combination configuration of main body and paper feed options

1	Main body	DK-705	
2	Main body	DK-510	
3	Main body	PC-115	LU-302 / LU-207
4	Main body	PC-215	LU-302 / LU-207
5	Main body	PC-415	LU-302 / LU-207

2.2.3 Combination configuration of main body and post-processing options

1	Main body	JS-506				
2	Main body	FS-533	PK-519			
3	Main body	RU-513	FS-536	PK-520	SK-602	
4	Main body	RU-513	FS-536SD	PK-520	SK-602	
5	Main body	RU-513	FS-537	PK-523	ZU-609	PI-507 / JS-602
6	Main body	RU-513	FS-537SD	PK-523	ZU-609	PI-507 / JS-602

2.2.4 Combination of main body and fax kit

(1) Japan, North America

1	Main body	FK-514 (main line)	FK-514 (line 2)	MK-742	FK-515 (line 3)	FK-515 (line 4)

(2) Europe

1	Main body	FK-514 (main line)	FK-514 (line 2)

2.2.5 Combination of main body (scanner section) and heater

(1) Japan

1	Main body (scanner section)	MK-719	HT-510

(2) International

- No optional settings

2.2.6 Combination configuration of paper feed options and dehumidifier heater

(1) Japan

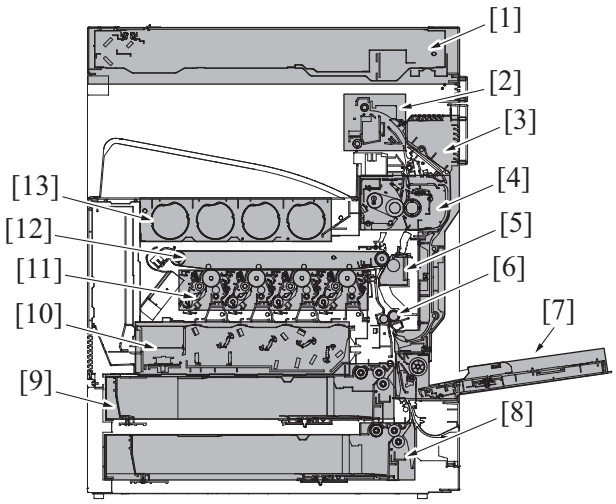
1	DK-510 (standard equipment dehumidifier heater)	HT-509

2	PC-115 (standard equipment dehumidifier heater)	HT-509	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101
3	PC-215 (standard equipment dehumidifier heater)	HT-509	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101
4	PC-415 (standard equipment dehumidifier heater)	HT-509	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101

(2) International

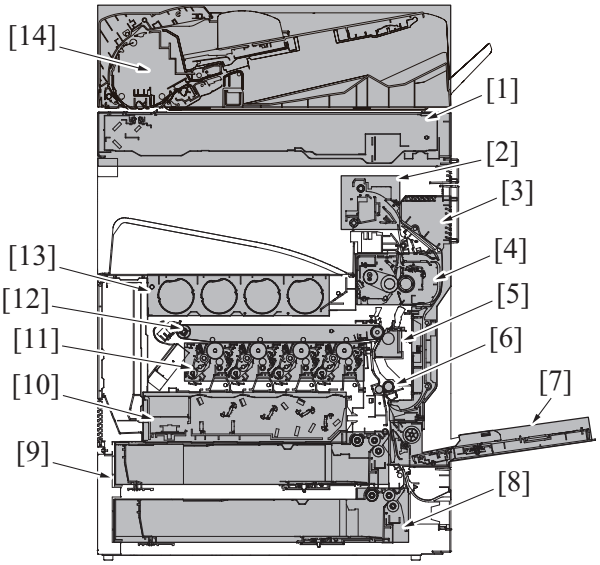
1	DK-510	HT-509	MK-734		
2	PC-115	HT-509	MK-734	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101
3	PC-215	HT-509	MK-734	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101
4	PC-415	HT-509	MK-734	LU-302 / LU-207 (standard equipment dehumidifier heater)	TK-101

3. SECTION CONFIGURATION (bizhub C368/C308/C258)



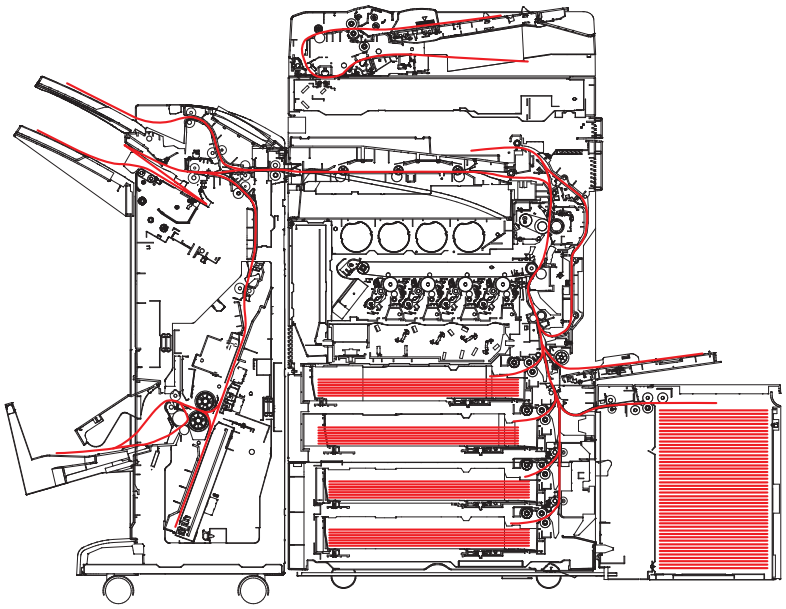
[1]	Scanner section	[2]	Paper exit/reverse section
[3]	Duplex section	[4]	Fusing section
[5]	2nd transfer section	[6]	Registration section
[7]	Paper feed section (Manual bypass tray)	[8]	Paper feed section (Tray 2)
[9]	Paper feed section (Tray 1)	[10]	Write section (PH section)
[11]	Photoconductor section/Developing section	[12]	1st transfer section
[13]	Toner supply section	-	-

4. SECTION CONFIGURATION (bizhub C658/C558/C458)



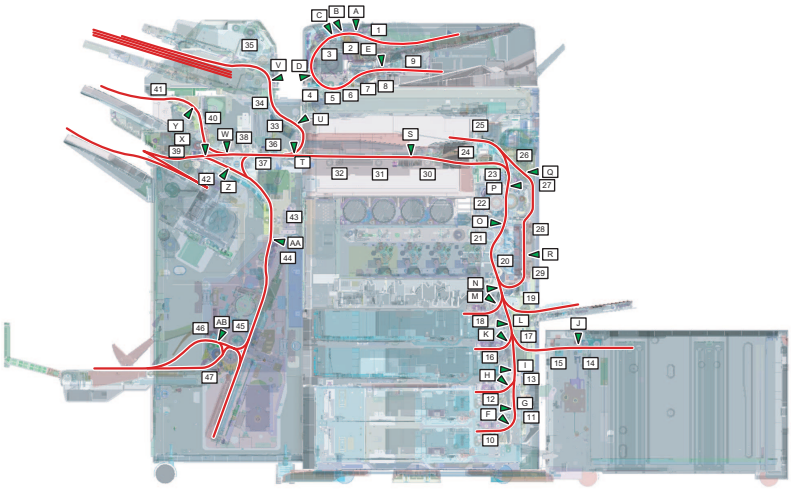
[1]	Scanner section	[2]	Paper exit/reverse section
[3]	Duplex section	[4]	Fusing section
[5]	2nd transfer section	[6]	Registration section
[7]	Paper feed section (Manual bypass tray)	[8]	Paper feed section (Tray 2)
[9]	Paper feed section (Tray 1)	[10]	Write section (PH section)
[11]	Photoconductor section/Developing section	[12]	1st transfer section
[13]	Toner supply section	[14]	Dual scan document feeder

5. PAPER PATH (bizhub C368/C308/C258)



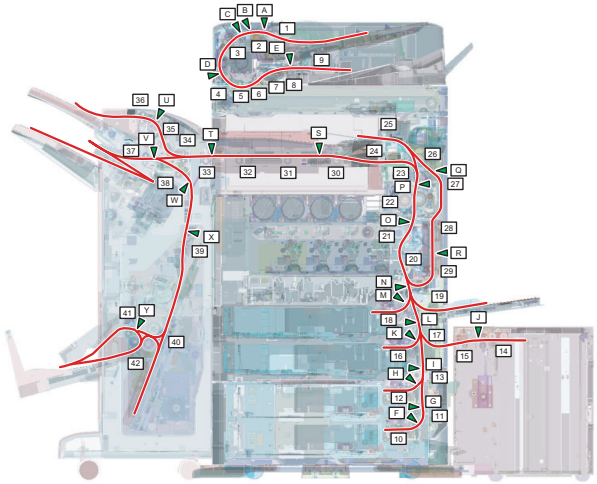
6. PAPER PATH (bizhub C658/C558/C458)

6.1 Main body + FS-537SD + RU-513 + LU-207 + PI-507



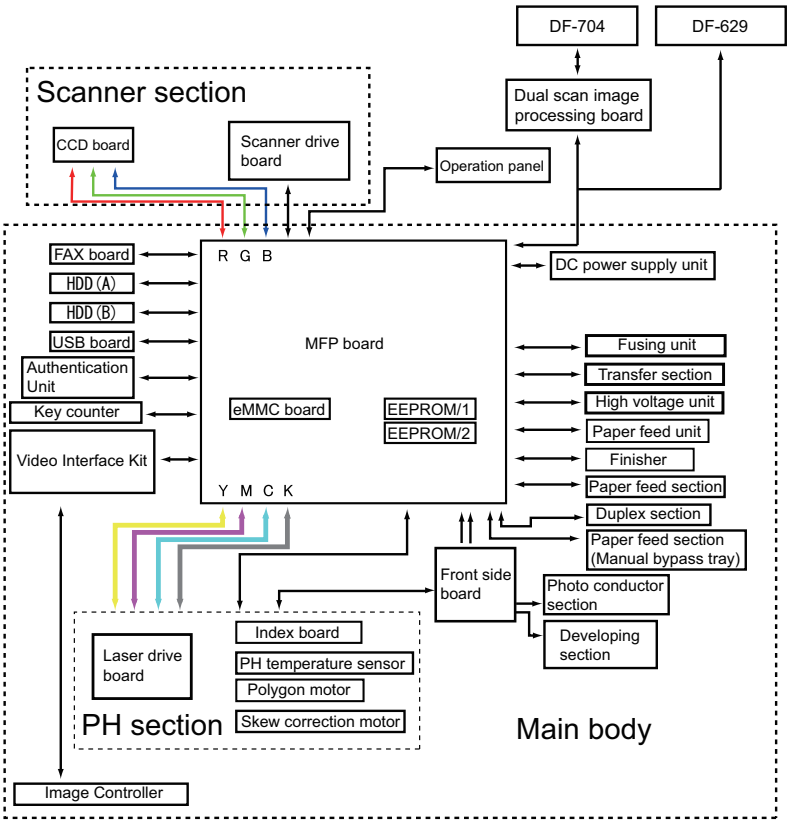
- List of drive rollers and sensors in the paper path: FS-537SD_RU-513_LU-207_PI-507_E.pdf

6.2 Main body + FS-536SD + RU-513 + LU-302

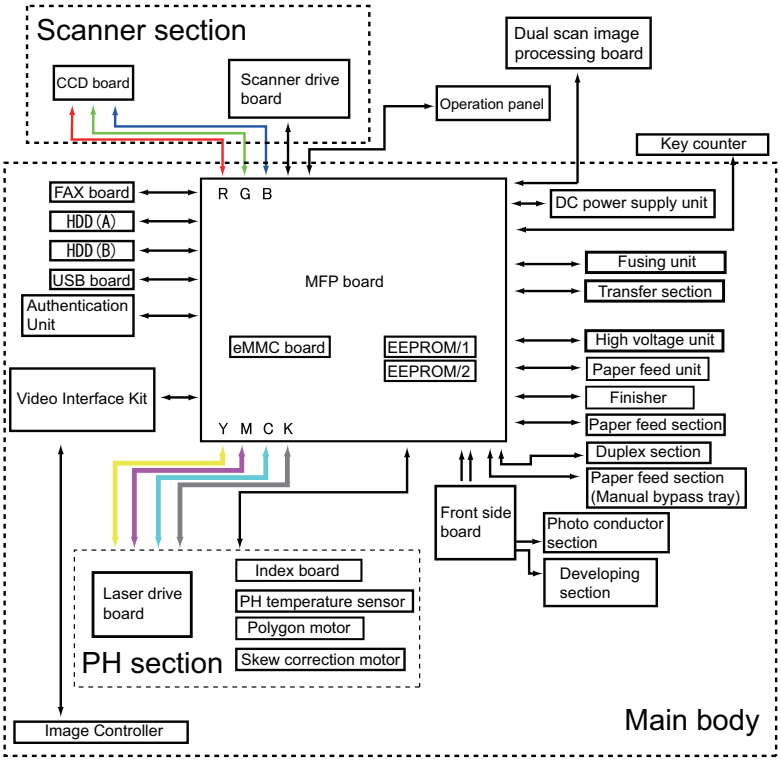


- List of drive rollers and sensors in the paper path: FS-536_RU-513_LU-302_E.pdf

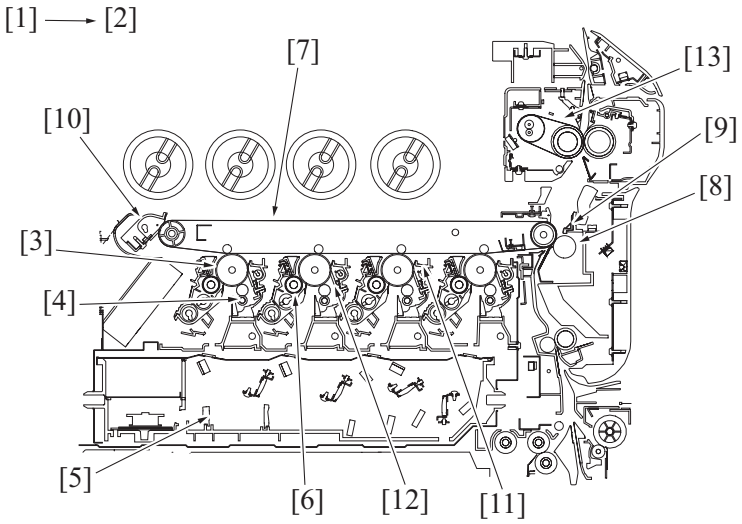
7. CONTROL BLOCK DIAGRAM (bizhub C368/C308/C258)



8. CONTROL BLOCK DIAGRAM (bizhub C658/C558/C458)

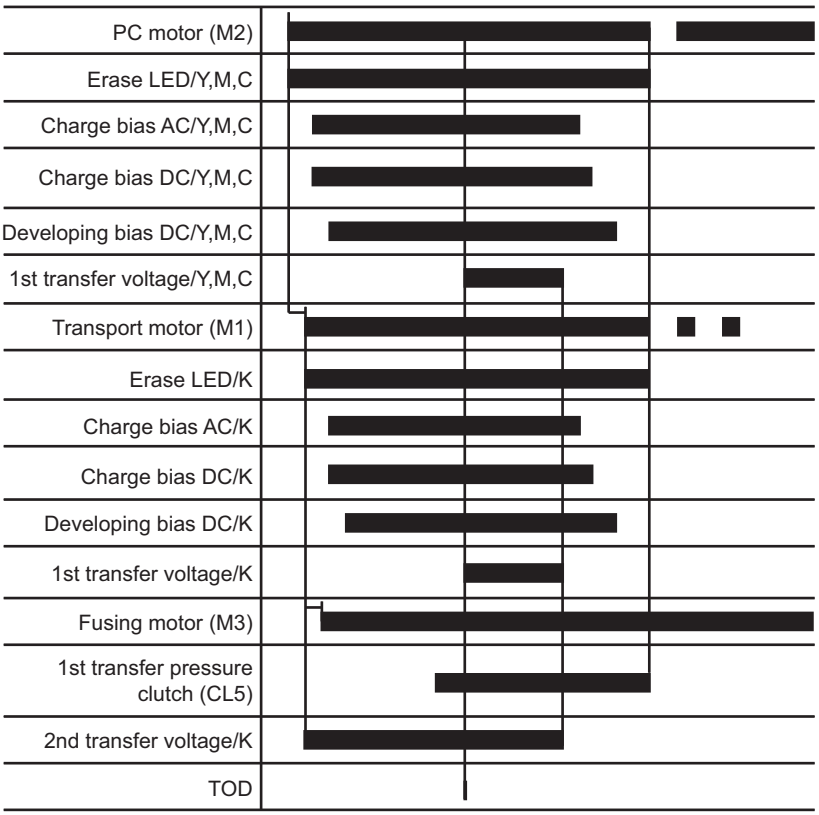


9. IMAGE CREATION PROCESS

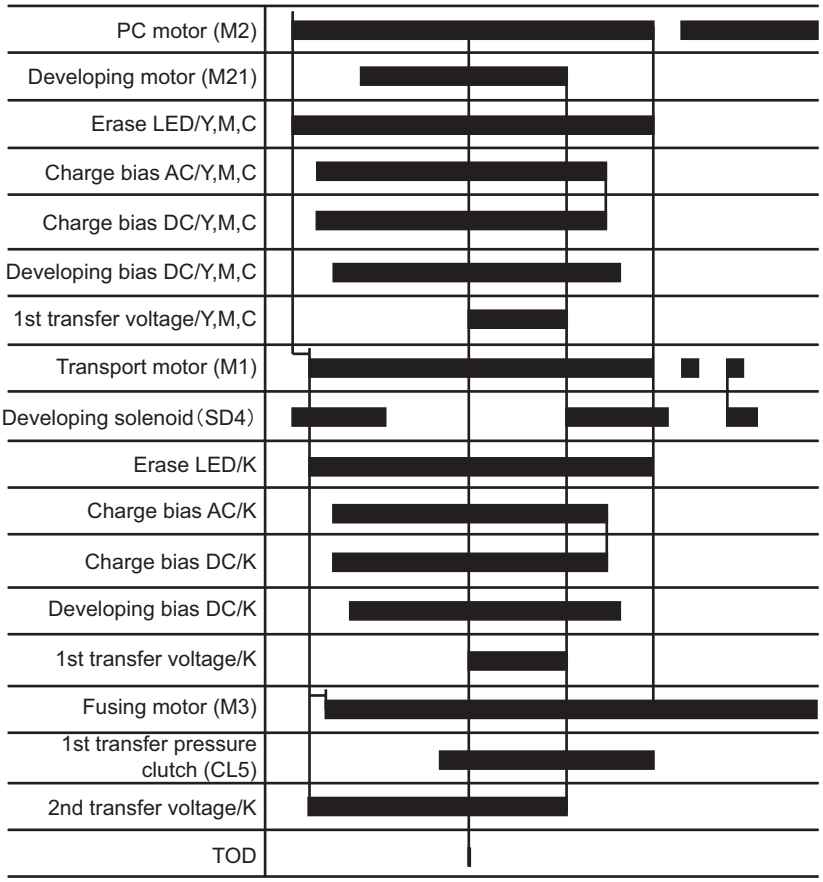


[1]	Photoelectric conversion	The light reflected off the surface of the original is separated into different colors using the color filters (R, G, and B); CCD then converts it into a corresponding electric signal and outputs the signal to the IR imaging processing section.
[2]	Printer image processing	• The electric signal is converted to digital image signals. After going through some corrections, video signals (C, M, Y, and K) are output to the printer image processing section. • D/A conversion will be performed after the VIDEO signals (Y, M, C, K) are corrected. This data will control the emission of the laser diode.
[3]	Photo conductor	The image of the original projected onto the surface of the photo conductor is changed to a corresponding electrostatic latent image.
[4]	Photo conductor charging Roller	Supply AC/DC charge on the photo conductor.
[5]	Laser exposure	Expose photo conductor to a laser beam to develop electrostatic latent image.
[6]	Developing	• The toner, agitated and negatively charged in the developer mixing chamber, is attracted onto the electrostatic latent image formed on the surface of the photo conductor. It is thereby changed to a visible, developed image. • AC and DC negative bias voltages are applied to the developing roller, thereby preventing toner from sticking to the background image portion.
[7]	1st image transfer	A DC positive voltage is applied to the backside of the transfer belt, thereby allowing the visible, developed image on the surface of each of the photo conductors (Y, M, C, and K) to be transferred onto the transfer belt.
[8]	2nd image transfer	A DC positive voltage is applied to the backside of the paper, thereby allowing the visible, developed image on the surface of the transfer belt to be transferred onto the paper.
[9]	Paper separation	The paper, which has undergone the 2nd image transfer process, is neutralized so that it can be properly separated from the transfer belt by the paper separator claws.
[10]	Transfer belt cleaning	Residual toner on the surface of the transfer belt is collected for cleaning by cleaning blade.
[11]	Main erase	The surface of the photo conductor is irradiated with light, which neutralizes any surface potential remaining on the surface of the photo conductor.
[12]	Photo conductor cleaning	The residual toner left on the surface of the photo conductor is scraped off.
[13]	Fusing	The visible toner image transferred onto the surface of the paper is melted by the heat of the fusing roller and fixed to the paper by pressure.

10. IMAGE FORMING CONTROL (bizhub C368/C308/C258)



11. IMAGE FORMING CONTROL (bizhub C658/C558/C458)



12. PROCESS SPEED (bizhub C368/C308/C258)

Paper Type/Mode	bizhub C368	bizhub C308 /C258
• Plain paper • Thin paper	166.4 mm/s	145.8 mm/s
• Thick 1 • Thick 1+	83.2 mm/s	
• Thick 2 • Thick 3 • Thick 4 • Envelop • Postcard	83.2 mm/s	
• OHP film *	166.4 mm/s	145.8 mm/s
• Gloss mode	83.2 mm/s	
• 1200 dpi mode	83.2 mm/s	

• *: Only the black mode is available to the OHP film.

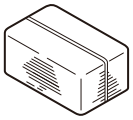
13. PROCESS SPEED (bizhub C658/C558/C458)

Paper Type/Mode	bizhub C658	bizhub C558	bizhub C458
• Plain paper • Thin paper	290.0 mm/s	252.2 mm/s	211.9 mm/s
• Thick 1 • Thick 1+	145.0 mm/s	126.1 mm/s	136.2 mm/s
• Thick 2	145.0 mm/s	126.1 mm/s	105.9 mm/s
• Thick 3 • Thick 4 • Envelope • Postcard	126.1 mm/s	126.1 mm/s	105.9 mm/s
• OHP film	126.1 mm/s	126.1 mm/s	211.9 mm/s
• Gloss mode	126.1 mm/s	126.1 mm/s	105.9 mm/s

E SERVICE TOOL

1. bizhub C368/C308/C258

1.1 Service material list

Name	Shape	Parts No.	Remarks
Cleaning pad		A5AWP001##	10pcs/1 pack
Hydro-wipe		65AA-9920	10pcs/1 pack

1.2 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
Color chart		1	9J06 PJP1 ##	
Monochrome chart		1	4040 PJP1 ##	

1.3 Utility tool

1.3.1 IC card information setting tool of AU-201/AU-201S/AU-202H/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader

(1) Outline

- Before connecting the AU-201/AU-201S/AU-202H/OMNIKEY 5427CK (AU-205H)/SCL-010 card reader to the MFP, it is necessary to prepare an IC card information setting file with the loadable driver. To prepare this file, a tool is used for preparing the IC card information setting file for use in each card reader.

(2) IC card information setting file preparation tool

(a) Tool names

Tools for CE

- For AU-201/AU-201S: Auth Device Tool Advanced for AU-201/AU-201S
- For SCL-010: Auth Device Tool Advanced for SCL-010
- For AU-202H: Auth Device Tool Advanced for AU-202H
- For OMNIKEY 5427CK (AU-205H): Auth Device Advanced for 5427CK (AU-205H)
- For the YSoft card reader: Auth Device Tool Advanced for YSoft CRv2/ YSoft CRv3

(b) System requirement of tools for CE

OS	• Windows 7 • Windows 8.1 • Windows 10 Support both 32-bit (x86) and 64-bit (x64) editions.
Library (Any of these needs to be installed)	• Microsoft .Net Framework2.0 SP2 • Microsoft .Net Framework3.0 SP2 • Microsoft .Net Framework3.5 SP1 • Microsoft .Net Framework3.5.1
Hard disk	3 MB or more free space is required
Display	800 x 600 pixels,16 bit full color

(3) IC card information setting procedures

(a) Preparations for the following (c), (e), (g), (j), (k) or (m) procedures

- Using the PageScope Data Administrator, register the target MFP in advance.
- Set the MFP into a state in which it can communicate over the network.
- Accessing PageScope Web Connection -> [Administrator mode] -> [Security Settings], issue a self-signed certificate from [Device Certificate Setting] and install it.

- Accessing PageScope Web Connection -> [Administrator mode] -> [Network Settings], set use of [SSL/TLS] in [OpenAPI] to “SSL Only”.

NOTE

- **Only one loadable device driver must be stored in the USB memory, and please do not save any other data in the USB memory.**

(b) Auth Device Tool Advanced for AU-201/AU-201S (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in AU-201/AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201/AU-201S.
3. Select [Import Loadable Driver] from [File] and select the loadable driver.
4. Select card type.
5. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
6. Input the necessary extended data. (For details, ask the IC card administrator.)
7. Select Loadable Driver in [Export Format] and click [Export].
8. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
9. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
10. Call the Service Mode to the screen of the MFP.
11. Select [System 2] -> [Driver Install] -> [Install].
12. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
13. Select [Loadable driver] and touch the [Start] to install the loadable driver.
14. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
16. Set the authentication user.

(c) Auth Device Tool Advanced for AU-201/AU-201S (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for use in AU-201/AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201/AU-201S.
3. Select card type.
4. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
5. Input the necessary extended data. (For details, ask the IC card administrator.)
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
17. Set the authentication user.

(d) Auth Device Tool Advanced for SCL-010 (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in SCL-010 that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(e) Auth Device Tool Advanced for SCL-010 (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for SCL-010 to the MFP.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.

13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(f) Auth Device Tool Advanced for AU-202H (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in AU-202H that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-202H.
3. Set the card ID length.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(g) Auth Device Tool Advanced for AU-202H (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for AU-202H to the MFP.
2. Start the Auth Device Tool Advanced for AU-202H.
3. Set the card ID length.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(h) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: TypeA/ HID Prox/Multiple)

NOTE

- **Selecting [Multiple] makes cards of HID Prox, HID iCLASS and TypeA available at the same time.**

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(i) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: HID iCLASS).

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select Loadable Driver in [Export Format] and click [Export].
7. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
8. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
9. Call the Service Mode to the screen of the MFP.
10. Select [System 2] -> [Driver Install] -> [Install].
11. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
12. Select [Loadable driver] and touch the [Start] to install the loadable driver.
13. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

15. Set the authentication user.

(j) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: TypeA/ HID Prox/Multiple)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(k) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: HID iCLASS)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
17. Set the authentication user.

(l) Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 (Setting IC card information in the loadable driver in advance)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 to choose a corresponding card type to be reported to the authentication program from the following list.**

Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1) *2
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1) *3
KM USB Reader v3 MF & Legic	LEGIC	TypeA (1) *1
KM USB Reader v3 Indala	Indala	Indala
KM USB Reader v3 MF+	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
	Mifare	TypeA (1) *1
	HID Prox	HID Prox (1) *2
	HID iCLASS	HID iCLASS (1) *3

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201/AU-201S.**
- ***2 The content (ID) to be read from the HID Prox card setting differs from which to be read by using AU-201H.**
- ***3 The content (ID) to be read from the HID iCLASS card setting differs from which to be read by using AU-202H.**

1. Obtain the loadable driver (ICC_LDR.tar) for the YSoft card reader.
2. Start the Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3.
3. Select card type.

4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(m) Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 (Installing IC card information setting only in the MFP afterward)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 to choose a corresponding card type to be reported to the authentication program from the following list.**

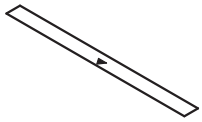
Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1) *2
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1) *3
KM USB Reader v3 MF & Legic	LEGIC	TypeA (1) *1
KM USB Reader v3 Indala	Indala	Indala
KM USB Reader v3 MF+	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
	Mifare	TypeA (1) *1
	HID Prox	HID Prox (1) *2
	HID iCLASS	HID iCLASS (1) *3

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201/AU-201S.**
- ***2 The content (ID) to be read from the HID Prox card setting differs from which to be read by using AU-201H.**
- ***3 The content (ID) to be read from the HID iCLASS card setting differs from which to be read by using AU-202H.**

1. Install the loadable driver for the YSoft card reader to the MFP.
2. Start the Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

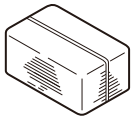
2. DF-628

2.1 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
DF reading chart		1	9J06 PJG1 XX	
DF reading chart (for 1-sided)		1	9J07 9551 ##	
DF reading chart (for Duplex)		1	A782 9450 ##	

3. bizhub C658/C558/C458

3.1 Service material list

Name	Shape	Parts No.	Remarks
Cleaning pad		A5AWP001##	10pcs/1 pack
Hydro-wipe		65AA-9920	10pcs/1 pack

3.2 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
Color chart		1	9J06 PJP1 ##	
Monochrome chart		1	4040 PJP1 ##	

3.3 Utility tool

3.3.1 IC card information setting tool of AU-201/AU-201S/AU-202H/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader

(1) Outline

- Before connecting the AU-201/AU-201S/AU-202H/OMNIKEY 5427CK (AU-205H)/SCL-010 card reader to the MFP, it is necessary to prepare an IC card information setting file with the loadable driver. To prepare this file, a tool is used for preparing the IC card information setting file for use in each card reader.

(2) IC card information setting file preparation tool

(a) Tool names

Tools for CE

- For AU-201/AU-201S: Auth Device Tool Advanced for AU-201/AU-201S
- For SCL-010: Auth Device Tool Advanced for SCL-010
- For AU-202H: Auth Device Tool Advanced for AU-202H
- For OMNIKEY 5427CK (AU-205H): Auth Device Advanced for 5427CK (AU-205H)
- For the YSoft card reader: Auth Device Tool Advanced for YSoft CRv2/ YSoft CRv3

(b) System requirement of tools for CE

OS	• Windows 7 • Windows 8.1 • Windows 10 Support both 32-bit (x86) and 64-bit (x64) editions.
Library (Any of these needs to be installed)	• Microsoft .Net Framework2.0 SP2 • Microsoft .Net Framework3.0 SP2 • Microsoft .Net Framework3.5 SP1 • Microsoft .Net Framework3.5.1
Hard disk	3 MB or more free space is required
Display	800 x 600 pixels,16 bit full color

(3) IC card information setting procedures

(a) Preparations for the following (c), (e), (g), (j), (k) or (m) procedures

- Using the PageScope Data Administrator, register the target MFP in advance.
- Set the MFP into a state in which it can communicate over the network.
- Accessing PageScope Web Connection -> [Administrator mode] -> [Security Settings], issue a self-signed certificate from [Device Certificate Setting] and install it.
- Accessing PageScope Web Connection -> [Administrator mode] -> [Network Settings], set use of [SSL/TLS] in [OpenAPI] to “SSL Only”.

NOTE

- **Only one loadable device driver must be stored in the USB memory, and please do not save any other data in the USB memory.**

(b) Auth Device Tool Advanced for AU-201/AU-201S (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in AU-201/AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201/AU-201S.
3. Select [Import Loadable Driver] from [File] and select the loadable driver.
4. Select card type.
5. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
6. Input the necessary extended data. (For details, ask the IC card administrator.)
7. Select Loadable Driver in [Export Format] and click [Export].
8. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
9. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
10. Call the Service Mode to the screen of the MFP.
11. Select [System 2] -> [Driver Install] -> [Install].
12. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
13. Select [Loadable driver] and touch the [Start] to install the loadable driver.
14. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
16. Set the authentication user.

(c) Auth Device Tool Advanced for AU-201/AU-201S (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for use in AU-201/AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201/AU-201S.
3. Select card type.
4. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
5. Input the necessary extended data. (For details, ask the IC card administrator.)
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
17. Set the authentication user.

(d) Auth Device Tool Advanced for SCL-010 (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in SCL-010 that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(e) Auth Device Tool Advanced for SCL-010 (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for SCL-010 to the MFP.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

15. Set the authentication user.

(f) Auth Device Tool Advanced for AU-202H (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in AU-202H that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-202H.
3. Set the card ID length.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(g) Auth Device Tool Advanced for AU-202H (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for AU-202H to the MFP.
2. Start the Auth Device Tool Advanced for AU-202H.
3. Set the card ID length.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(h) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: TypeA/ HID Prox/Multiple)

NOTE

- **Selecting [Multiple] makes cards of HID Prox, HID iCLASS and TypeA available at the same time.**

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(i) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: HID iCLASS).

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select Loadable Driver in [Export Format] and click [Export].
7. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
8. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
9. Call the Service Mode to the screen of the MFP.
10. Select [System 2] -> [Driver Install] -> [Install].
11. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
12. Select [Loadable driver] and touch the [Start] to install the loadable driver.
13. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(j) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: TypeA/ HID Prox/Multiple)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

(k) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: HID iCLASS)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
17. Set the authentication user.

(l) Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 (Setting IC card information in the loadable driver in advance)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 to choose a corresponding card type to be reported to the authentication program from the following list.**

Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1) *2
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1) *3
KM USB Reader v3 MF & Legic	LEGIC	TypeA (1) *1
KM USB Reader v3 Indala	Indala	Indala
KM USB Reader v3 MF+	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
	Mifare	TypeA (1) *1
	HID Prox	HID Prox (1) *2
	HID iCLASS	HID iCLASS (1) *3

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201/AU-201S.**
- ***2 The content (ID) to be read from the HID Prox card setting differs from which to be read by using AU-201H.**
- ***3 The content (ID) to be read from the HID iCLASS card setting differs from which to be read by using AU-202H.**

1. Obtain the loadable driver (ICC_LDR.tar) for the YSoft card reader.
2. Start the Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3.
3. Select card type.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].

6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
13. Set the authentication user.

(m) Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 (Installing IC card information setting only in the MFP afterward)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3 to choose a corresponding card type to be reported to the authentication program from the following list.**

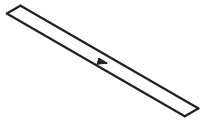
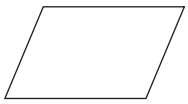
Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1) *2
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1) *3
KM USB Reader v3 MF & Legic	LEGIC	TypeA (1) *1
KM USB Reader v3 Indala	Indala	Indala
KM USB Reader v3 MF+	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
	Mifare	TypeA (1) *1
	HID Prox	HID Prox (1) *2
	HID iCLASS	HID iCLASS (1) *3

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201/AU-201S.**
- ***2 The content (ID) to be read from the HID Prox card setting differs from which to be read by using AU-201H.**
- ***3 The content (ID) to be read from the HID iCLASS card setting differs from which to be read by using AU-202H.**

1. Install the loadable driver for the YSoft card reader to the MFP.
2. Start the Auth Device Tool Advanced for YSoft CRv2/YSoft CRv3.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Set the authentication user.

4. Dual Scan Document Feeder

4.1 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
DF reading chart		1	9J06 PJG1 XX	
DF reading chart (for Duplex)		1	A782 9450 ##	
Adjustment sheet for Double Feed Detection Kit (UK-501)		1	A8WC 7071 ##	

F PERIODICAL MAINTENANCE

1. Concept of periodical maintenance

- Cleaning/replacement cycle for each maintenance item of main body/options can be evaluated with the total counter or each life counter value of [Service Mode] -> [Counter] -> [Life].

2. Periodical maintenance items

2.1 Main unit (bizhub C368/C308/C258)

2.1.1 bizhub C368

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●		
2		Appearance	-	●	●		
3	Conveyance section	Registration roller	-	●			
4	Image transfer section	Around waste toner port	-	●			
5	Duplex section	Duplex transport roller	-	●			

(2) Periodical maintenance 2 (Field standard yield; every 90,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/Y,M,C	1			●	

(3) Periodical maintenance 3 (Field standard yield; every 120,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/K	1			●	

(4) Periodical maintenance 4 (Life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1			●	
2		Manual bypass tray separation roller assy	1			●	

(5) Periodical maintenance 5 (Life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1			●	
2		Tray 1 feed roller	1			●	
3		Tray 1 separation roller	1			●	
4		Tray 2 pick-up roller	1			●	
5		Tray 2 feed roller	1			●	
6		Tray 2 separation roller	1			●	

(6) Periodical maintenance 6 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Transfer section	Transfer Belt Unit	1			●	
2		Transfer roller unit	1			●	

(7) Periodical maintenance 7 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Developing unit/Y,M,C,K	1			●	
2	Fusing section	Fusing unit	1			●	

2.1.2 bizhub C308

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●		
2		Appearance	-	●	●		
3	Conveyance section	Registration roller	-	●			
4	Image transfer section	Around waste toner port	-	●			
5	Duplex section	Duplex transport roller	-	●			

(2) Periodical maintenance 2 (Field standard yield; every 75,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/Y,M,C	1			●	

(3) Periodical maintenance 3 (Field standard yield; every 120,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/K	1			●	

(4) Periodical maintenance 4 (Life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1			●	
2		Manual bypass tray separation roller assy	1			●	

(5) Periodical maintenance 5 (Life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1			●	
2		Tray 1 feed roller	1			●	
3		Tray 1 separation roller	1			●	
4		Tray 2 pick-up roller	1			●	
5		Tray 2 feed roller	1			●	
6		Tray 2 separation roller	1			●	

(6) Periodical maintenance 6 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Transfer section	Transfer Belt Unit	1			●	
2		Transfer roller unit	1			●	

(7) Periodical maintenance 7 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Developing unit/Y,M,C,K	1			●	
2	Fusing section	Fusing unit	1			●	

2.1.3 bizhub C258

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●		
2		Appearance	-	●	●		
3	Conveyance section	Registration roller	-	●			
4	Image transfer section	Around waste toner port	-	●			
5	Duplex section	Duplex transport roller	-	●			

(2) Periodical maintenance 2 (Field standard yield; every 55,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/Y,M,C	1			●	

(3) Periodical maintenance 3 (Field standard yield; every 90,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Drum unit/K	1			●	

(4) Periodical maintenance 4 (Life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1			●	
2		Manual bypass tray separation roller assy	1			●	

(5) Periodical maintenance 5 (Life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1			●	
2		Tray 1 feed roller	1			●	
3		Tray 1 separation roller	1			●	
4		Tray 2 pick-up roller	1			●	

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
5		Tray 2 feed roller	1			●	
6		Tray 2 separation roller	1			●	

(6) Periodical maintenance 6 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Transfer section	Transfer Belt Unit	1			●	
2		Transfer roller unit	1			●	

(7) Periodical maintenance 7 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Replace	Descriptions
1	Processing section	Developing unit/Y,M,C,K	1			●	
2	Fusing section	Fusing unit	1			●	

2.2 Main unit (bizhub C658/C558/C458)

2.2.1 bizhub C658

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4	Image transfer section	Around waste toner port	-	●				
5	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (Field standard yield; every 105,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/Y,M,C	1				●	

(3) Periodical maintenance 3 (Field standard yield; every 150,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/K	1				●	

(4) Periodical maintenance 4 (Life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1				●	*
2		Manual bypass tray separation roller assy	1				●	

- *: Replace these parts at the same time.

(5) Periodical maintenance 5 (Life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1				●	*
2		Tray 1 feed roller	1				●	
3		Tray 1 separation roller	1				●	
4		Tray 2 pick-up roller	1				●	*
5		Tray 2 feed roller	1				●	
6		Tray 2 separation roller	1				●	

- *: Replace these parts at the same time.

(6) Periodical maintenance 6 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner Filter	1				●	
2	Transfer section	Transfer Belt Unit	1				●	
3		Transfer roller unit	1				●	

(7) Periodical maintenance 7 (Field standard yield; every 590,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Japan)	1				●	

(8) Periodical maintenance 8 (Field standard yield; every 595,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (North America)	1				●	

(9) Periodical maintenance 9 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Europe)	1				●	

(10) Periodical maintenance 10 (Field standard yield; every 1,175,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (North America)	1				●	
2		IH coil unit (North America)	1	●				*

- *: When the fusing unit is replaced.

(11) Periodical maintenance 11 (Field standard yield; every 1,185,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (Japan)	1				●	
2		IH coil unit (Japan)	1	●				*

- *: When the fusing unit is replaced.

(12) Periodical maintenance 12 (Field standard yield; every 1,200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (Europe)	1				●	
2		IH coil unit (Europe)	1	●				*

- *: When the fusing unit is replaced.

2.2.2 bizhub C558

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4	Image transfer section	Around waste toner port	-	●				
5	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (Field standard yield; every 100,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/Y,M,C	1				●	

(3) Periodical maintenance 3 (Field standard yield; every 140,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/K	1				●	

(4) Periodical maintenance 4 (Life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1				●	*
2		Manual bypass tray separation roller assy	1				●	

- *: Replace these parts at the same time.

(5) Periodical maintenance 5 (Life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1				●	*

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
2		Tray 1 feed roller	1				●	
3		Tray 1 separation roller	1				●	
4		Tray 2 pick-up roller	1				●	*
5		Tray 2 feed roller	1				●	
6		Tray 2 separation roller	1				●	

- *: Replace these parts at the same time.

(6) Periodical maintenance 6 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner Filter	1				●	
2	Transfer section	Transfer Belt Unit	1				●	
3		Transfer roller unit	1				•	

(7) Periodical maintenance 7 (Field standard yield; every 590,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Japan)	1				●	

(8) Periodical maintenance 8 (Field standard yield; every 595,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (North America)	1				●	

(9) Periodical maintenance 9 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Europe)	1				●	

(10) Periodical maintenance 10 (Field standard yield; every 1,175,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (North America)	1				●	
2		IH coil unit (North America)	1	●				*

- *: When the fusing unit is replaced.

(11) Periodical maintenance 11 (Field standard yield; every 1,185,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (Japan)	1				•	
2		IH coil unit (Japan)	1	•				*

- *: When the fusing unit is replaced.

(12) Periodical maintenance 12 (Field standard yield; every 1,200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (Europe)	1				●	
2		IH coil unit (Europe)	1	●				*

- *: When the fusing unit is replaced.

2.2.3 bizhub C458

(1) Periodical maintenance 1 (Total counter; every 60,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4	Image transfer section	Around waste toner port	-	●				
5	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (Field standard yield; every 85,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/Y, M, C (Japan)	1				●	

(3) Periodical maintenance 3 (Field standard yield; every 100,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/Y, M, C (Outside of Japan)	1				●	

(4) Periodical maintenance 4 (Field standard yield; every 135,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Drum unit/K	1				●	

(5) Periodical maintenance 5 (life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Manual bypass tray feed roller	1				●	*
2		Manual bypass tray separation roller assy	1				●	

- *: Replace these parts at the same time.

(6) Periodical maintenance 6 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Tray 1 pick-up roller	1				●	*
2		Tray 1 feed roller	1				●	
3		Tray 1 separation roller	1				●	
4		Tray 2 pick-up roller	1				●	*
5		Tray 2 feed roller	1				●	
6		Tray 2 separation roller	1				●	

- *: Replace these parts at the same time.

(7) Periodical maintenance 7 (Field standard yield; every 300,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner Filter	1				●	
2	Transfer section	Transfer Belt Unit	1				●	
3		Transfer roller unit	1				●	

(8) Periodical maintenance 8 (Field standard yield; every 520,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit (Japan)	1				●	

(9) Periodical maintenance 9 (Field standard yield; every 580,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Japan)	1				●	

(10) Periodical maintenance 10 (Field standard yield; every 590,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (North America)	1				●	
2	Fusing section	Fusing unit (North America)	1				●	

(11) Periodical maintenance 11 (Field standard yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit/Y, M, C, K (Europe)	1				●	
2	Fusing section	Fusing unit (Europe)	1				●	

2.2.4 Dual scan document feeder

(1) Periodical maintenance 1 (total counter; every 50,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	-	●				
4		Feed roller	-	●				
5		Separation roller	-	●				

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
6	Conveyance section	Rollers and rolls	-	●				
7	Scanning section	Front side scanning guide	-	●				
8	Paper feed section	Reflective sensor section	-	●				

(2) Periodical maintenance 2 (life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	2				●	*
2		Feed roller	1				●	
3		Separation roller	1				●	
4		Torque limiter	-	●				

- *: Replace these parts at the same time.

2.3 Option (bizhub C368/C308/C258)

2.3.1 DF-704

(1) Periodical maintenance 1 (total counter; every 50,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	-	●				
4		Feed roller	-	●				
5		Separation roller	-	●				
6	Conveyance section	Rollers and rolls	-	●				
7	Scanning section	Front side scanning guide	-	●				
8	Paper feed section, Conveyance section	Reflective sensor section	-	●				

(2) Periodical maintenance 2 (life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	2				●	*
2		Feed roller	1				●	
3		Separation roller assy	1				●	

*: Replace those three parts at the same time.

2.3.2 DF-629

(1) Periodical maintenance 1 (total counter; every 50,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	-	●				
4		Feed roller	-	●				
5		Separation roller	-	●				
6	Conveyance section	Rollers and rolls	-	●				
7	Scanning section	Scanning guide	-	●				
8	Paper feed section, Conveyance section	Reflective sensor section	-	●				

(2) Periodical maintenance 2 (life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	2				●	*
2		Feed roller	1				●	
3		Separation roller assy	1				●	

*: Replace those three parts at the same time.

2.3.3 PC-110/PC-410

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	1				●	*
4		Feed roller	1				●	
5		Separation roller	1				●	

*: Replace those three parts at the same time.

2.3.4 PC-210

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	2				●	*
4		Feed roller	2				●	
5		Separation roller	2				●	

*: Replace those three parts at the same time.

2.3.5 LU-302

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	1				●	*
2		Feed roller	1				●	
3		Separation roller	1				●	

- *: Replace those three parts at the same time.

2.3.6 FS-534

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4		Paddle	6	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Paddle unit	3				●	

2.3.7 FS-534SD

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section (Finisher)	Roller and rolls	-	●				
4		Paddle	6	●				
5	Conveyance section (saddle unit)	Duplex transport roller	-	●				
6		Upper paddle	4	●				
7		Lower paddle	8	●				
8	Folding section	Folding roller	-	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section (Finisher)	Paddle unit	3				●	

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
2	Conveyance section (saddle unit)	Upper paddle assy	1				●	
3		Lower paddle unit	4				●	

2.3.8 FS-533

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4	Paper exit section	Paddle	4	●				

(2) Periodical maintenance 2 (life counter; every 1,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Alignment section	Alignment roller assy/ F	1				●	*
2		Alignment roller assy/ R	1				●	

*: Replace those three parts at the same time.

2.4 Option (bizhub C658/C558/C458)

2.4.1 PC-115/PC-415

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	1				●	*
4		Feed roller	1				●	
5		Separation roller	1				●	

- *: Replace those three parts at the same time.

2.4.2 PC-215

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Pick-up roller	2				●	*
4		Feed roller	2				●	
5		Separation roller	2				●	

- *: Replace those three parts at the same time.

2.4.3 LU-207/LU-302

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	1				●	*
2		Feed roller	1				●	
3		Separation roller	1				●	

- *: Replace those three parts at the same time.

2.4.4 FS-537

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4		Paddle	6	●				
5	Sensor section	FNS entrance sensor (PS34)	1	●				

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
6		FNS middle sensor (PS36)	1	●				
7		Main tray exit sensor (PS37)	1	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Paddle	2				●	

2.4.5 FS-537SD

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section (Finisher)	Roller and rolls	-	●				
4		Paddle	6	●				
5	Conveyance section (Saddle unit)	Conveyance roller	-	●				
6		Upper paddle	4	●				
7		Lower paddle	8	●				
8	Sensor unit (Finisher)	FNS entrance sensor (PS34)	1	●				
9		FNS middle sensor (PS36)	1	●				
10		Main tray exit sensor (PS37)	1	●				
11	Folding section (Saddle unit)	Folding roller	-	●				
12	Exit section (Saddle unit)	Exit tray conveyance belt	2	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section (Finisher)	Paddle	2				●	
2	Conveyance section (Saddle unit)	Upper paddle	1				●	
3		Lower paddle	4				●	

2.4.6 ZU-609

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2	Z folding section	Folding roller	-	●				
3		Folding guide	-	●				

2.4.7 JS-602

(1) Periodical maintenance (total counter; every 100,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Conveyance roller	-	●				
4	Paper exit section	Paper exit roller	-	●				

2.4.8 PI-507

(1) Periodical maintenance 1 (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	•	●			
3	Paper feed section	Feed roller	-	●				
4		Separation roller	-	●				
5		Pick-up roller	-	●				

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
6	Conveyance section	Paper exit roller	-	●				

(2) Periodical maintenance 2 (Parts Counter (fixed); every 100,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Feed roller /Lw	1				●	
2		Separation roller /Lw	1				●	

(3) Periodical maintenance 3 (Parts Counter (fixed); every 200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller / Lw	1				●	

(4) Periodical maintenance 4 (Parts Counter (fixed); every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Torque limiter/Lw	1				●	

2.4.9 FS-536

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4		Paddle	9	●				
5	Sensor section	FNS entrance sensor (PS4)	1	●				
6		Main tray exit sensor (PS16)	1	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Paddle	3				●	

2.4.10 FS-536SD

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section (Finisher)	Roller and rolls	-	●				
4		Paddle	9	●				
5	Conveyance section (Saddle unit)	Conveyance roller	-	●				
6		Upper paddle	4	●				
7		Lower paddle	8	●				
8	Sensor section (Finisher)	FNS entrance sensor (PS4)	1	●				
9		Main tray exit sensor (PS16)	1	●				
10	Folding section (Saddle unit)	Folding roller	-	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section (Finisher)	Paddle	3				●	
2	Conveyance section (Saddle unit)	Upper paddle	1				●	
3		Lower paddle	4				●	

2.4.11 FS-533 (C558/C458 only)

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4	Paper exit section	Paddle	4	●				

(2) Periodical maintenance 2 (life counter; every 1,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Alignment section	Alignment roller assy/ F	1				●	*
2		Alignment roller assy/ R	1				●	

- *: Replace those three parts at the same time.

3. Periodical replacement parts list

3.1 bizhub C368/C308/C258

Classification	Parts name		Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paper feed section	Tray 1 pick-up roller		A5C1 5622 ##	1	300,000	*2 *4	F.7.7.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller
	Tray 1 feed roller		A00J 5636 ##	1	300,000		
	Tray 1 separation roller			1	300,000		
	Tray 2 pick-up roller		A5C1 5622 ##	1	300,000	*2 *4	F.7.7.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller
	Tray 2 feed roller		A00J 5636 ##	1	300,000		
	Tray 2 separation roller			1	300,000		
	Manual bypass tray feed roller		A00F 6232 ##	1	200,000	*2 *4	F.7.7.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy
	Manual bypass tray separation roller assy		4658 0151 ##	1	200,000		
Processing section	Toner cartridge/Y,M,C *1	bizhub C368	-	1	26,000	-	F.7.3.1 Replacing the toner cartridge
		bizhub C308	-	1	26,000		
		bizhub C258	-	1	26,000		
	Toner cartridge/K *1	bizhub C368	-	1	28,000	-	
		bizhub C308	-	1	28,000		
		bizhub C258	-	1	28,000		
	Drum unit/Y,M,C *1	bizhub C368	-	1	90,000	*3	F.7.1.1 Replacing the drum unit
		bizhub C308	-	1	75,000		
		bizhub C258	-	1	55,000		
	Drum unit/K *1	bizhub C368	-	1	120,000	*3	
		bizhub C308	-	1	120,000		
		bizhub C258	-	1	90,000		
	Developing unit/Y,M,C,K	bizhub C368	-	1	600,000	*3	F.7.2.1 Replacing the developing unit
		bizhub C308	-	1	600,000		
		bizhub C258	-	1	600,000		
	Waste toner box *1	bizhub C368	• A4NN WY3 (North America and Europe) • A4NN WY1 (Other)	1	33,000	*3	F.7.6.1 Replacing the waste toner box
		bizhub C308		1	30,000		
		bizhub C258		1	30,000		
Image transfer section	Transfer Belt Unit	bizhub C368	A161 R713 ##	1	300,000	*3	F.7.4.3 Replacing the transfer belt unit
		bizhub C308		1	300,000		
		bizhub C258		1	300,000		
	Transfer Roller Unit	bizhub C368	-	1	300,000	*3	F.7.5.1 Replacing the transfer roller unit
		bizhub C308		1	300,000		
		bizhub C258		1	300,000		
Fusing section	Fusing unit	bizhub C368	• A7PU R702 ## (100V) • A7PU R703 ## (120V) • A7PU R704 ## (220-240V)	1	600,000	*3	F.7.9.1 Replacing the fusing unit
		bizhub C308		1	600,000		
		bizhub C258		1	600,000		

*1: The parts can be replaced either by user or service engineer.
*2: Actual durable cycle (life counter value)
*3: Field standard yield C.1.4 Material
*4: Replace those parts at the same time.

3.2 bizhub C658/C558/C458

Classification	Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Dual scan document feeder	Pick-up roller	9J07 3301 ##	2	200,000	*2 *4	F.9.1.4 Replacing the pick-up roller/feed roller
	Feed roller	A00J 5636 ##	1	200,000		
	Separation roller	9J07 3409 ##	1	200,000		F.9.1.5 Replacing the separation roller

Classification	Parts name		Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paper feed section	Tray 1 pick-up roller		A64J 5642 ##	1	300,000	*2 *4	F.8.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller
	Tray 1 feed roller		A64J 5641 ##	1	300,000		
	Tray 1 separation roller			1	300,000		
	Tray 2 pick-up roller		A64J 5642 ##	1	300,000	*2 *4	F.8.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller
	Tray 2 feed roller		A64J 5641 ##	1	300,000		
	Tray 2 separation roller			1	300,000		
	Manual bypass tray feed roller		A00F 6232 ##	1	200,000	*2 *4	F.8.8.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy
	Manual bypass tray separation roller assy		4658 0151 ##	1	200,000		
Processing section	Toner cartridge/Y,M,C *1	bizhub C658	-	1	26,000		F.8.4.1 Replacing the toner cartridge
		bizhub C558	-	1	26,000		
		bizhub C458	-	1	26,000		
	Toner cartridge/K *1	bizhub C658	-	1	28,000		
		bizhub C558	-	1	28,000		
		bizhub C458	-	1	28,000		
	Drum unit/Y,M,C *1	bizhub C658	-	1	105,000	*3	F.8.2.1 Replacing the drum unit
		bizhub C558	-	1	100,000		
		bizhub C458	-	1	85,000 (Japan) 100,000 (outside Japan)		
	Drum unit/K *1	bizhub C658	-	1	150,000	*3	
		bizhub C558	-	1	140,000		
		bizhub C458	-	1	135,000		
	Developing unit/Y,M,C,K	bizhub C658	-	1	595,000 (Japan) 590,000 (North America) 600,000 (Europe)	*3	F.8.3.1 Replacing the developing unit
		bizhub C558	-	1	595,000 (Japan) 590,000 (North America) 600,000 (Europe)		
		bizhub C458	-	1	580,000 (Japan) 590,000 (North America) 600,000 (Europe)		
	Toner Filter	bizhub C658	-	1	300,000	*3	F.8.1.1 Replacing the toner filter
		bizhub C558		1	300,000		
		bizhub C458		1	300,000		
	Waste toner box *1		A4NN WY1 (outside North America/ Europe) A4NN WY3 (North America/Europe)	1	(40,000)	*5	F.8.7.1 Replacing the waste toner box
Image transfer section	Transfer Belt Unit	bizhub C658	A79J R709 ##	1	300,000	*3	F.8.5.3 Replacing the transfer belt unit
		bizhub C558	A79J R709 ##	1	300,000		
		bizhub C458		1	300,000		
	Transfer Roller Unit	bizhub C658	-	1	300,000	*3	F.8.6.1 Replacing the transfer roller unit
		bizhub C558		1	300,000		
		bizhub C458		1	300,000		
Fusing section	Fusing unit	bizhub C658	A79J R710 ##	1	1,185,000 (Japan) 1,175,000 (North America) 1,200,000 (Europe)	*3	F.8.10.1 Replacing the fusing unit (bizhub C658/ C558)
		bizhub C558	A79J R710 ##	1	1,185,000 (Japan) 1,175,000 (North America) 1,200,000 (Europe)		
		bizhub C458	A79M R701 ##: 100 V A79M R702 ##: 120V	1	520,000 (Japan) 590,000 (North America) 600,000 (Europe)		F.8.10.2 Replacing the fusing unit (bizhub C458)

Classification	Parts name		Parts No.	Qt.	Replacing cycle	Descr iption s	Ref. page
			A79M R703 ##: 230V				

*1: The parts can be replaced either by user or service engineer.
*2: Actual durable cycle (life counter value)
*3: Field standard yield C.2.4 Material
*4: Replace those parts at the same time.
*5: A waste toner full condition is detected with detecting the actual waste toner emissions.

3.3 Option (bizhub C368/C308/C258)

3.3.1 DF-704

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A143 PP52 ##	2	200,000	*1 *2	F.11 Periodical maintenance procedure DF-704
Feed roller	A143 5631 ##	1	200,000		
Paper feed assy.	A85G PP0P ##	1	200,000		
Separation roller assy.	A3CF PP4H ##	1	200,000		

*1: Actual durable cycle (life counter value)
*2: Replace those three parts at the same time.

3.3.2 DF-629

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A143 PP52 ##	2	200,000	*1 *2	F.10 Periodical maintenance procedure DF-629
Feed roller	A143 5631 ##	1	200,000		
Paper feed assy.	A85G PP0P ##	1	200,000		
Separation roller assy	A3CF PP4H ##	1	200,000		

*1: Actual durable cycle (life counter value)
*2: Replace those three parts at the same time.

3.3.3 PC-110

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1 *2	F.12.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller
Feed roller	A00J 5636 ##	1	300,000		
Separation roller	A00J 5636 ##	1	300,000		

*1: Actual durable cycle (life counter value)
*2: Replace those three parts at the same time.

3.3.4 PC-210

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	2	300,000	*1 *2	F.12.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller F.12.1.2 Replacing the tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller
Feed roller	A00J 5636 ##	2	300,000		
Separation roller	A00J 5636 ##	2	300,000		

*1: Actual durable cycle (life counter value)
*2: Replace those three parts at the same time.

3.3.5 PC-410

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1 *2	F.14.1.1 Replacing the feed roller, pick-up roller, separation roller
Feed roller	A00J 5636 ##	1	300,000		
Separation roller	A00J 5636 ##	1	300,000		

*1: Actual durable cycle (life counter value)
*2: Replace those three parts at the same time.

3.3.6 LU-302

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1 *2	F.17.1.1 Replacing the pick-up roller

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Feed roller	A00J 5636 ##	1	300,000		F.17.1.2 Replacing the feed roller
Separation roller	A00J 5636 ##	1	300,000		F.17.1.3 Replacing the separation roller

- *1: Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.3.7 FS-534

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle unit	A3EP PPD3 ##	2	2,000,000	*1	F.18.1.3 Replacing the paddle units
	A3EP PPD4 ##	1	2,000,000		

*1: Actual durable cycle (life counter value)

3.3.8 FS-534SD

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle unit	A3EP PPD3 ##	2	2,000,000	*1	F.18 Periodical maintenance procedure FS-534/FS-534SD
	A3EP PPD4 ##	1	2,000,000	*1	
Upper paddle assy	A3ER PP38 ##	1	2,000,000	*1	F.18.1.7 Replacing the upper paddle assy
Lower paddle unit	A3ER PP7Y ##	4	2,000,000	*1	F.18.1.8 Replacing the lower paddle unit

*1: Actual durable cycle (life counter value)

3.3.9 FS-533

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Alignment roller assy/ F	A2YU PPK0 ##	1	1,000,000	*1 *2	F.19 Periodical maintenance procedure FS-533
Alignment roller assy/ R	A2YU PPK1 ##	1	1,000,000		

*1: Actual durable cycle (life counter value)
*2: Replace those parts at the same time.

3.4 Option (bizhub C658/C558/C458)

3.4.1 PC-115

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A64J 5642 ##	1	300,000	*1 *2	F.13.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller
Feed roller	A64J 5641 ##	1	300,000		
Separation roller	A64J 5641 ##	1	300,000		

- *1: Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.4.2 PC-215

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A64J 5642 ##	2	300,000	*1 *2	F.13.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller F.13.1.2 Replacing the tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller
Feed roller	A64J 5641 ##	2	300,000		
Separation roller	A64J 5641 ##	2	300,000		

- *1: Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.4.3 PC-415

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A64J 5642 ##	1	300,000	*1 *2	F.15.1.1 Replacing the feed roller, pick-up roller, separation roller
Feed roller	A64J 5641 ##	1	300,000		
Separation roller	A64J 5641 ##	1	300,000		

- *1: Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.4.4 LU-207

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1 *2	F.16.1.1 Replacing the pick-up roller
Feed roller	A00J 5636 ##	1	300,000		F.16.1.2 Replacing the feed roller
Separation roller	A00J 5636 ##	1	300,000		F.16.1.3 Replacing the separation roller

- *1 : Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.4.5 LU-302

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1 *2	F.17.1.1 Replacing the pick-up roller
Feed roller	A00J 5636 ##	1	300,000		F.17.1.2 Replacing the feed roller
Separation roller	A00J 5636 ##	1	300,000		F.17.1.3 Replacing the separation roller

- *1 : Actual durable cycle (life counter value)
- *2: Replace those three parts at the same time.

3.4.6 FS-537

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle	A87H PPAA ##	2	2,000,000	*	F.20.1.3 Replacing the paddle (FS-537SD/FS-537)

- *: Actual durable cycle (life counter value)

3.4.7 FS-537SD

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle (Finisher)	A87H PPAA ##	2	2,000,000	*	F.20.1.3 Replacing the paddle (FS-537SD/FS-537)
Upper paddle (Saddle unit)	A3ER PP38 ##	1	2,000,000	*	F.20.1.7 Replacing the upper paddle (FS-537SD)
Lower paddle (Saddle unit)	A3ER PP7Y ##	4	2,000,000	*	F.20.1.8 Replacing the lower paddle (FS-537SD)

- *: Actual durable cycle (life counter value)

3.4.8 PI-507

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Feed roller /Lw	13QN R705 ##	1	100,000	*	F.23.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)
Separation roller /Lw	13QN R704 ##	1	100,000	*	F.23.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)
Pick-up roller/Lw	50BA R701 ##	1	200,000	*	F.23.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)
Torque limiter /Lw	13QN 4073 ##	1	600,000	*	F.23.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)

- *: Parts counter (Fixed) value

3.4.9 FS-536

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle	A87G PP0W ##	2	2,000,000	*	F.24.1.3 Replacing the paddle (FS-536/FS-536SD)
	A87G PP0X ##	1	2,000,000		

- *: Actual durable cycle (life counter value)

3.4.10 FS-536SD

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle (Finisher)	A87G PP0W ##	2	2,000,000	*	F.24.1.3 Replacing the paddle (FS-536/FS-536SD)
	A87G PP0X ##	1	2,000,000		

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Upper paddle (Saddle unit)	A3ER PP38 ##	1	2,000,000	*	F.24.1.6 Replacing the upper paddle (FS-536SD)
Lower paddle (Saddle unit)	A3ER PP7Y ##	4	2,000,000	*	F.24.1.7 Replacing the lower paddle (FS-536SD)

- *: Actual durable cycle (life counter value)

3.4.11 FS-533 (C558/C458 only)

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Alignment roller assy/ F	A2YU PPK0 ##	1	1,000,000	*1 *2	F.19.2.1 Replacing the alignment roller assy F/R
Alignment roller assy/ R	A2YU PPK1 ##	1	1,000,000		

- *1: Actual durable cycle (life counter value)
- *2: Replace those parts at the same time.

4. Periodical cleaning parts list (bizhub C368/C308/C258)

- Clean with reference to the numeric values displayed on the total counter or the messages displayed on the control panel.

4.1 Main unit

Classification	Parts name	Cleaning cycle	Descriptions	Ref. page
Conveyance section	Registration roller	60,000	*1	F.7.8.1 Cleaning of the registration roller
Image transfer section	Area around the waste toner collecting port	60,000	*1	F.7.6.2 Cleaning of the area around the waste toner collecting port
	Image transfer entrance guide	240,000 or When transfer belt unit is replaced	*1	F.7.4.1 Cleaning of the image transfer entrance guide
	IDC sensor window	240,000 or When transfer belt unit is replaced	*1	F.7.4.2 Cleaning of the IDC sensor window
Duplex section	Duplex transport roller	60,000	*1	F.7.10.1 Cleaning of the duplex transport rollers

*1: Total counter value

4.2 DF-704

Parts name	Cleaning cycle	Descriptions	Ref. page
Pick-up roller	50,000		F.11 Periodical maintenance procedure DF-704
Feed roller	50,000		
Separation roller	50,000		
Rollers and rolls	50,000		
Front side scanning guide	50,000		
Reflective sensor section	50,000		

4.3 DF-629

Parts name	Cleaning cycle	Descriptions	Ref. page
Pick-up roller	50,000		F.10 Periodical maintenance procedure DF-629
Feed roller	50,000		
Separation roller	50,000		
Rollers and rolls	50,000		
Scanning guide	50,000		
Reflective sensor section	50,000		

4.4 FS-534

Parts name	Cleaning cycle	Descriptions	Ref. page
Roller and rolls	300,000		F.18 Periodical maintenance procedure FS-534/FS-534SD
Paddle	300,000		

4.5 FS-534SD

Parts name	Cleaning cycle	Descriptions	Ref. page
Roller and rolls	300,000		F.18 Periodical maintenance procedure FS-534/FS-534SD
Paddle	300,000		
Conveyance roller	300,000		
Folding roller	300,000		
Upper paddle	300,000		
Lower paddle	300,000		

4.6 FS-533

Parts name	Cleaning cycle	Descriptions	Ref. page
Roller and rolls	300,000		F.19 Periodical maintenance procedure FS-533
Paddle	300,000		

5. Periodical cleaning parts list (bizhub C658/C558/C458)

- Clean with reference to the numeric values displayed on the total counter, the life counter or the messages displayed on the control panel.

5.1 Main unit

Classification	Parts name	Cleaning cycle	Descriptions	Ref. page
Dual scan document feeder	Pick-up roller	50,000		F.9.1.1 Cleaning of the pick-up roller/feed roller
	Feed roller	50,000		
	Separation roller	50,000		F.9.1.2 Cleaning of the separation roller
	Torque limiter	200,000		F.9.1.3 Cleaning the torque limiter
	Rollers and rolls	50,000		F.9.2.1 Cleaning of the miscellaneous rollers F.9.2.2 Cleaning of the miscellaneous rolls
	Front side scanning guide	50,000		F.9.3.1 Cleaning of the front side scanning guide
	Reflective sensor section	50,000		F.9.3.2 Cleaning of the reflective sensor section
Conveyance section	Registration roller	60,000	*	F.8.9.1 Cleaning of the registration roller
Image transfer section	Area around the waste toner collecting port	60,000	*	F.8.7.2 Cleaning of the area around the waste toner collecting port
	Image transfer entrance guide	240,000 or When transfer belt unit is replaced	*	F.8.5.1 Cleaning of the image transfer entrance guide
	IDC sensor window	240,000 or When transfer belt unit is replaced	*	F.8.5.2 Cleaning of the IDC sensor window
Duplex section	Duplex transport roller	60,000	*	F.8.11.1 Cleaning of the duplex transport rollers
Fusing section	IH coil unit	Replace every time the fusing unit is replaced.	-	F.8.10.3 Cleaning of the IH coil (bizhub C658/C558)

*: Total counter value

5.2 FS-537

Part name	Actual cleaning cycle	Note
Paddle	300,000	*
FNS entrance sensor (PS34)	300,000	*
FNS middle sensor (PS36)	300,000	*
Main tray exit sensor (PS37)	300,000	*

- *: Total counter value

5.3 FS-537SD

Parts name	Actual cleaning cycle	Note
Paddle (Finisher)	300,000	*
Conveyance roller (saddle unit)	300,000	*
Fold roller (saddle unit)	300,000	*
Upper paddle (saddle unit)	300,000	*
Lower paddle (saddle unit)	300,000	*
Exit tray conveyance belt (saddle unit)	300,000	*
FNS entrance sensor (PS34) (Finisher)	300,000	*
FNS middle sensor (PS36) (Finisher)	300,000	*
Main tray exit sensor (PS37) (Finisher)	300,000	*

- *: Total counter value

5.4 ZU-609

Parts name	Actual cleaning cycle	Note
Folding roller	300,000	*
Folding guide	300,000	*

- *: Total counter value

5.5 JS-602

Parts name	Actual cleaning cycle	Note
Conveyance roller	100,000	*
Paper exit roller	100,000	*

- *: Total counter value

5.6 PI-507

Parts name	Actual cleaning cycle	Note
Feed roller	100,000	*
Separation roller	100,000	*
Pick-up roller	100,000	*
Conveyance roller	100,000	*

- *: Total counter value

5.7 FS-536

Parts name	Actual cleaning cycle	Note
Roller and rolls	300,000	*
Paddle	300,000	*
FNS entrance sensor (PS4)	300,000	*
Main tray exit sensor (PS16)	300,000	*

- *: Total counter value

5.8 FS-536SD

Parts name	Actual cleaning cycle	Note
Roller and rolls (Finisher)	300,000	*
Paddle (Finisher)	300,000	*
Conveyance roller (Saddle unit)	300,000	*
Fold roller (Saddle unit)	300,000	*
Upper paddle (Saddle unit)	300,000	*
Lower paddle (Saddle unit)	300,000	*
FNS entrance sensor (PS4) (Finisher)	300,000	*
Main tray exit sensor (PS16) (Finisher)	300,000	*

- *: Total counter value

5.9 FS-533 (C558/C458 only)

Parts name	Actual cleaning cycle	Note
Roller and rolls	300,000	*
Paddle	300,000	*

*: Total counter value

6. Concept of consumable/part replacement time

6.1 Consumable/part replacement time (bizhub C368/C308/C258)

- The replacement time for each consumable and part is available from [Service Mode] -> [Counter] -> [Life].
- The replacement time means the standard replacement time when prints are made under the conditions as defined in the another section, Specified conditions for replacement time. The actual replacement time may vary depending on how the machine is used and the environment.
- “M” refers to the rotation time of each unit.

Consumables/parts name	Target model	Field standard yield *1	Replacement time *2	Life stop *2
Drum unit (C/M/Y)	C368	90,000 sheets	5730M	6876M
	C308	75,000 sheets	6539M	7847M
	C258	55,000 sheets	6539M	7847M
Drum unit (K) (DR313K)	C368	120,000 sheets	5730M	6876M
	C308	120,000 sheets	6539M	7847M
	C258	90,000 sheets	6539M	7847M
Drum unit (K) (DR315K)	C368	225,000 sheets	10714M	12857M
	C308	225,000 sheets	12226M	14672M
	C258	170,000 sheets	12226M	14672M
Developing Unit	C368	600,000 sheets	600,000 counts	610,000 counts
	C308	600,000 sheets	600,000 counts	610,000 counts
	C258	600,000 sheets	600,000 counts	610,000 counts
Transfer Belt Unit	C368	300,000 sheets	22088M	24096M
	C308	300,000 sheets	26960M	29411M
	C258	300,000 sheets	26960M	29411M
Transfer roller	C368	300,000 sheets	22088M	24096M
	C308	300,000 sheets	26960M	29411M
	C258	300,000 sheets	26960M	29411M
Fusing Unit	C368	600,000 sheets	600,000 counts	630,000 counts
	C308	600,000 sheets	600,000 counts	630,000 counts
	C258	600,000 sheets	600,000 counts	630,000 counts

- *1: For details of specified conditions of field standard yield, see “ C.1.4 Material”.
- *2: The replacement time changes depending on the setting of the replacement timing intelligent control. For details, see I.7.3.9 (3) (x) Replacement timing Intelligent Control of Developing unit

6.2 Consumable/part replacement time (bizhub C658/C558/C458)

- The replacement time for each consumable and part is available from [Service Mode] -> [Counter] -> [Life].
- The replacement time means the standard replacement time when prints are made under the conditions as defined in the another section, Specified conditions for replacement time. The actual replacement time may vary depending on how the machine is used and the environment.
- “M” refers to the rotation time of each unit.

Consumables/parts name	Target model	Destination	Field standard yield *1	Replacement time *2	Life stop *2
Drum unit (C/M/Y)	C658	-	105,000 sheets	3279M	3931M
	C558	-	100,000 sheets	3770M	5385M
	C458	Japan	85,000 sheets	4489M	5385M
		North America/Europe	100,000 sheets		
Drum unit (K) (DR313K)	C658	-	150,000 sheets	3279M	3931M
	C558	-	140,000 sheets	3770M	5376M
	C458	-	135,000 sheets	4489M	5376M
Drum unit (K) (DR315K)	C658	-	266,000 sheets	5819M	6983M
	C558	-	251,000 sheets	6783M	8139M
	C458	-	242,000 sheets	8076M	9691M
Developing unit (C/M/Y)	C658/C558	Japan	595,000 sheets	600,000 counts	610,000 counts
	C458		580,000 sheets		
	C658/C558/C458	North America	590,000 sheets		
		Europe	600,000 sheets		
Developing unit (K)	C658/C558	Japan	595,000 sheets		
	C458		580,000 sheets		
	C658/C558/C458	North America	590,000 sheets		
		Europe	600,000 sheets		
Transfer belt unit	C658	-	300,000 sheets	12643M	13792M

Consumables/parts name	Target model	Destination	Field standard yield *1	Replacement time *2	Life stop *2
	C558			14550M	15872M
	C458			17377M	18956M
Transfer roller	C658	-	300,000 sheets	12643M	13792M
	C558			14550M	15872M
	C458			17377M	18956M
Fusing unit	C658/C558	Japan	1,185,000 sheets	1,200,000 sheets	1,230,000 count
		North America	1,175,000 sheets		
		Europe	1,200,000 sheets		
	C458	Japan	520,000 sheets	600,000 counts	630,000 counts
		North America	590,000 sheets		
		Europe	600,000 sheets		
Toner filter (C/M/Y)	C658/C558/C458	-	-	150,000 sheets	160,000 sheets
Toner filter (K)	C658/C558/C458	-	-	300,000 sheets	315,000 sheets

- *1: For details of specified conditions of field standard yield, see " C.1.4 Material".
- *2: The replacement time changes depending on the setting of the replacement timing intelligent control. For details, see I.7.3.9 (3) (x) Replacement timing Intelligent Control of Developing unit

6.3 Specified condition for replacement time on field standard yield (bizhub C368/C308/C258)

6.3.1 Japan

Items		bizhub C368	bizhub C308	bizhub C258
Printing	Color	1.5 P/J	1 P/J	1 P/J
	Black	4 P/J	3 P/J	3 P/J
Paper size		A4S: 40 %		
Color ratio		20 %		
Coverage		Each color 5%		
Average print volume/month		5,800 prints/month	3,900 prints/month	2,600 prints/month

6.3.2 North America

Items		bizhub C368	bizhub C308	bizhub C258
Printing	Color	2 P/J	1.5 P/J	1.5 P/J
	Black	4 P/J	3 P/J	3 P/J
Paper size		Letter S: 7%		
Color ratio		30%	25%	25%
Coverage		Each color 5%		
Average print volume/month		6,800 prints/month	5,300 prints/month	4,100 prints/month

6.3.3 Europe

Items		bizhub C368	bizhub C308	bizhub C258
Printing	Color	2 P/J	2 P/J	1.5 P/J
	Black	4 P/J	3 P/J	3 P/J
Paper size		A4S: 7 %		
Color ratio		30%		
Original density		Each color 5%		
Average print volume/month		8,900 prints/month	6,700 prints/month	5,100 prints/month

6.4 Specified condition for replacement time on field standard yield (bizhub C658/C558/C458)

6.4.1 Japan

Items		bizhub C658	bizhub C558	bizhub C458
Printing	Color	3 P/J	3 P/J	2 P/J
	Black	7 P/J	6 P/J	5 P/J
Paper size ratio		A4S: 40 %		
Color ratio		20%		
Coverage		Each color 5%		
Average print volume (pages/ month)		17,300	14,300	9400

6.4.2 North America

Items		bizhub C658	bizhub C558	bizhub C458
Printing	Color	3 P/J	3 P/J	2.5 P/J
	Black	7 P/J	6 P/J	5 P/J
Paper size ratio		Letter S: 7%		
Color ratio		33%		
Coverage		Each color 5%		
Average print volume (pages/ month)		14,300	12,300	9300

6.4.3 Europe

Items		bizhub C658	bizhub C558	bizhub C458
Printing	Color	4 P/J	3 P/J	2.5 P/J
	Black	3 P/J	6 P/J	5 P/J
Paper size ratio		A4S: 7 %		
Color ratio		30%		
Coverage		Each color 5%		
Average print volume (pages/ month)		16,100	13,900	10,500

7. Periodical maintenance procedure bizhub C368/C308/C258

NOTE
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

7.1 Photo conductor section

7.1.1 Replacing the drum unit

⚠CAUTION

- When replacing with the drum unit (DR315K), make sure to install the firmware (ver. G00-V1 or later) beforehand. J.1 REWRITING OF FIRMWARE

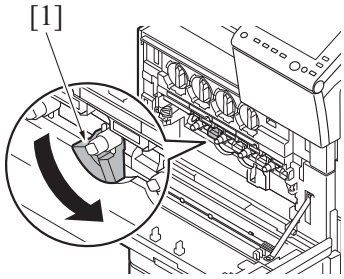
  If you replaced with the drum unit (DR315K) without installing the firmware (ver. G00-V1 or later), "Drum Unit Detection Error" will appear.

(1) Periodically replacing parts/cycle
- Drum unit/Y,M,C: Every 90,000 sheets (bizhub C368)
- Drum unit/Y,M,C: Every 75,000 sheets (bizhub C308)
- Drum unit/Y,M,C: Every 55,000 sheets (bizhub C258)
- Drum unit/K (DR313K): Every 120,000 sheets (bizhub C368)
- Drum unit/K (DR313K): Every 120,000 sheets (bizhub C308)
- Drum unit/K (DR313K): Every 90,000 sheets (bizhub C258)
- Drum unit/K (DR315K): Every 225,000 sheets (bizhub C368)
- Drum unit/K (DR315K): Every 225,000 sheets (bizhub C308)
- Drum unit/K (DR315K): Every 170,000 sheets (bizhub C258)

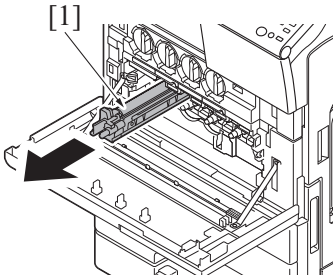
NOTE
- **The following shows the procedure for replacing the drum unit/M, but take the same procedure for the drum unit/Y, C, K.**

(2) Removal procedure

1. Open the front door.
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box

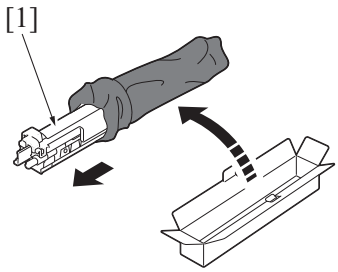


3. Turn the drum unit lock lever [1] and release the lock.

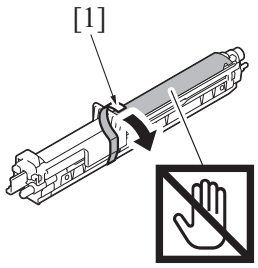


4. Pull the drum unit [1] to you and remove it from the machine.

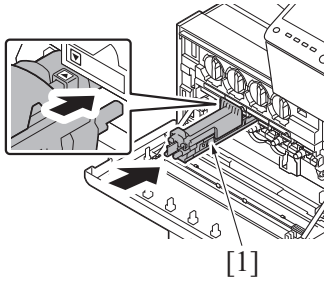
(3) Reinstall procedure



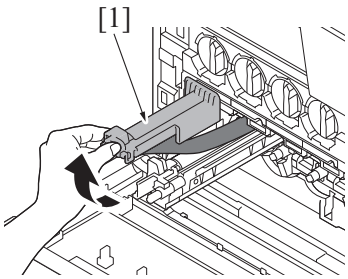
1. Remove the drum unit [1] from its package.
2. Remove the drum unit [1] from the plastic bag.



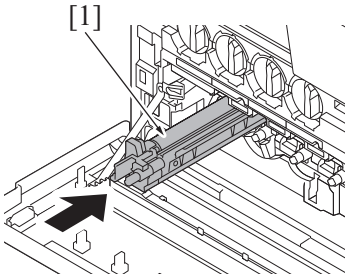
3. Peel off the tape [1].
   NOTE
   - **Do not hold the drum unit by the upper part. Holding it by the upper part can cause scratches on the surface of the photo conductor, resulting in the deterioration of image quality.**



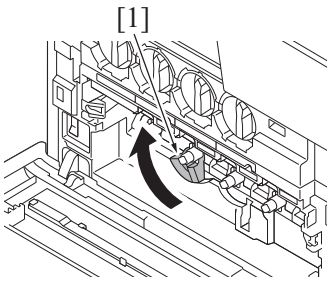
4. Put the label. (Drum unit/Y,M,C only)
5. Align the "▲" mark on the drum unit with the "▼" mark on the machine and insert the drum unit [1] into the machine.



6. Remove the photo conductor protective sheet [1].



7. Completely insert the drum unit [1].



8. Turn the drum unit lock lever [1] and lock the drum unit.
NOTE
- **If the lock lever is hard to rotate, turn the lever while pushing the drum unit to the rear.**

9. Reinstall the waste toner box.
10. Close the front door.
11. Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and carry out gradation adjust.

7.2 Developing section

7.2.1 Replacing the developing unit

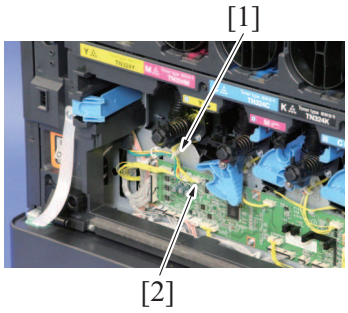
(1) Periodically replacing parts/cycle

- Developing unit : Every 600,000 (bizhub C368)
- Developing unit : Every 600,000 (bizhub C308)
- Developing unit : Every 600,000 (bizhub C258)

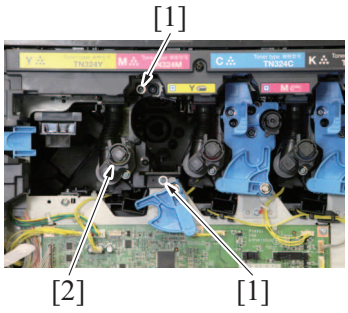
NOTE
- **Although the procedure shown below is for the replacement of the developing unit/Y, use the same procedure to replace other developing units.**

(2) Procedure

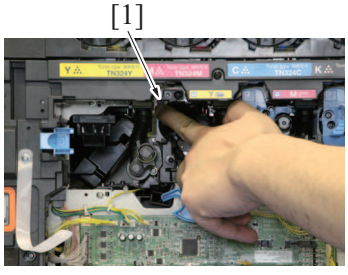
1. Open the front door.
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
3. Remove the front lower cover.
   G.5.2.14 Front lower cover
4. Remove the drum unit/Y.
   F.7.1.1 Replacing the drum unit



5. Remove the harness from the wire saddle [1], and disconnect the connector [2].



6. Remove two screws [1], and remove the developing unit [2].



7. To reinstall, reverse the order of removal.
NOTE
- **To install the two screws in the developing unit, press the position [1] with your finger as shown in the illustration.**

8. Carry out the [Service Mode] -> [Image Process Adjustment] -> [Gradation Adjust].

7.3 Toner supply section

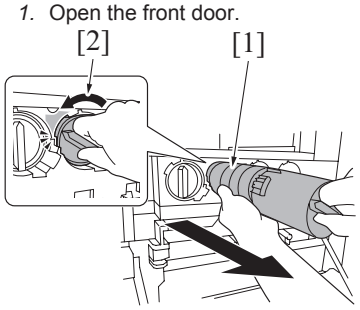
7.3.1 Replacing the toner cartridge

(1) Periodically replacing parts/cycle

- Toner cartridge/Y,M,C : Every 25,000 prints (bizhub C368)
- Toner cartridge/Y,M,C : Every 25,000 prints (bizhub C308)
- Toner cartridge/Y,M,C : Every 25,000 prints (bizhub C258)
- Toner cartridge/K : Every 27,000 prints (bizhub C368)
- Toner cartridge/K : Every 27,000 prints (bizhub C308)
- Toner cartridge/K : Every 27,000 prints (bizhub C258)

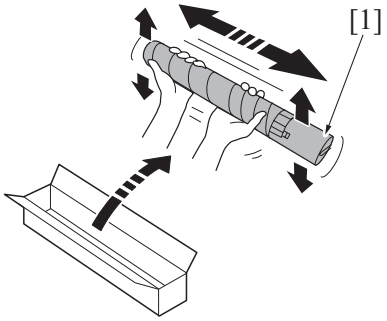
(2) Removal procedure

1. Open the front door.

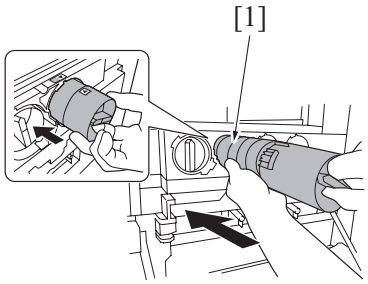


2. Turn the toner cartridge [1] in the direction [2] as shown in the illustration to release the lock.
3. Remove the toner cartridge [1].

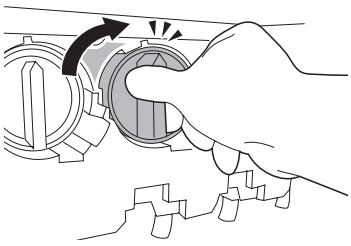
(3) Reinstall procedure



1. Remove the new toner cartridge [1] from its packaging, and the shake the cartridge side to side 5 to 10 times.
   NOTE
   - **Shake the toner cartridge well.**
     If shaking is not enough, that may cause trouble.



2. Insert the toner cartridge [1] into the machine.
   NOTE
   - **Make sure that the toner cartridge is the same color as the label in the cartridge compartment.**
   - **Make sure that the blue label position of the toner cartridge is matched with the one of the machine side.**



3. Completely insert the toner cartridge into the machine and turn it in the direction as shown in the illustration in order to fix the toner cartridge.

7.4 1st transfer section

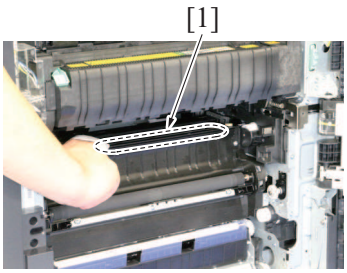
7.4.1 Cleaning of the image transfer entrance guide

(1) Periodically cleaning parts/cycle

- Image transfer entrance guide: Every 240,000 counts or when the transfer belt unit is replaced.

(2) Procedure

1. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit



2. Wipe the image transfer entrance guide [1] clean of spilled toner and dirt using a cleaning pad with water or alcohol.

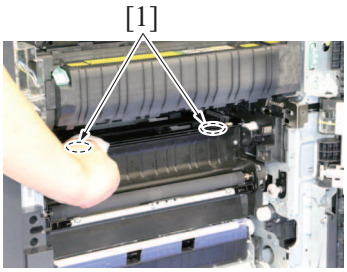
7.4.2 Cleaning of the IDC sensor window

(1) Periodically cleaning parts/cycle

- IDC sensor window: Every 240,000 counts or when the transfer belt unit is replaced.

(2) Procedure

1. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit



2. Wipe the surface of the IDC sensor window [1] clean of spilled toner and dirt.
   NOTE
   - **Do not wipe out with any solvents or alcohols.**

7.4.3 Replacing the transfer belt unit

(1) Periodically replacing parts/cycle

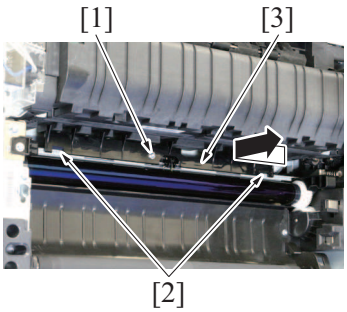
- Transfer belt unit : Every 300,000 sheets (bizhub C368)
- Transfer belt unit : Every 300,000 sheets (bizhub C308)
- Transfer belt unit : Every 300,000 sheets (bizhub C258)

NOTE

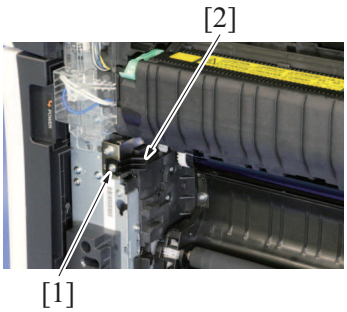
- **Before replacement operations of the transfer belt unit, make sure to turn OFF the main power switch.**

(2) Removal procedure

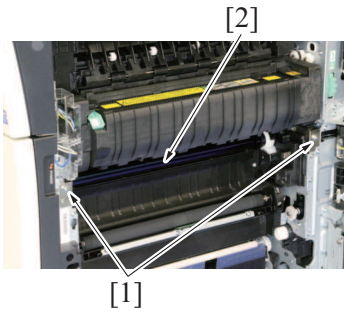
1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
2. Open the right door and the regist unit.



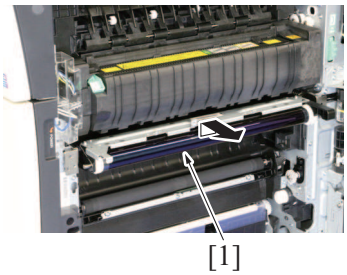
3. Remove the screw [1] and two tabs [2], and remove the 2nd transfer paper winding prevention guide [3].



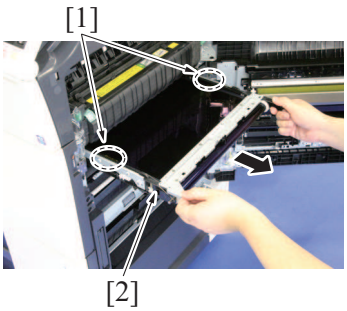
4. Remove the screw [1], and remove the stopper [2].



5. Remove two screws [1] and unlock the transfer belt unit [2].

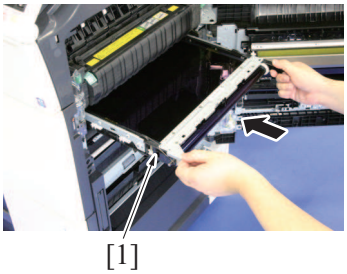


6. Hold the both sides and lift it to take out the transfer belt unit [1] a little.

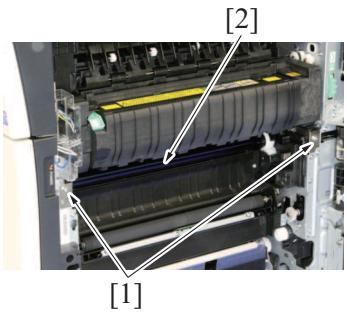


7. Hold the position [1] and remove the transfer belt unit [2].
NOTE
- **Do not touch the surface of the transfer belt unit.**
- **Cover the transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.**
- **If accidentally touched the surface of the transfer belt, lightly wipe it using the Hydro-wipe (65AA-99##). Do not clean with alcohol or water.**

(3) Reinstall procedure



1. Insert the transfer belt unit [1].
NOTE
- **Insert the transfer belt unit with care not to allow its docking gear to be damaged by hitting it against the rail or associated part.**
- **Do not touch the surface of the transfer belt unit.**
- **Cover the transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.**
- **If accidentally touched the surface of the transfer belt, lightly wipe it using the Hydro-wipe (65AA-99##). Do not clean with alcohol or water.**



2. Install the transfer belt unit [2] with two screws [1].
3. Install the 2nd transfer paper winding prevention guide.
4. To reinstall, reverse the order of removal.
5. Turn ON the main power switch.
6. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].
7. Carry out the [Service Mode] -> [Image Process Adjustment] -> [Gradation Adjust].

7.5 2nd transfer/separation section

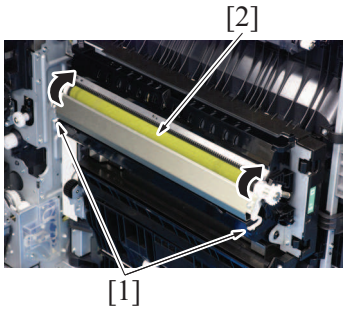
7.5.1 Replacing the transfer roller unit

(1) Periodically replacing parts/cycle

- Transfer roller unit : Every 300,000 sheets (bizhub C368)
- Transfer roller unit : Every 300,000 sheets (bizhub C308)
- Transfer roller unit : Every 300,000 sheets (bizhub C258)

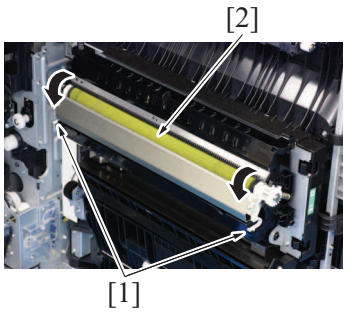
(2) Removal procedure

1. Open the right door and the regist unit.



2. Unlock the lock levers [1] of the transfer roller unit (at two places).
3. Holding onto the lock levers [1] (at two places), remove the transfer roller unit [2].

(3) Reinstall procedure



1. Holding onto the lock levers [1] (at two places), mount the new transfer roller unit [2].
2. Lock the lock levers [1] (at two places).
   NOTE
   - **Make sure that the levers are locked in position both at front and rear.**
3. Close the right door.

7.6 Toner collection section

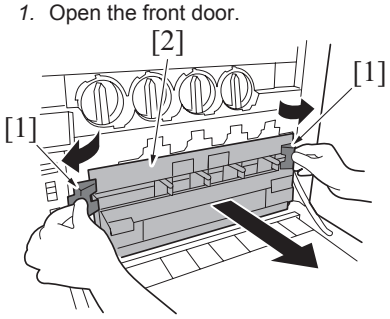
7.6.1 Replacing the waste toner box

(1) Periodically replacing parts/cycle

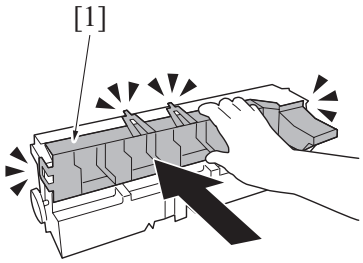
- Waste toner box: Every 33,000 counts (bizhub C368)
- Waste toner box: Every 30,000 counts (bizhub C308)
- Waste toner box: Every 30,000 counts (bizhub C258)

(2) Removal procedure

1. Open the front door.

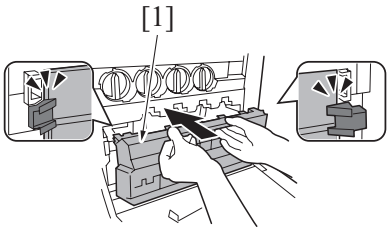


2. Unhook the waste toner box fixing levers [1] and remove the waste toner box [2].



3. Take out the cap [1] from the new waste toner box package, and attach it to the old waste toner box.
   NOTE
   - **After removing the Waste Toner Box, quickly install the cap. If the Waste Toner Box is tilted, waste toner may spill.**
4. Clean the surface around the waste toner collecting port.
   F.7.6.2 Cleaning of the area around the waste toner collecting port

(3) Reinstall procedure



1. Remove the brand new waste toner box from its package and remove the packing material.
2. Set the waste toner box [1].
3. Close the front door.

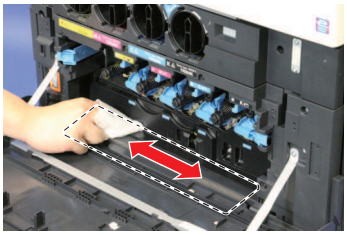
7.6.2 Cleaning of the area around the waste toner collecting port

(1) Periodically cleaning parts/cycle

- Area around the waste toner collecting port: Every 60,000 counts (upon each call)

(2) Procedure

1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box



2. Wipe the areas around the waste toner collecting port clean of spilled toner and dirt using a cleaning pad with water or alcohol.

7.7 Paper feed section

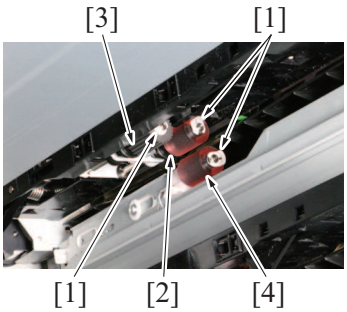
7.7.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller

(1) Periodically replacing parts/cycle

- Tray 1 feed roller: Every 300,000 counts
- Tray 1 pick-up roller: Every 300,000 counts
- Tray 1 separation roller: Every 300,000 counts

(2) Procedure

1. Open the right door.
2. Remove the tray 1.
   G.5.2.23 Tray 1
3. Remove the tray 2.
   G.5.2.24 Tray 2



4. Remove the C-clip [1] each, and remove the tray 1 feed roller [2], tray 1 pick-up roller [3] and tray 1 separation roller [4].
5. To reinstall, reverse the order of removal.
6. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [1st.].

7.7.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller

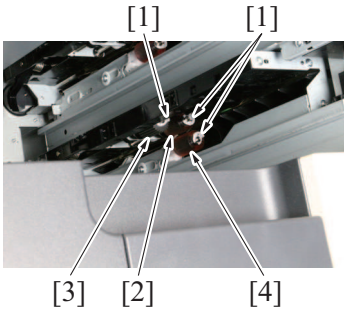
(1) Periodically replacing parts/cycle

- Tray 2 feed roller: Every 300,000 counts
- Tray 2 pick-up roller: Every 300,000 counts
- Tray 2 separation roller: Every 300,000 counts

(2) Procedure

1. Open the right door.
2. Remove the tray 1.
   G.5.2.23 Tray 1

3. Remove the tray 2.
G.5.2.24 Tray 2



4. Remove the C-clip [1] each, and remove the tray 2 feed roller [2], tray 2 pick-up roller [3] and tray 2 separation roller [4].

5. To reinstall, reverse the order of removal.
6. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [2nd.].

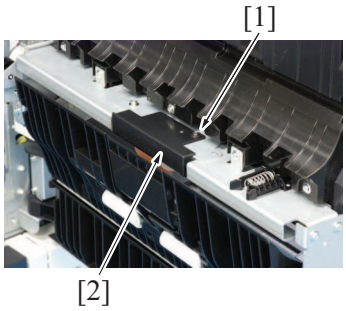
7.7.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy

(1) Periodically replacing parts/cycle

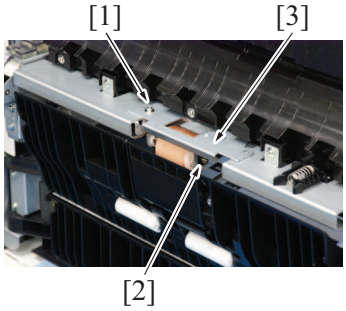
- Manual bypass tray feed roller: Every 200,000 counts
- Manual bypass tray separation roller assy: Every 200,000 counts

(2) Procedure

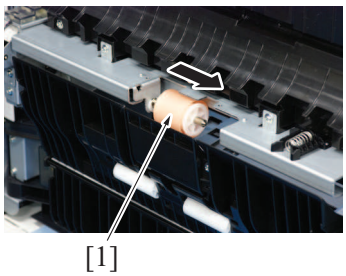
1. Open the right door.



2. Remove the screw [1], and remove the feed roller cover [2].

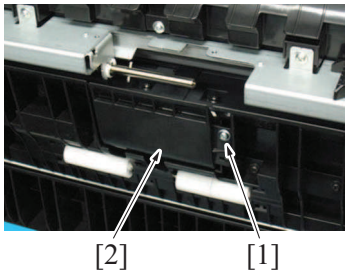


3. Remove the screw [1], and remove the bushing [2] and the metal plate [3].

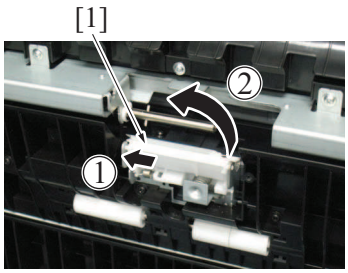


4. Remove the manual bypass tray feed roller [1].

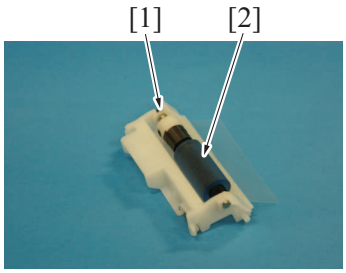
5. Remove the screw [1], and remove the cover [2].



6. Remove the manual bypass tray separation roller unit [1].



7. Remove the C-ring [1], and remove the manual bypass tray separation roller assy [2].



8. To reinstall, reverse the order of removal.
9. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray].

7.8 Registration section

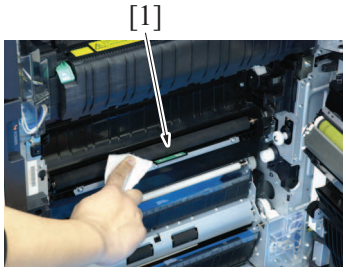
7.8.1 Cleaning of the registration roller

(1) Periodically cleaning parts/cycle

- Registration roller: Every 60,000 counts (upon each call)

(2) Procedure

1. Open the right door and the regist unit.



2. Using a cleaning pad with alcohol, wipe the registration roller [1] clean of dirt.

7.9 Fusing section

7.9.1 Replacing the fusing unit

CAUTION

- **The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.**

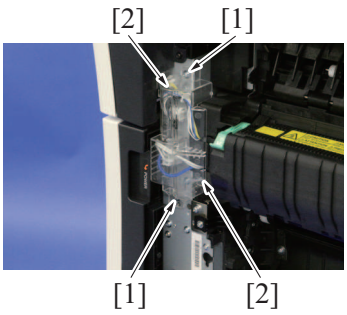
  Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.

(1) Periodically replacing parts/cycle

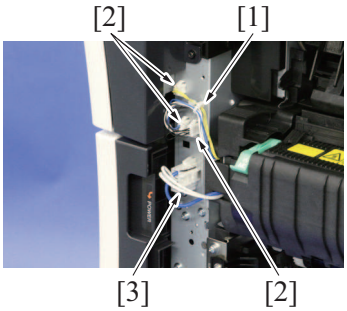
- Fusing unit: Every 600,000 (bizhub C368)
- Fusing unit: Every 600,000 (bizhub C308)
- Fusing unit: Every 600,000 (bizhub C258)

(2) Procedure

1. Open the right door and the regist unit.



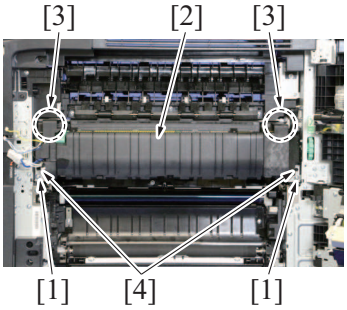
2. Remove the screw [1] each, and remove the two connector protective covers [2].



3. Remove the harness from the wire saddle [1].
4. Disconnect three connectors [2].
5. Disconnect the connector [3].

   NOTE

   - **When removing the connector [3], press the claw to release the lock, then remove it.**



6. Remove two screws [1], and remove the fusing unit [2].

   NOTE

   - **When removing the fusing unit, hold the parts [3] shown on the picture so that it would not fall.**
   - **When installing the fusing unit, make sure that the set pin [4] is inserted in the fusing unit.**

7. To reinstall, reverse the order of removal.
8. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].

7.10 Duplex section

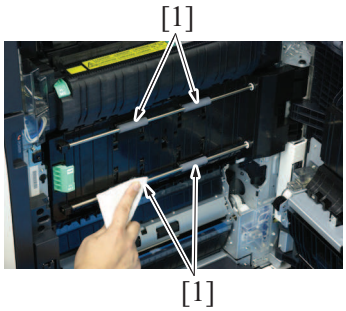
7.10.1 Cleaning of the duplex transport rollers

(1) Periodically cleaning parts/cycle

- Duplex transport rollers: Every 60,000 counts (upon each call)

(2) Procedure

1. Open the right door.



2. Using a cleaning pad with water or alcohol, wipe the duplex transport rollers [1] clean of dirt.

8. Periodical maintenance procedure bizhub C658/C558/C458

NOTE
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

8.1 Housing section

8.1.1 Replacing the toner filter

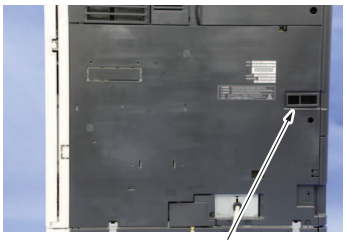
(1) Periodically replacing parts/cycle

- Toner filter: Every 300,000 sheets (bizhub C658)
- Toner filter: Every 300,000 sheets (bizhub C558)
- Toner filter: Every 300,000 sheets (bizhub C458)

* The transfer roller unit is supplied with the transfer belt unit, and these are replaced at the same time.

(2) Procedure

1. Squeeze the hooks and remove the toner filter [1].



[1]

2. To reinstall, reverse the order of removal.

8.2 Photo conductor section

8.2.1 Replacing the drum unit

⚠CAUTION

- When replacing with the drum unit (DR315K), make sure to install the firmware (ver. G00-V1 or later) beforehand. J.1 REWRITING OF FIRMWARE

  If you replaced with the drum unit (DR315K) without installing the firmware (ver. G00-V1 or later), "Drum Unit Detection Error" will appear.

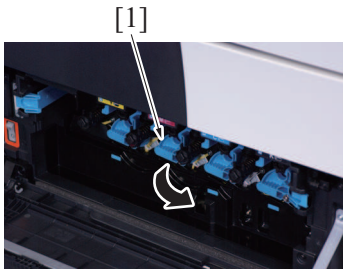
(1) Periodically replacing parts/cycle

- Drum unit/Y, M, C: Every 105,000 sheets (bizhub C658)
- Drum unit/Y, M, C: Every 100,000 sheets (bizhub C558)
- Drum unit/Y, M, C: Every 85,000 sheets (bizhub C458 - Japan)
- Drum unit/Y, M, C: Every 100,000 sheets (bizhub C458 - outside Japan)
- Drum unit/K (DR313K): Every 150,000 sheets (bizhub C658)
- Drum unit/K (DR313K): Every 140,000 sheets (bizhub C558)
- Drum unit/K (DR313K): Every 135,000 sheets (bizhub C458)
- Drum unit/K (DR315K): Every 266,000 sheets (bizhub C658)
- Drum unit/K (DR315K): Every 251,000 sheets (bizhub C558)
- Drum unit/K (DR315K): Every 242,000 sheets (bizhub C458)

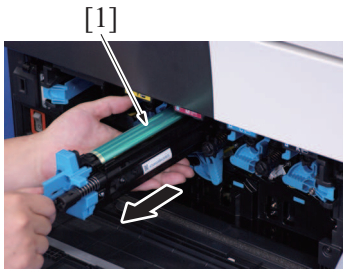
NOTE
- **The following shows the procedure for replacing the drum unit/M, but take the same procedure for the drum unit/Y, C, K.**

(2) Removal procedure

1. Open the lower front door.
2. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box

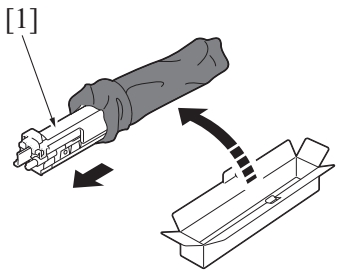


3. Turn the drum unit lock lever [1] and release the lock.

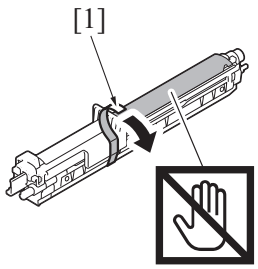


4. Pull the drum unit [1] to you and remove it from the machine.

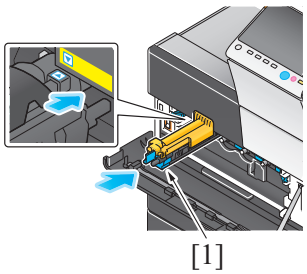
(3) Reinstall procedure



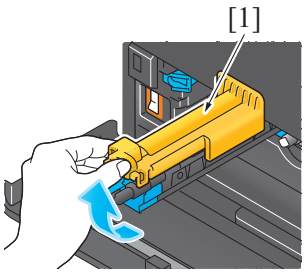
1. Remove the drum unit [1] from its package.
2. Remove the drum unit [1] from the plastic bag.



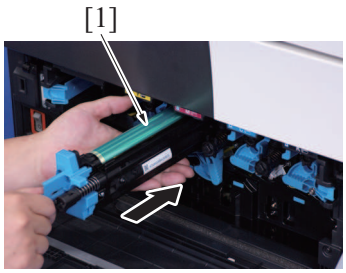
3. Peel off the tape [1].
   NOTE
   - **Do not hold the drum unit by the upper part. Holding it by the upper part can cause scratches on the surface of the photo conductor, resulting in the deterioration of image quality.**



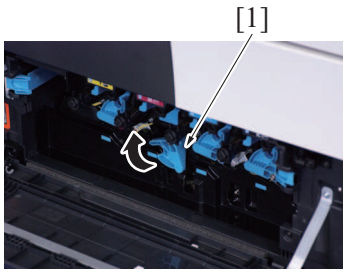
4. Put the label. (Drum Unit/Y, M, C only)
5. Align the "▲" mark on the drum unit with the "▼" mark on the machine and insert the drum unit [1] into the machine.



6. Remove the photo conductor protective sheet [1].



7. Completely insert the drum unit [1].



8. Turn the drum unit lock lever [1] and lock the drum unit.
NOTE
- **If the lock lever is hard to rotate, turn the lever while pushing the drum unit to the rear.**

9. Reinstall the waste toner box.
10. Close the lower front door.
11. Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and carry out gradation adjust.

8.3 Developing section

8.3.1 Replacing the developing unit

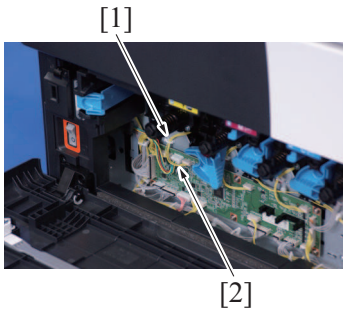
(1) Periodically replacing parts/cycle

- Developing unit: Every 595,000 sheets (bizhub C658 - Japan)
- Developing unit: Every 590,000 sheets (bizhub C658 - North America)
- Developing unit: Every 600,000 sheets (bizhub C658 - Europe)
- Developing unit: Every 595,000 sheets (bizhub C558 - Japan)
- Developing unit: Every 590,000 sheets (bizhub C558 - North America)
- Developing unit: Every 600,000 sheets (bizhub C558 - Europe)
- Developing unit: Every 580,000 sheets (bizhub C458 - Japan)
- Developing unit: Every 590,000 sheets (bizhub C458 - North America)
- Developing unit: Every 600,000 sheets (bizhub C458 - Europe)

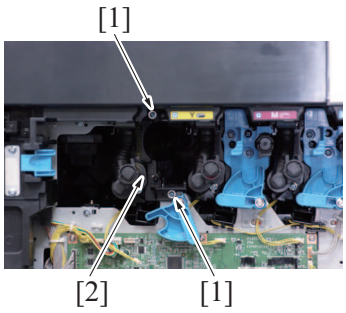
NOTE
- **Although the procedure shown below is for the replacement of the developing unit/Y, use the same procedure to replace other developing units.**

(2) Procedure

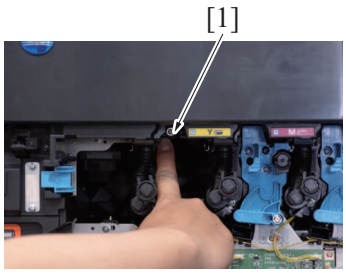
1. Open the lower front door.
2. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
3. Remove the front lower cover.
   G.6.2.14 Front lower cover
4. Remove the drum unit/Y.
   F.8.2.1 Replacing the drum unit



5. Remove the harness from the wire saddle [1], and disconnect the connector [2].



6. Remove two screws [1], and remove the developing unit [2].



7. To reinstall, reverse the order of removal.
NOTE
- **To install two screws in the developing unit, press the position [1] with your finger as shown in the illustration.**

8. Carry out the [Service Mode] -> [Image Process Adjustment] -> [Gradation Adjust].

8.4 Toner supply section

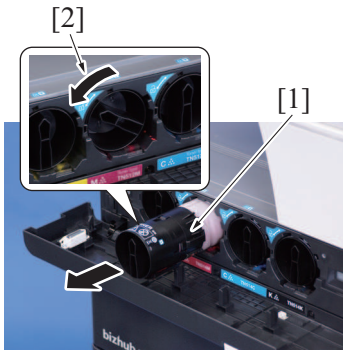
8.4.1 Replacing the toner cartridge

(1) Periodically replacing parts/cycle

- Toner cartridge/Y, M, C: Every 26,000 sheets (bizhub C658)
- Toner cartridge/Y, M, C: Every 26,000 sheets (bizhub C558)
- Toner cartridge/Y, M, C: Every 26,000 sheets (bizhub C458)
- Toner cartridge/K: Every 28,000 sheets (bizhub C658)
- Toner cartridge/K: Every 28,000 sheets (bizhub C558)
- Toner cartridge/K: Every 28,000 sheets (bizhub C458)

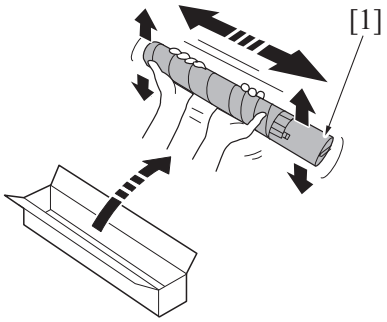
(2) Removal procedure

1. Open the upper front door.



2. Turn the toner cartridge [1] in the direction [2] as shown in the illustration to release the lock.
3. Remove the toner cartridge [1].

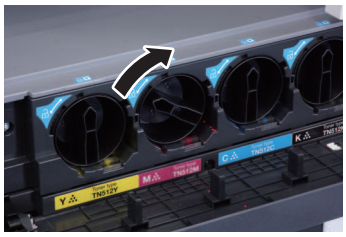
(3) Reinstall procedure



1. Remove the new toner cartridge [1] from its packaging, and the shake the cartridge side to side 5 to 10 times.
   NOTE
   - **Shake the toner cartridge well.**
     If shaking is not enough, that may cause trouble.



2. Insert the toner cartridge [1] into the machine.
   NOTE
   - **Make sure that the toner cartridge is the same color as the label in the cartridge compartment.**
   - **Make sure that the blue label position of the toner cartridge is matched with the one of the machine side.**



3. Completely insert the toner cartridge into the machine and turn it in the direction as shown in the illustration in order to fix the toner cartridge.

8.5 1st transfer section

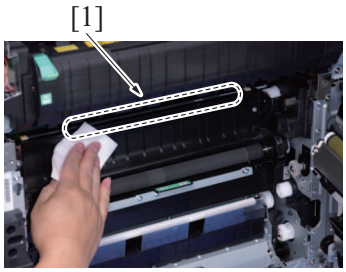
8.5.1 Cleaning of the image transfer entrance guide

(1) Periodically cleaning parts/cycle

- Image transfer entrance guide: Every 240,000 counts or when the transfer belt unit is replaced.

(2) Procedure

1. Remove the transfer belt unit.
   F.8.5.3 Replacing the transfer belt unit



2. Wipe the image transfer entrance guide [1] clean of spilled toner and dirt using a cleaning pad with water or alcohol.

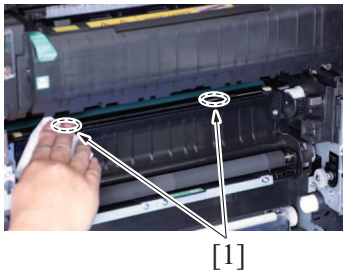
8.5.2 Cleaning of the IDC sensor window

(1) Periodically cleaning parts/cycle

- IDC sensor window: Every 240,000 counts or when the transfer belt unit is replaced.

(2) Procedure

1. Remove the transfer belt unit.
   F.8.5.3 Replacing the transfer belt unit



2. Wipe out the IDC sensor window [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**

8.5.3 Replacing the transfer belt unit

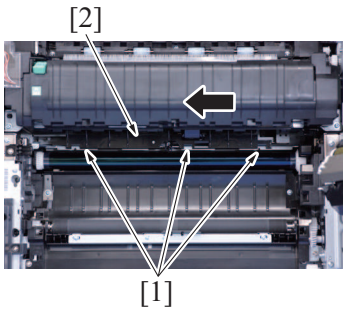
(1) Periodically replacing parts/cycle

- Transfer belt unit: Every 300,000 sheets (bizhub C658)
- Transfer belt unit: Every 300,000 sheets (bizhub C558)
- Transfer belt unit: Every 300,000 sheets (bizhub C458)

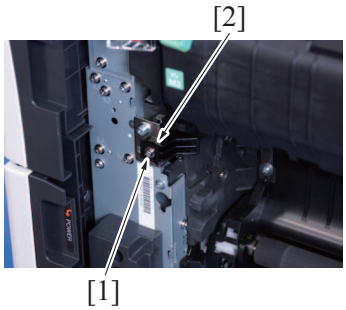
NOTE
- **Before replacement operations of the transfer belt unit, make sure to turn OFF the main power switch.**

(2) Removal procedure

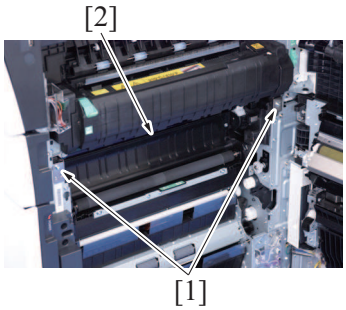
1. Open the right door and the regist unit.



2. Release three tabs [1], and remove the 2nd transfer paper winding prevention guide [2].

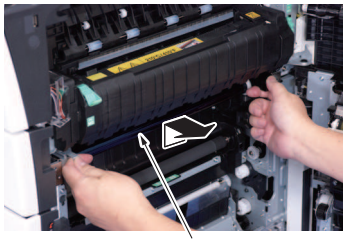


3. Remove the screw [1], and remove the stopper [2].

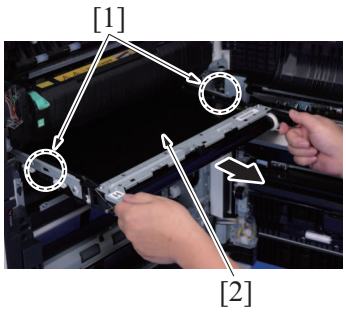


4. Remove two screws [1] and unlock the transfer belt unit [2].

5. Hold the both sides and lift it to take out the transfer belt unit [1] a little.

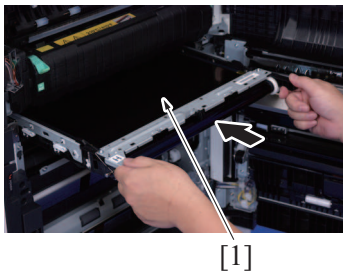


6. Hold the position [1] and remove the transfer belt unit [2].
NOTE
- **Do not touch the surface of the transfer belt unit.**
- **Cover the transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.**
- **If accidentally touched the surface of the transfer belt, lightly wipe it using the Hydro-wipe (65AA-99##). Do not clean with alcohol or water.**

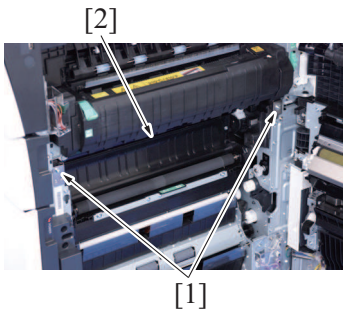


(3) Reinstall procedure

1. Insert the transfer belt unit [1].
NOTE
- **Insert the transfer belt unit with care not to allow its docking gear to be damaged by hitting it against the rail or associated part.**
- **Do not touch the surface of the transfer belt unit.**
- **Cover the transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.**
- **If accidentally touched the surface of the transfer belt, lightly wipe it using the Hydro-wipe (65AA-99##). Do not clean with alcohol or water.**



2. Install the transfer belt unit [2] with two screws [1].
NOTE
- **Make sure to also replace the transfer roller unit, and toner filter bundled with the transfer belt unit.**
3. Install the 2nd transfer paper winding prevention guide.



4. To reinstall, reverse the order of removal.
5. Turn ON the main power switch.
6. [Service Mode] -> [Counter] -> [Life] -> [New Release]. Then, carry out manual bypass tray width adjustment.
7. Carry out the [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust].

8.6 2nd transfer/separation section

8.6.1 Replacing the transfer roller unit

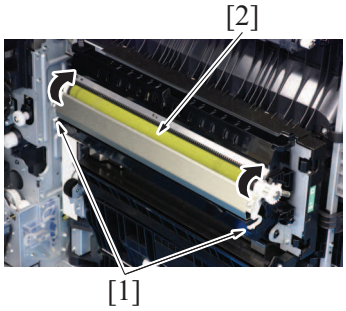
(1) Periodically replacing parts/cycle

- Transfer roller unit: Every 300,000 sheets (bizhub C658)
- Transfer roller unit: Every 300,000 sheets (bizhub C558)
- Transfer roller unit: Every 300,000 sheets (bizhub C458)

* The transfer roller unit is supplied with the transfer belt unit, and these are replaced at the same time.

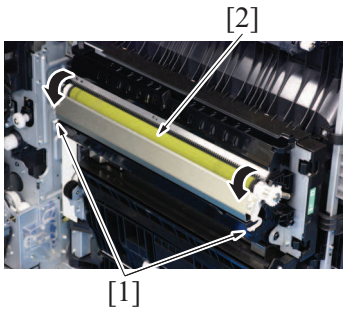
(2) Removal procedure

1. Open the right door.



2. Unlock the lock levers [1] of the transfer roller unit (at two places).
3. Holding onto the lock levers [1] (at two places), remove the transfer roller unit [2].

(3) Reinstall procedure



1. Holding onto the lock levers [1] (at two places), mount the new transfer roller unit [2].
2. Lock the lock levers [1] (at two places).
   NOTE
   - **Make sure that the levers are locked in position both at front and rear.**

3. Close the right door.

8.7 Toner collection section

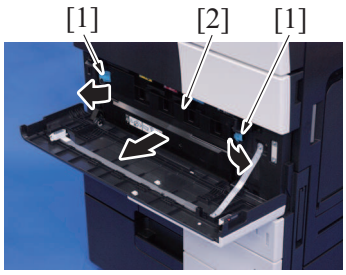
8.7.1 Replacing the waste toner box

(1) Periodically replacing parts/cycle

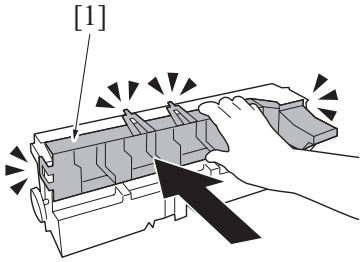
- Waste toner box: Every 40,000 counts

(2) Removal procedure

1. Open the lower front door.



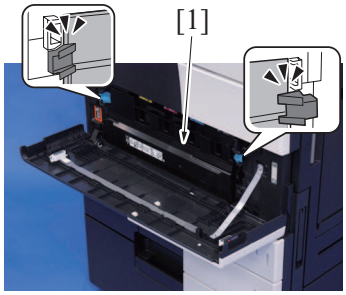
2. Unhook the waste toner box fixing levers [1] and remove the waste toner box [2].



3. Take out the cap [1] from the new waste toner box package, and attach it to the old waste toner box.
   NOTE
   - **After removing the Waste Toner Box, quickly install the cap. If the Waste Toner Box is tilted, waste toner may spill.**

4. Clean the surface around the waste toner collecting port.
   F.8.7.2 Cleaning of the area around the waste toner collecting port

(3) Reinstall procedure



1. Remove the brand new waste toner box from its package and remove the packing material.
2. Set the waste toner box [1].
3. Close the lower front door.

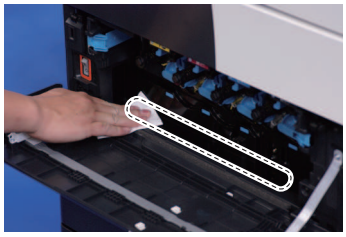
8.7.2 Cleaning of the area around the waste toner collecting port

(1) Periodically cleaning parts/cycle

- Area around the waste toner collecting port: Every 60,000 counts (upon each call)

(2) Procedure

1. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box



2. Wipe the areas around the waste toner collecting port clean of spilled toner and dirt using a cleaning pad with water or alcohol.

8.8 Document feed section

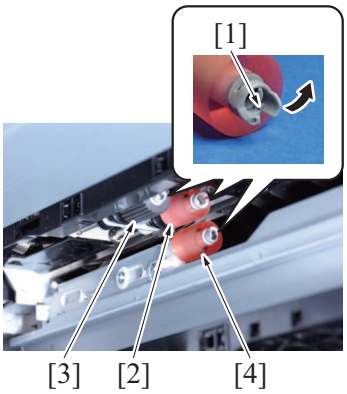
8.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller

(1) Periodically replacing parts/cycle

- Tray 1 feed roller: Every 300,000 counts
- Tray 1 pick-up roller: Every 300,000 counts
- Tray 1 separation roller: Every 300,000 counts

(2) Procedure

1. Open the right door.
2. Remove the tray 1.
   G.6.2.27 Tray 1
3. Remove the tray 2.
   G.6.2.28 Tray 2



4. Release the tab [1], and remove the tray 1 feed roller [2].
5. Release the tab [1], and remove the tray 1 pick-up roller [3].
6. Release the tab [1], and remove the tray 1 separation roller [4].
7. To reinstall, reverse the order of removal.
8. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [1st.].

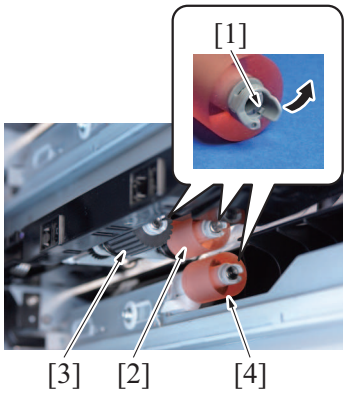
8.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller

(1) Periodically replacing parts/cycle

- Tray 2 feed roller: Every 300,000 counts
- Tray 2 pick-up roller: Every 300,000 counts
- Tray 2 separation roller: Every 300,000 counts

(2) Procedure

1. Open the right door.
2. Remove the tray 1.
   G.6.2.27 Tray 1
3. Remove the tray 2.
   G.6.2.28 Tray 2



4. Release the tab [1], and remove the tray 2 feed roller [2].
5. Release the tab [1], and remove the tray 2 pick-up roller [3].
6. Release the tab [1], and remove the tray 2 separation roller [4].
7. To reinstall, reverse the order of removal.
8. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [2nd.].

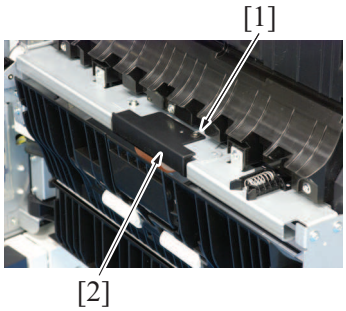
8.8.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy

(1) Periodically replacing parts/cycle

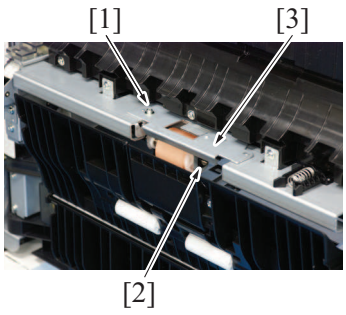
- Manual bypass tray feed roller: Every 200,000 counts
- Manual bypass tray separation roller assy: Every 200,000 counts

(2) Procedure

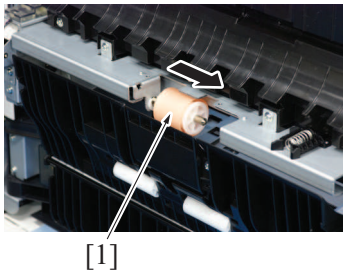
1. Open the right door.
2. Open the registration unit.



3. Remove the screw [1], and remove the feed roller cover [2].

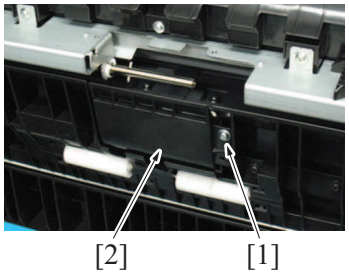


4. Remove the screw [1], and remove the bushing [2] and the metal plate [3].

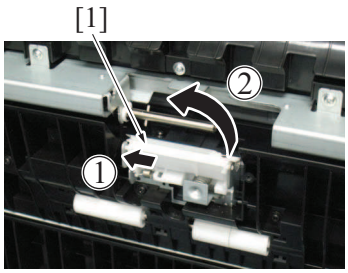


5. Remove the manual bypass tray feed roller [1].

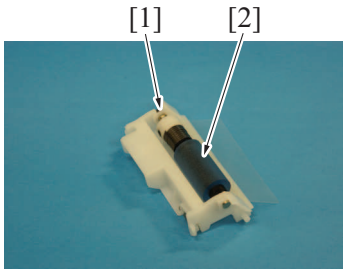
6. Remove the screw [1], and remove the cover [2].



7. Remove the manual bypass tray separation roller unit [1].



8. Remove the C-ring [1], and remove the manual bypass tray separation roller assy [2].



9. To reinstall, reverse the order of removal.
10. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray].

8.9 Registration section

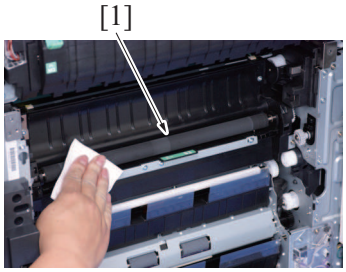
8.9.1 Cleaning of the registration roller

(1) Periodically cleaning parts/cycle

- Registration roller: Every 60,000 counts (upon each call)

(2) Procedure

1. Open the right door.



2. Using a cleaning pad with alcohol, wipe the registration roller [1] clean of dirt.

8.10 Fusing section

8.10.1 Replacing the fusing unit (bizhub C658/C558)

⚠CAUTION



- **The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.**

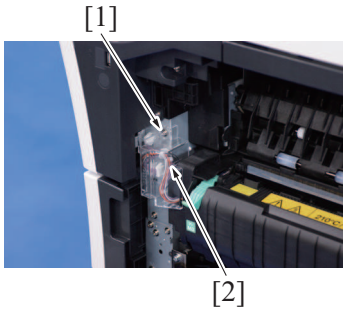
  Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.

(1) Periodically replacing parts/cycle

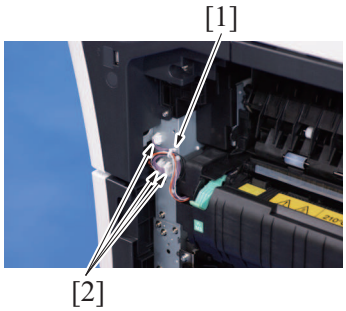
- Fusing Unit: Every 1,185,000 sheets (Japan)
- Fusing Unit: Every 1,175,000 sheets (North America)
- Fusing Unit: Every 1,200,000 sheets (Europe)

(2) Procedure

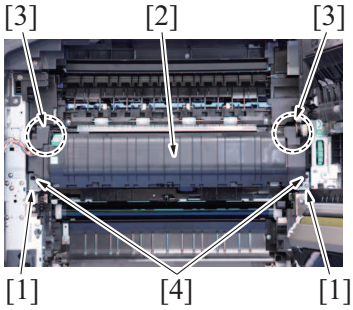
1. Open the right door.



2. Remove the screw [1], and remove the connector protective cover [2].



3. Remove the harness from the wire saddle [1].
4. Disconnect three connectors [2].



5. Remove two screws [1], and remove the fusing unit [2].

   NOTE
   - **When removing the fusing unit, hold the parts [3] shown on the picture so that it would not fall.**
   - **If the fusing unit is difficult to remove, the main power switch was likely turned off while the fusing pressure roller was engaged. To release the fusing pressure roller, turn on the main power switch, wait for the device to warm up, and then turn off the main power switch again.**
   - **When installing the fusing unit, make sure that the set pin [4] is inserted in the fusing unit.**

6. Clean the IH coil unit.
7. To reinstall, reverse the order of removal.
8. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].

8.10.2 Replacing the fusing unit (bizhub C458)

⚠CAUTION

- **The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.**

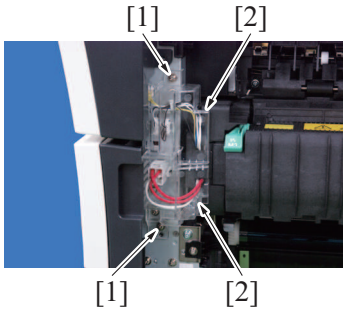
  Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.

(1) Periodically replacing parts/cycle

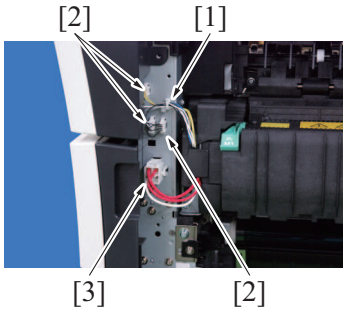
- Fusing Unit: Every 520,000 sheets (Japan)
- Fusing Unit: Every 590,000 sheets (North America)
- Fusing Unit: Every 600,000 sheets (Europe)

(2) Procedure

1. Open the right door.

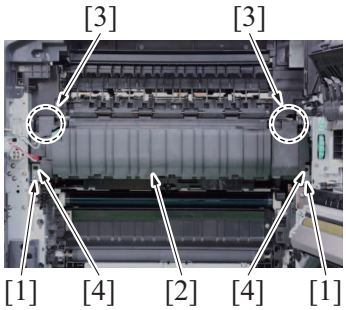


2. Remove the screw [1] each, and remove two connector protective covers [2].



3. Remove the harness from the wire saddle [1].
4. Disconnect three connectors [2].
5. Disconnect the connector [3].

   NOTE
   - **When removing the connector [3], press the claw to release the lock, then remove it.**



6. Remove two screws [1], and remove the fusing unit [2].

   NOTE
   - **When removing the fusing unit, hold the parts [3] shown on the picture so that it would not fall.**
   - **When installing the fusing unit, make sure that the set pin [4] is inserted in the fusing unit.**

7. To reinstall, reverse the order of removal.
8. [Service Mode] -> [Counter] -> [Life] -> [New Release]. Then, carry out manual bypass tray width adjustment.

8.10.3 Cleaning of the IH coil (bizhub C658/C558)

(1) Periodically cleaning parts/cycle

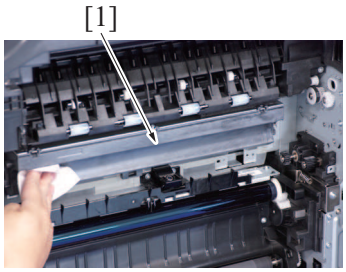
- IH Coil: Every 1,185,000 sheets (Replace every time the fusing unit is replaced) (Japan)
- IH Coil: Every 1,175,000 sheets (Replace every time the fusing unit is replaced) (North America)
- IH Coil: Every 1,200,000 sheets (Replace every time the fusing unit is replaced) (Europe)

NOTE

- **If you continue to use the main unit without cleaning the IH coil, toner and paper dust could accumulate on the IH coil, which could result in image streaks and unevenness in gloss.**

(2) Procedure

1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)



2. Use a cleaning pad dampened with alcohol to clean the IH coil [1].

NOTE

- **Do not touch or contaminate the heating roller temperature sensor while cleaning the IH coil. If the heating roller temperature sensor is moved, damaged, or contaminated, the heating roller temperature sensor may not detect the heating roller temperature correctly, which would cause the P-32 warning code or other trouble codes to appear.**

8.11 Duplex section

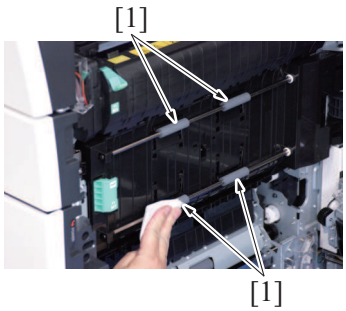
8.11.1 Cleaning of the duplex transport rollers

(1) Periodically cleaning parts/cycle

- Duplex transport rollers: Every 60,000 counts (upon each call)

(2) Procedure

1. Open the right door.
2. Open the registration unit.



3. Using a cleaning pad with water or alcohol, wipe the duplex transport rollers [1] clean of dirt.

9. Periodical maintenance procedure dual scan document feeder

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

9.1 Take-up section

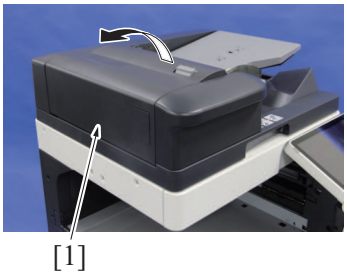
9.1.1 Cleaning of the pick-up roller/feed roller

(1) Periodically cleaning parts/cycle

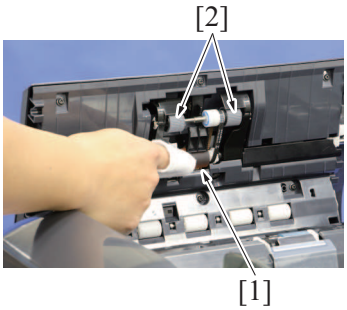
- Pick-up roller: Every 50,000 counts
- Feed roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the pick-up roller [1]/feed roller [2] clean of dirt.



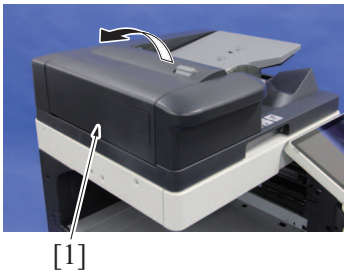
9.1.2 Cleaning of the separation roller

(1) Periodically cleaning parts/cycle

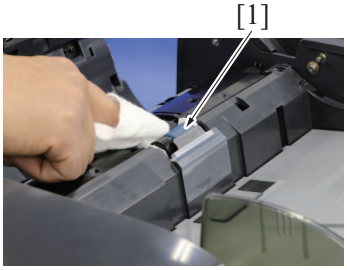
- Separation roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the separation roller [1] clean of dirt.



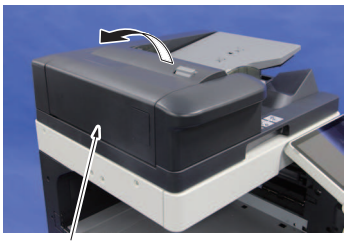
9.1.3 Cleaning the torque limiter

(1) Periodically cleaning parts/cycle

- Torque limiter: Every 200,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the torque limiter [1] clean of dirt.



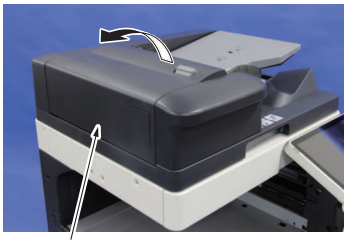
9.1.4 Replacing the pick-up roller/feed roller

(1) Periodically replacing parts/cycle

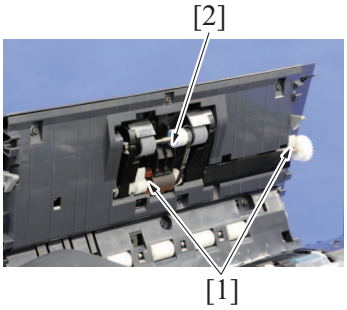
- Pick-up roller: Every 200,000 counts
- Feed roller: Every 200,000 counts

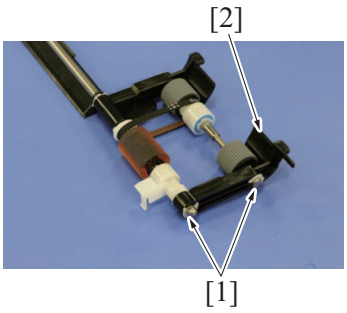
(2) Procedure

1. Open the left cover [1].

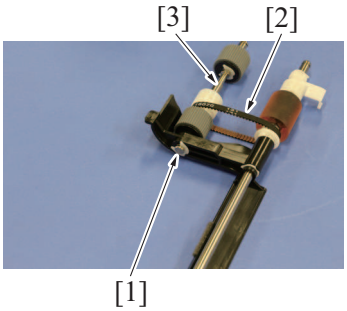


2. Release two locks [1], and remove the pick-up/feed roller assy [2].

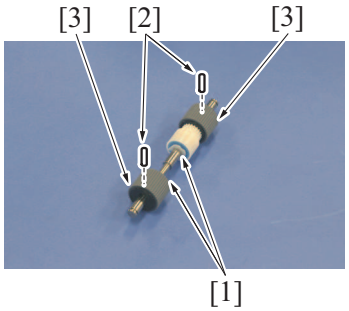




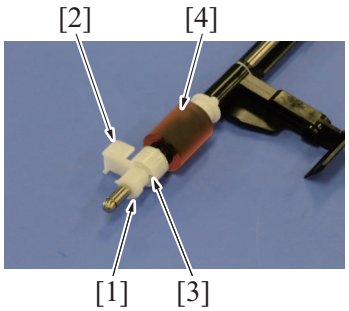
3. Remove two C-clips [1], and remove the arm [2].



4. Remove the C-clip [1] and the belt [2], and remove the pick-up roller assy [3].



5. Remove two C-clips [1] and two pins [2], and remove two pick-up rollers [3].



6. Remove the C-clip [1], and remove the arm [2].
7. Remove the C-clip [3], and remove the feed roller [4].

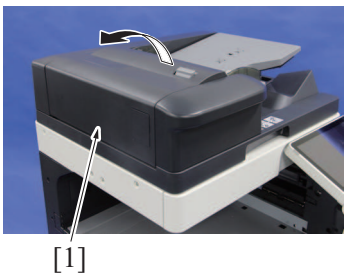
8. To reinstall, reverse the order of removal.

9.1.5 Replacing the separation roller

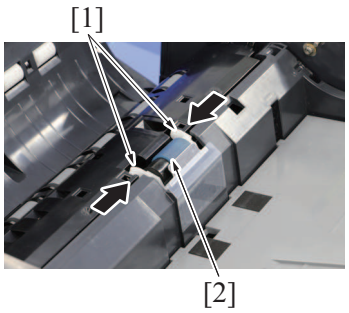
(1) Periodically replacing parts/cycle

- Separation roller: Every 200,000 counts

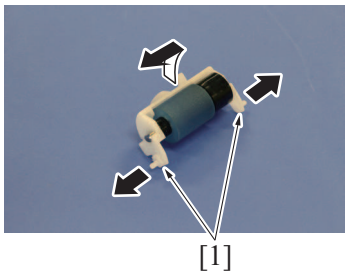
(2) Procedure



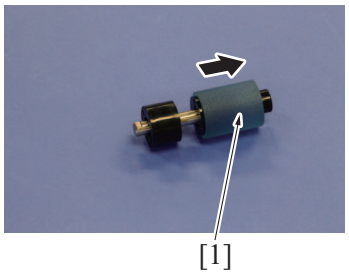
1. Open the left cover [1].



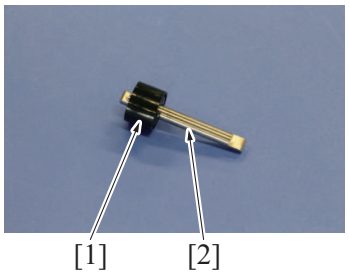
2. Grip both sides [1] of the holder and remove the separation roller assy [2].



3. While opening up the holder [1], remove the shaft.
NOTE
- **Opening the holder too much can break the holder.**



4. Remove the separation roller [1] from the shaft.
NOTE
- **Be careful not to lose the pin.**



5. Before attaching a new separation roller, wipe off the grease adhered to the torque limiter [1] and the shaft [2] using a dry cloth.
NOTE
- **Make sure not to use alcohol. Wipe with a dry cloth.**

6. To reinstall, reverse the order of removal.

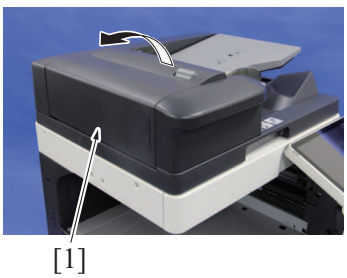
9.2 Transport section

9.2.1 Cleaning of the miscellaneous rollers

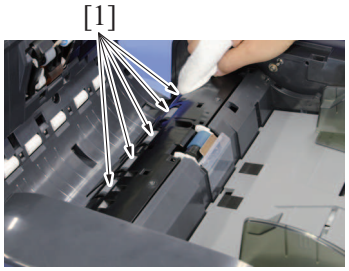
(1) Periodically cleaning parts/cycle

- Miscellaneous rollers: Every 50,000 counts

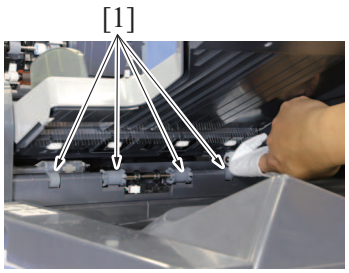
(2) Procedure



1. Open the left cover [1].

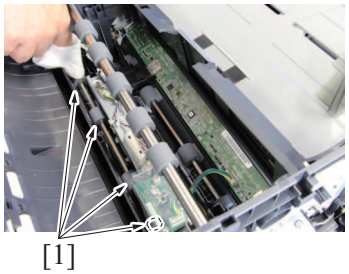


2. Using a cleaning pad dampened with alcohol, wipe the roller [1].

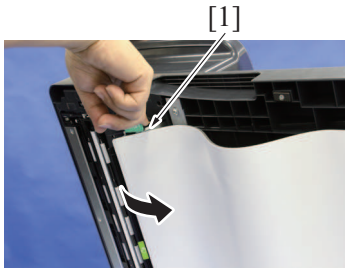


3. Lift up the document feed tray.
4. Using a cleaning pad dampened with alcohol, wipe the roller [1].

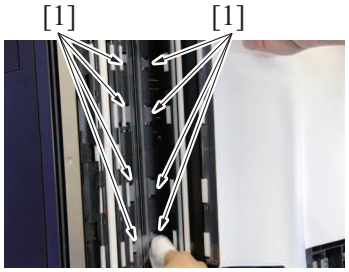
5. Remove the front cover.
G.7.2.5 Lower guide assembly (dual scan document feeder)



6. Using a cleaning pad dampened with alcohol, wipe the roller [1].



7. Open the opening and closing guide [1].



8. Using a cleaning pad dampened with alcohol, wipe the roller [1].

9. To reinstall, reverse the order of removal.

9.2.2 Cleaning of the miscellaneous rolls

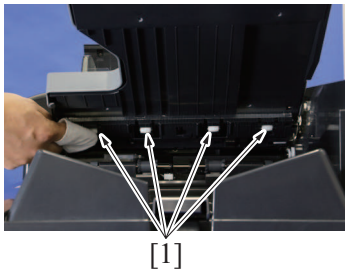
(1) Periodically cleaning parts/cycle

- Miscellaneous rolls: Every 50,000 counts

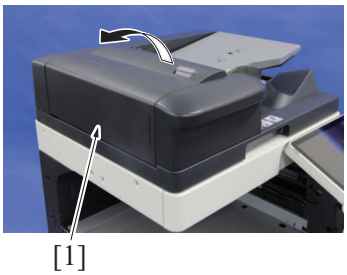
(2) Procedure

1. Lift up the document feed tray.

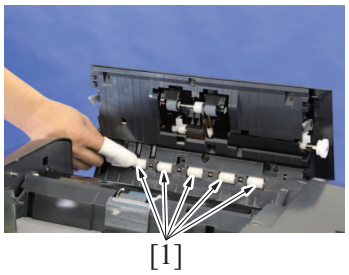
2. Using a cleaning pad dampened with alcohol, wipe the roll [1].



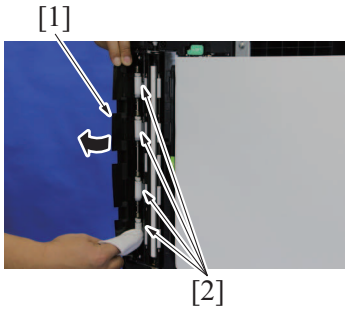
3. Open the left cover [1].



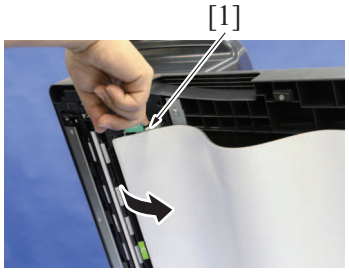
4. Using a cleaning pad dampened with alcohol, wipe the roll [1].

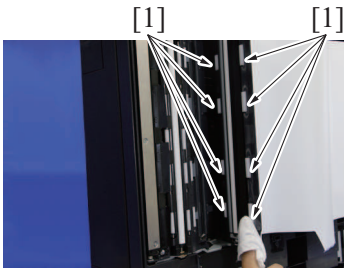


5. Open the dual scan document feeder.
6. Wipe the roll [2] with a cleaning pad dampened with alcohol while opening the pre-read sheet assy [1].



7. Open the opening and closing guide [1].





8. Using a cleaning pad dampened with alcohol, wipe the roll [1].

9.3 Scanning section

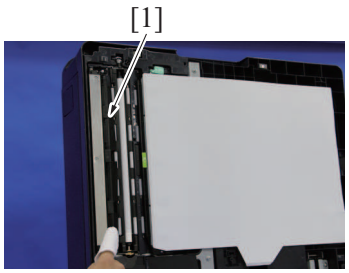
9.3.1 Cleaning of the front side scanning guide

(1) Periodically cleaning parts/cycle

- Front side scanning guide: Every 50,000 counts

(2) Procedure

1. Open the dual scan document feeder.



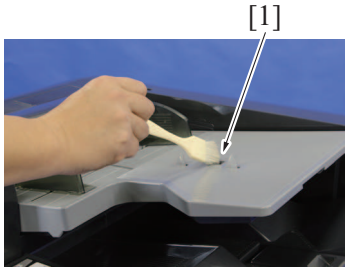
2. Using a cleaning pad dampened with alcohol, wipe the front side scanning guide [1] clean of dirt.
   NOTE
   - **Be careful not to damage the sheet.**

9.3.2 Cleaning of the reflective sensor section

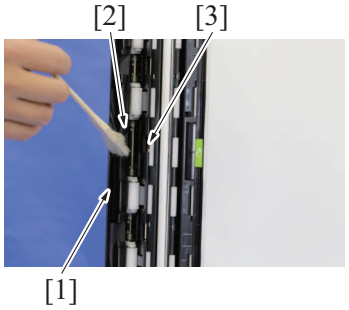
(1) Periodically cleaning parts/cycle

- Reflective sensor section: Every 50,000 counts

(2) Procedure



1. Clean the sensor [1] using a brush or other similar tools.



2. Open the dual scan document feeder.
3. Clean the reflective section [2] and sensor section [3] while opening the pre-read sheet assy [1].

10. Periodical maintenance procedure DF-629

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

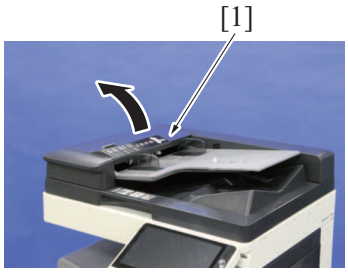
10.1 Take-up section

10.1.1 Cleaning of the pick-up roller/feed roller

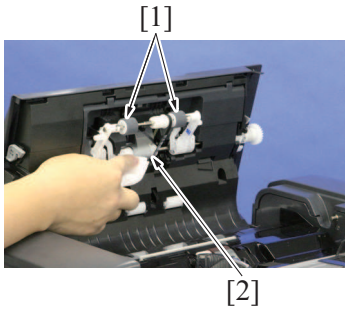
(1) Periodically cleaning parts/cycle

- Pick-up roller: Every 50,000 counts
- Feed roller: Every 50,000 counts

(2) Procedure



1. Open the left cover [1].



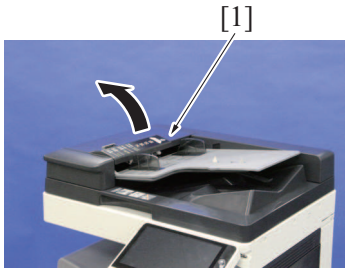
2. Using a cleaning pad with alcohol, wipe the pick-up roller [1] / feed roller [2] clean of dirt.

10.1.2 Cleaning of the separation roller

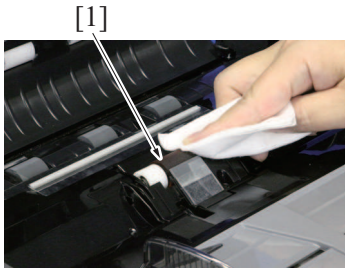
(1) Periodically cleaning parts/cycle

- Separation roller: Every 50,000 counts

(2) Procedure



1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the separation roller [1] clean of dirt.

10.1.3 Replacing the paper feed assy.

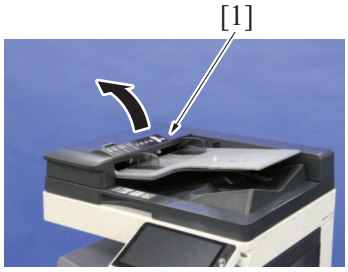
(1) Periodically replacing parts/cycle

- Paper feed assy.: Every 200,000 counts

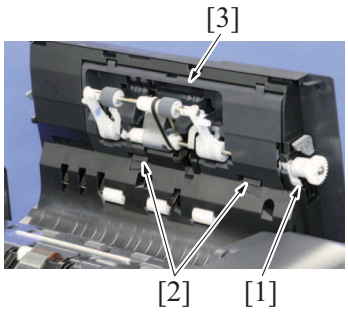
NOTE

- **At replacing the rollers, the paper feed assy. (pick-up roller + feed roller) and the separation roller assy. must be replaced at the same time. Otherwise, the pick-up roller, feed roller , and separation roller assy. must be replaced at the same time.**

(2) Procedure



1. Open the left cover [1].



2. Release the lock [1].
3. Release two tabs [2], and remove the paper feed assy. [3].
4. To reinstall, reverse the order of removal.

10.1.4 Replacing the pick-up roller/feed roller

(1) Periodically replacing parts/cycle

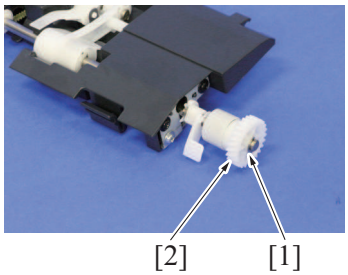
- Pick-up roller: Every 200,000 counts
- Feed roller: Every 200,000 counts

NOTE

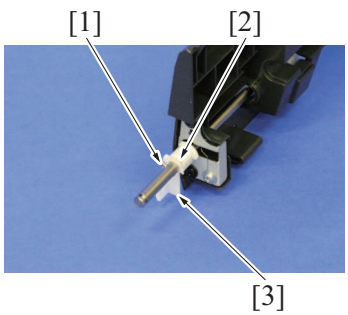
- **At replacing the rollers, the paper feed assy. (pick-up roller + feed roller) and the separation roller assy. must be replaced at the same time. Otherwise, the pick-up roller, feed roller, and separation roller assy. must be replaced at the same time.**

(2) Procedure

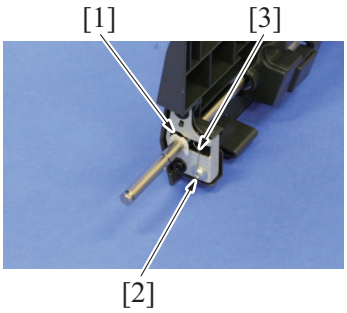
1. Remove the paper feed assy.
   F.10.1.3 Replacing the paper feed assy.



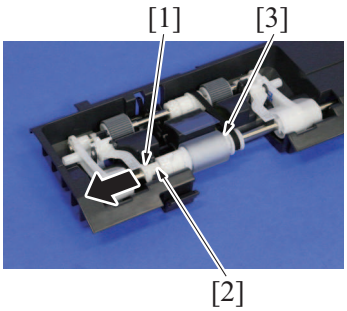
2. Remove the E-ring [1] and the gear assy [2].
   NOTE
   - **When reinstalling the gear assy [2], push the gear assy [2] into position while rotating it.**



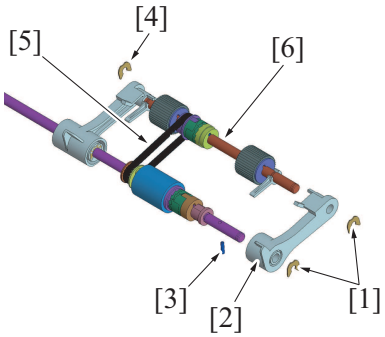
3. Remove the pin [1].
   NOTE
   - **Be careful not to lose the pin [1].**
4. Remove the C-clip [2], and remove the lever [3].



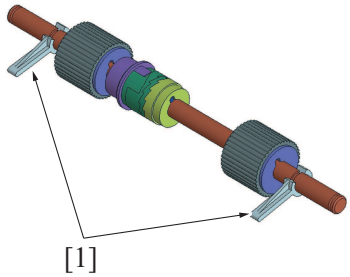
5. Remove the C-clip [1].
6. Remove the screw [2], and remove the spring [3].



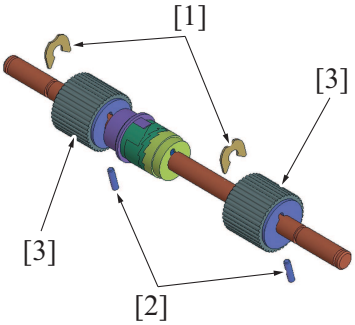
7. Remove the C-clip [1] and slide the bushing [2] in the direction of the arrow.
8. Remove the pick-up roller/feed roller assy [3].



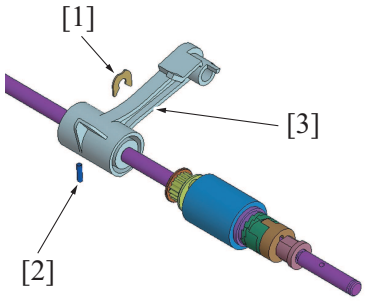
9. Remove two C-rings [1].
10. Remove the arm [2] and the pin [3].
    NOTE
    - **Be careful not to lose the pin [3].**
11. Remove the C-ring [4] and the belt [5], and remove the pick-up roller assy [6].



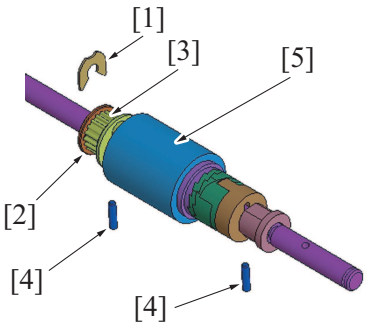
12. Remove two levers [1].



13. Remove two C-rings [1] and two pins [2], and remove two pick-up rollers [3].
    NOTE
    - **Be careful not to lose the pin [2].**



14. Remove the C-ring [1] and the pin [2], and remove the arm [3].
NOTE
- **Be careful not to lose the pin [2].**



15. Remove the C-ring [1], the pulley [2] and the gear [3].
16. Remove two pins [4], and remove the feed roller [5].
NOTE
- **Be careful not to lose the pin [4].**

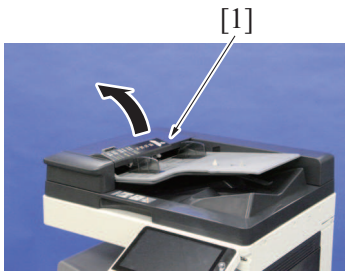
17. To reinstall, reverse the order of removal.

10.1.5 Replacing the separation roller assy

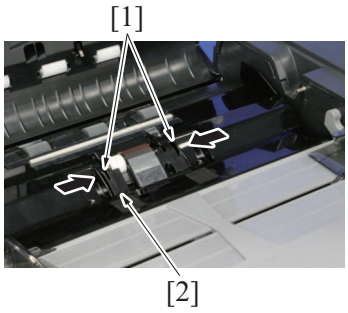
(1) Periodically replacing parts/cycle

- Separation roller assy: Every 200,000 counts

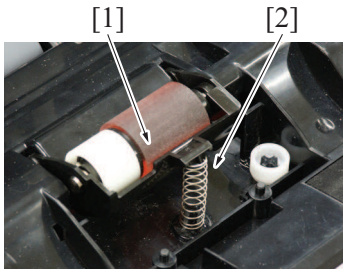
(2) Procedure

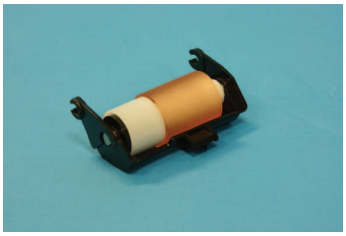


1. Open the left cover [1].



2. Grip both sides [1] of the holder and remove the cover [2].





3. Remove the separation roller assy [1].
NOTE
- **Do not lose the spring [2] at the lower part of the separation roller assy [1].**

4. To reinstall, reverse the order of removal.

10.2 Transport section

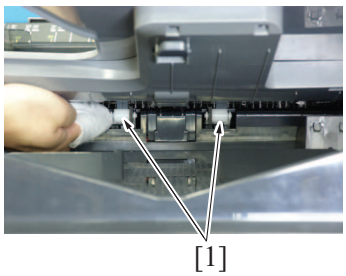
10.2.1 Cleaning of the miscellaneous rolls

(1) Periodically cleaning parts/cycle

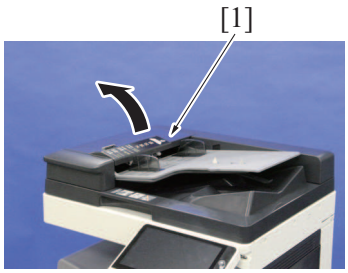
- Miscellaneous rolls: Every 50,000 counts

(2) Procedure

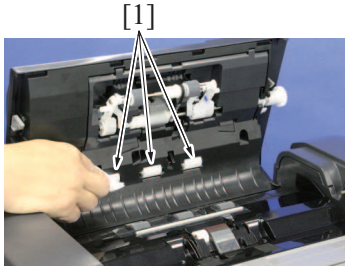
1. Lift up the document feed tray.



2. Using a cleaning pad dampened with alcohol, wipe the roll [1].



3. Open the left cover [1].



4. Using a cleaning pad dampened with alcohol, wipe the roll [1].

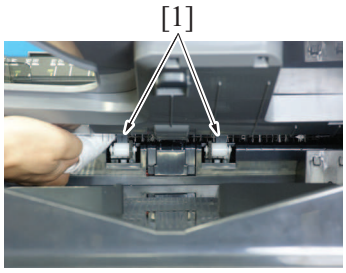
10.2.2 Cleaning of the miscellaneous rollers

(1) Periodically cleaning parts/cycle

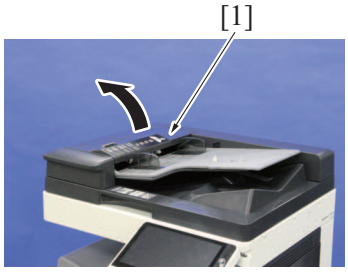
- Miscellaneous rollers: Every 50,000 counts

(2) Procedure

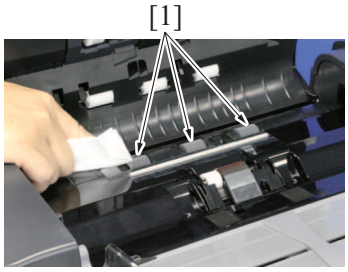
1. Lift up the document feed tray.



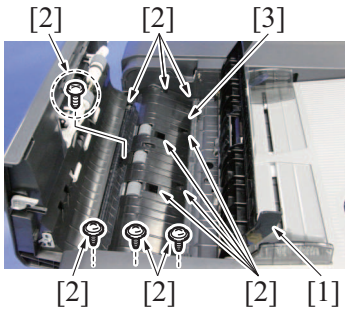
2. Using a cleaning pad dampened with alcohol, wipe the roller [1].



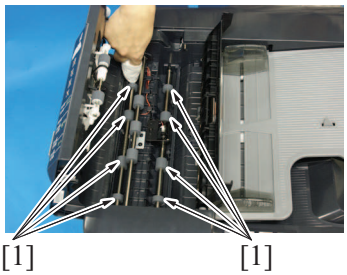
3. Open the left cover [1].



4. Using a cleaning pad dampened with alcohol, wipe the roller [1].



5. Lift up the guide plate DF1 [1].
6. Remove 11 screws [2], and remove the transport guide [3].
   NOTE
   - **Use care when mounting the screw [2] in the dashed circle (one on the left when looking from the front) since it is different from other 10 screws [2].**



7. Using a cleaning pad dampened with alcohol, wipe the roller [1].

10.3 Scanning section

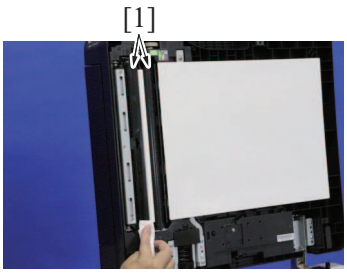
10.3.1 Cleaning of the scanning guide

(1) Periodically cleaning parts/cycle

- Scanning guide: Every 50,000 counts

(2) Procedure

1. Open the reverse automatic document feeder.



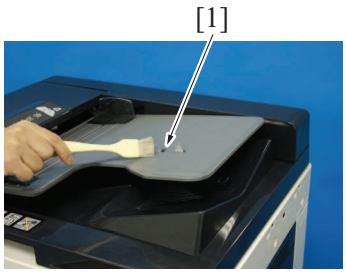
2. Using a cleaning pad dampened with alcohol, wipe the scanning guide [1] clean of dirt.
NOTE
- **Be careful not to damage the sheet.**

10.3.2 Cleaning of the reflective sensor section

(1) Periodically cleaning parts/cycle

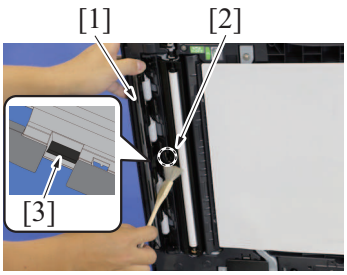
- Reflective sensor section: Every 50,000 counts

(2) Procedure



1. Clean the sensor [1] using a brush or other similar tools.

2. Open the reverse automatic document feeder.



3. Open the document reading front guide [1], and clean the sensor [2] and the reflective part [3] using a brush or other similar tools.

11. Periodical maintenance procedure DF-704

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

11.1 Take-up section

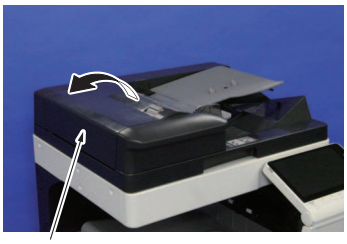
11.1.1 Cleaning of the pick-up roller/feed roller

(1) Periodically cleaning parts/cycle

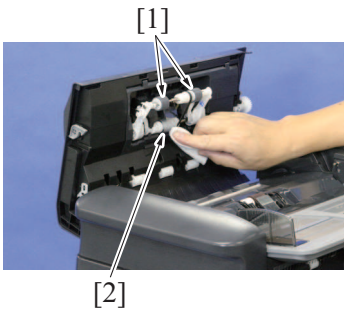
- Pick-up roller: Every 50,000 counts
- Feed roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the pick-up roller [1] / feed roller [2] clean of dirt.



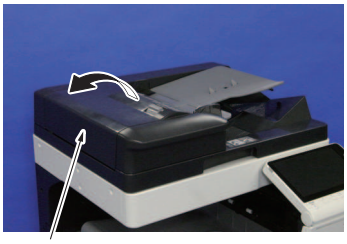
11.1.2 Cleaning of the separation roller

(1) Periodically cleaning parts/cycle

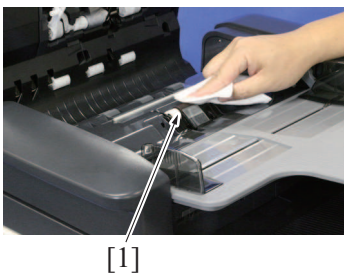
- Separation roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the separation roller [1] clean of dirt.



11.1.3 Replacing the paper feed assy.

(1) Periodically replacing parts/cycle

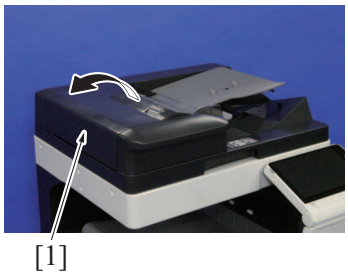
- Paper feed assy.: Every 200,000 counts

NOTE

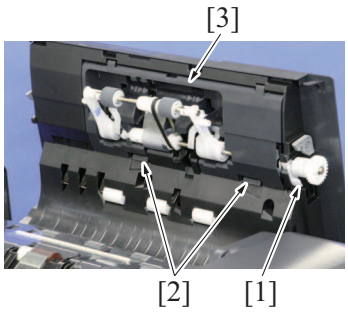
- **At replacing the rollers, the paper feed assy. (pick-up roller + feed roller) and the separation roller assy. must be replaced at the same time. Otherwise, the pick-up roller, feed roller , and separation roller assy. must be replaced at the same time.**

(2) Procedure

1. Open the left cover [1].



2. Release the lock [1].
3. Release the two tabs [2], and remove the paper feed assy. [3].



4. To reinstall, reverse the order of removal.

11.1.4 Replacing the pick-up roller/feed roller

(1) Periodically replacing parts/cycle

- Pick-up roller: Every 200,000 counts
- Feed roller: Every 200,000 counts

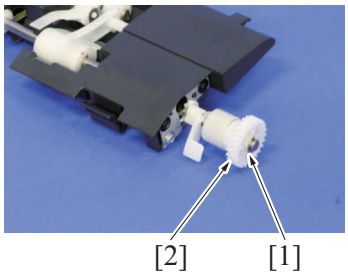
NOTE

- **At replacing the rollers, the paper feed assy. (pick-up roller + feed roller) and the separation roller assy. must be replaced at the same time. Otherwise, the pick-up roller, feed roller, and separation roller assy. must be replaced at the same time.**

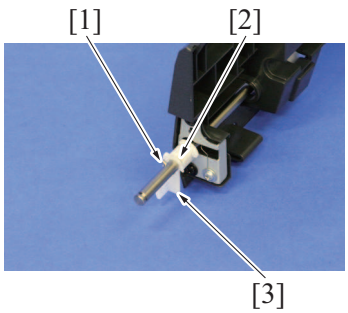
(2) Procedure

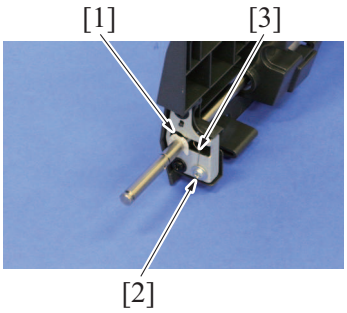
1. Remove the paper feed assy..
   F.11.1.3 Replacing the paper feed assy.

2. Remove the E-ring [1] and the gear assy [2].
   NOTE
   - **When reinstalling the gear assy [2], push the gear assy [2] into position while rotating it.**

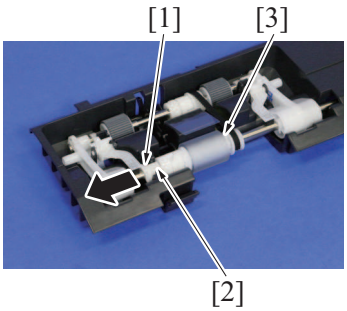


3. Remove the pin [1].
   NOTE
   - **Be careful not to lose the pin [1].**
4. Remove the C-clip [2], and remove the lever [3].

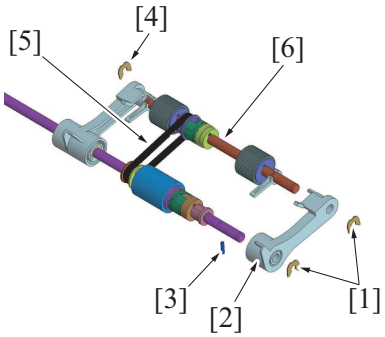




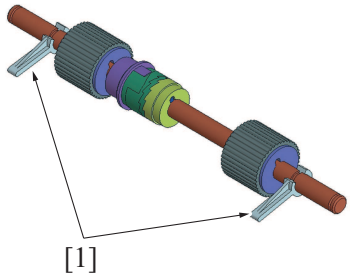
5. Remove the C-clip [1].
6. Remove the screw [2], and remove the spring [3].



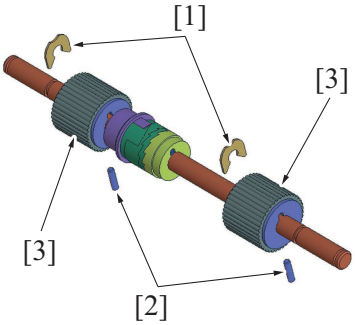
7. Remove the C-clip [1] and slide the bushing [2] in the direction of the arrow.
8. Remove the pick-up roller/feed roller assy [3].



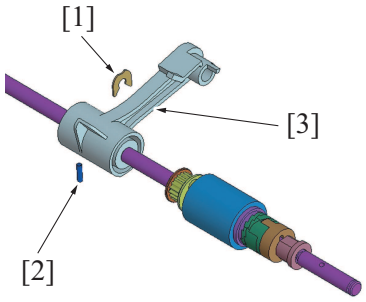
9. Remove two C-rings [1].
10. Remove the arm [2] and the pin [3].
    NOTE
    - **Be careful not to lose the pin [3].**
11. Remove the C-ring [4] and the belt [5], and remove the pick-up roller assy [6].



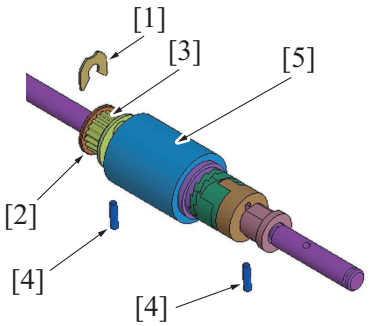
12. Remove two levers [1].



13. Remove two C-rings [1] and two pins [2], and remove two pick-up rollers [3].
    NOTE
    - **Be careful not to lose the pin [2].**



14. Remove the C-ring [1] and the pin [2], and remove the arm [3].
NOTE
- **Be careful not to lose the pin [2].**



15. Remove the C-ring [1], the pulley [2] and the gear [3].
16. Remove two pins [4], and remove the feed roller [5].
NOTE
- **Be careful not to lose the pin [4].**

17. To reinstall, reverse the order of removal.

11.1.5 Replacing the separation roller assy

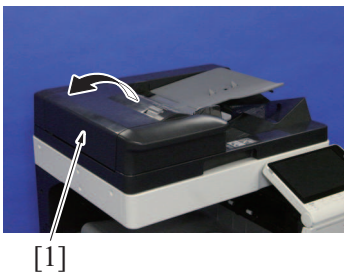
(1) Periodically replacing parts/cycle

- Separation roller assy: Every 200,000 counts

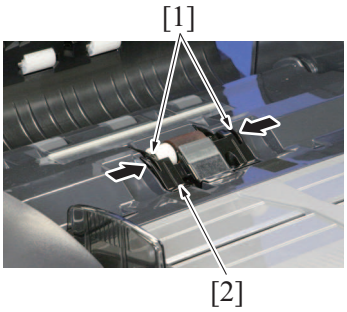
NOTE
- **At replacing the rollers, the paper feed assy. (pick-up roller + feed roller) and the separation roller assy. must be replaced at the same time. Otherwise, the pick-up roller, feed roller , and separation roller assy. must be replaced at the same time.**

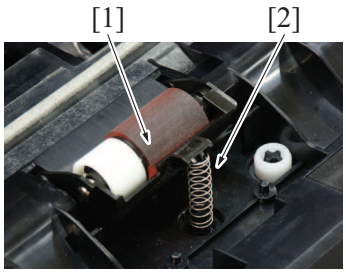
(2) Procedure

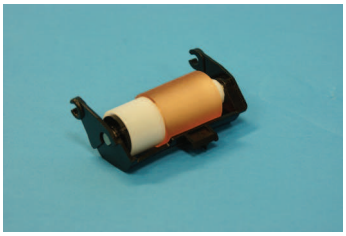
1. Open the left cover [1].



2. Grip both sides [1] of the holder and remove the cover [2].







3. Remove the separation roller assy [1].
NOTE
- **Do not lose the spring [2] at the lower part of the separation roller assy [1].**

4. To reinstall, reverse the order of removal.

11.2 Transport section

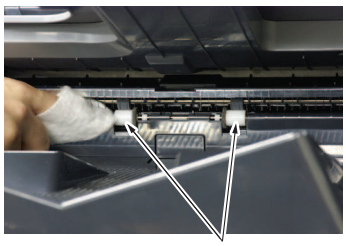
11.2.1 Cleaning of the miscellaneous rolls

(1) Periodically cleaning parts/cycle

- Miscellaneous rolls: Every 50,000 counts

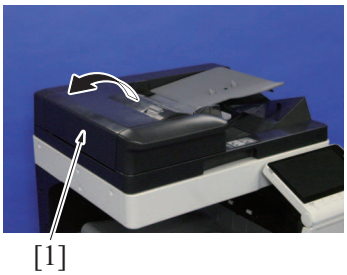
(2) Procedure

1. Lift up the document feed tray.

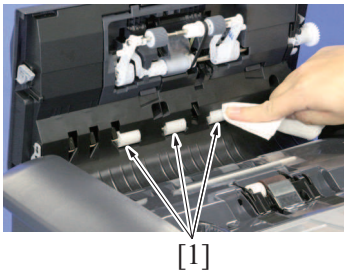


2. Using a cleaning pad dampened with alcohol, wipe the roll [1].

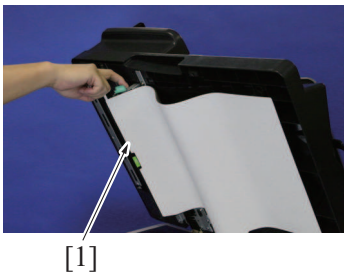
3. Open the left cover [1].



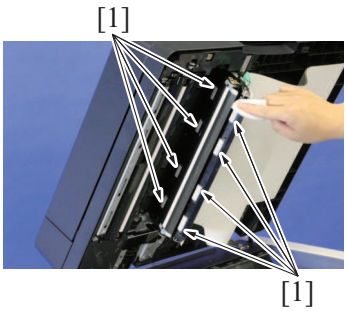
4. Using a cleaning pad dampened with alcohol, wipe the roll [1].



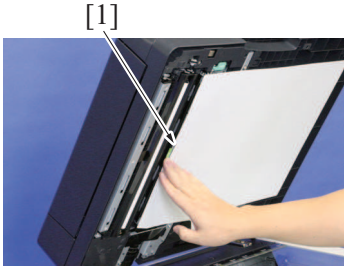
5. Open the opening and closing guide [1].



6. Using a cleaning pad dampened with alcohol, wipe the roll [1].



7. Close the opening and closing guide [1].



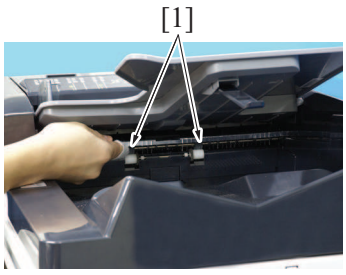
11.2.2 Cleaning of the miscellaneous rollers

(1) Periodically cleaning parts/cycle

- Miscellaneous rollers: Every 50,000 counts

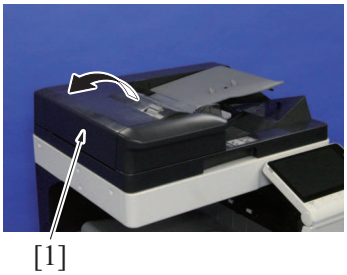
(2) Procedure

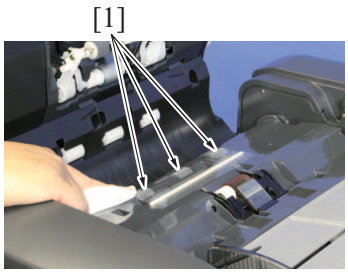
1. Lift up the document feed tray.



2. Using a cleaning pad dampened with alcohol, wipe the roller [1].

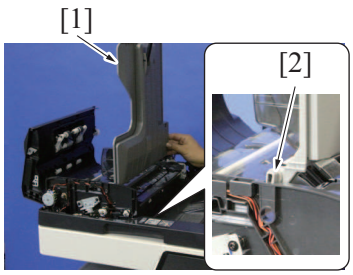
3. Open the left cover [1].



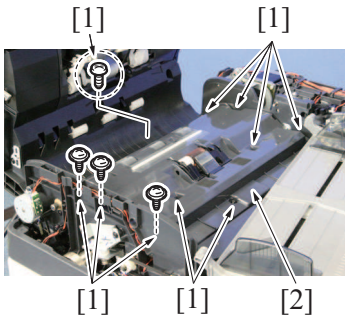


4. Using a cleaning pad dampened with alcohol, wipe the roller [1].

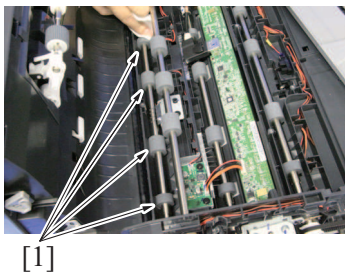
5. Remove the front cover.
   G.8.4.1 Front cover (DF-704)
6. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



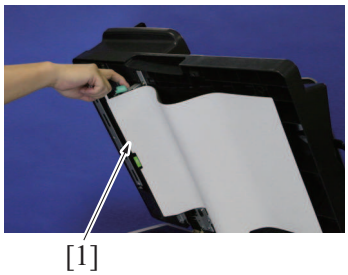
7. Lift up the document feed tray [1].
8. Remove the claw [2] at the front side, and set the document feed tray [1] off the working area.



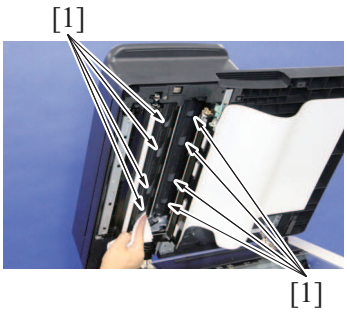
9. Remove 10 screws [1], and remove the transport guide [2].
   NOTE
   - **Use care when mounting the screw [1] in the dashed circle (one on the left when looking from the front) since it is different from other nine screws [1].**



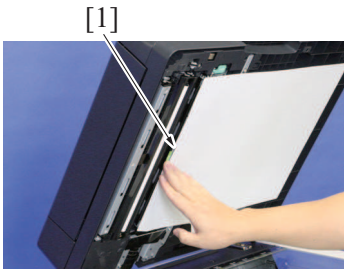
10. Using a cleaning pad dampened with alcohol, wipe the roller [1].



11. Open the opening and closing guide [1].



12. Using a cleaning pad dampened with alcohol, wipe the roller [1].



13. Close the opening and closing guide [1].

11.3 Scanning section

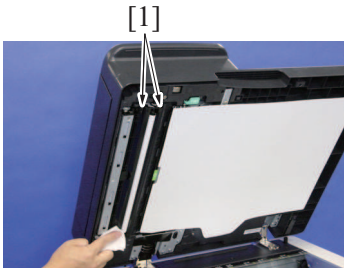
11.3.1 Cleaning of the front side scanning guide

(1) Periodically cleaning parts/cycle

- Front side scanning guide: Every 50,000 counts

(2) Procedure

1. Open the dual scan document feeder.



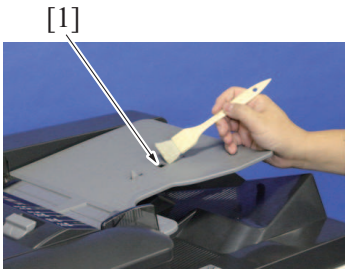
2. Using a cleaning pad dampened with alcohol, wipe the front side scanning guide [1] clean of dirt.
NOTE
- **Be careful not to damage the sheet.**

11.3.2 Cleaning of the reflective sensor section

(1) Periodically cleaning parts/cycle

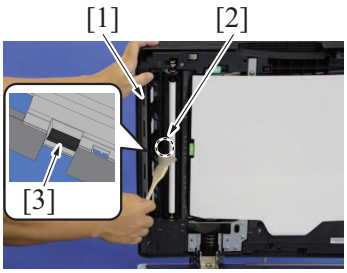
- Reflective sensor section: Every 50,000 counts

(2) Procedure



1. Clean the sensor [1] using a brush or other similar tools.

2. Open the dual scan document feeder.



3. Open the document reading front guide [1], and clean the sensor [2] and the reflective part [3] using a brush or other similar tools.

12. Periodical maintenance procedure PC-110/PC-210

12.1 Paper feed section

12.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller

(1) Periodically replacing parts/cycle

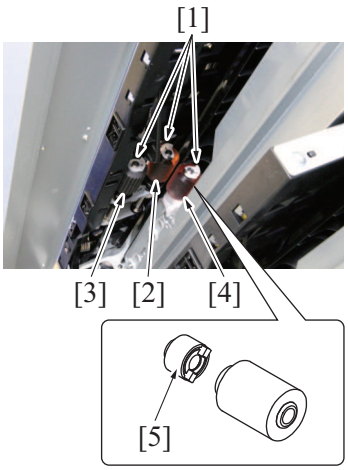
- Tray 3 feed roller: Every 300,000 counts
- Tray 3 pick-up roller: Every 300,000 counts
- Tray 3 separation roller + torque limiter: Every 300,000 counts

NOTE

- **Replace the tray 3 feed roller, tray 3 pick-up roller and tray 3 separation roller at the same time.**

(2) Procedure

1. Open the right door.
2. Remove the tray 3.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
3. Remove the tray 4 or storage box.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



4. Remove the C-clip [1] each, and remove the tray 3 feed roller [2], tray 3 pick-up roller [3] and tray 3 separation roller [4].
   NOTE
   - **When replacing the tray 3 separation roller, replace the torque limiter [5] at the same time.**
5. To reinstall, reverse the order of removal.
6. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [3rd.].

12.1.2 Replacing the tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller

(1) Periodically replacing parts/cycle

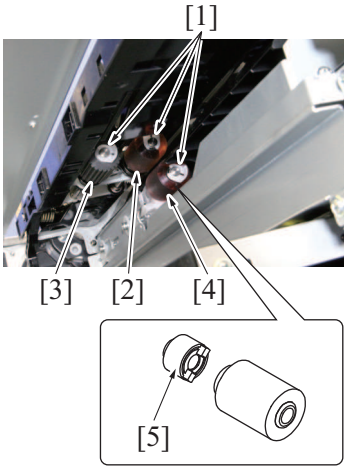
- Tray 4 feed roller: Every 300,000 counts
- Tray 4 pick-up roller: Every 300,000 counts
- Tray 4 separation roller + torque limiter: Every 300,000 counts

NOTE

- **Replace the tray 4 feed roller, tray 4 pick-up roller and tray 4 separation roller at the same time.**

(2) Procedure

1. Open the right door.
2. Remove the tray 3 and tray 4.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



3. Remove the C-clip [1] each, and remove the tray 4 feed roller [2], tray 4 pick-up roller [3] and tray 4 separation roller [4].
   NOTE
   - **When replacing the tray 4 separation roller, replace the torque limiter [5] at the same time.**
4. To reinstall, reverse the order of removal.

5. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [4th.].

13. Periodical maintenance procedure PC-115/PC-215

13.1 Paper feed section

13.1.1 Replacing the tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller

(1) Periodically replacing parts/cycle

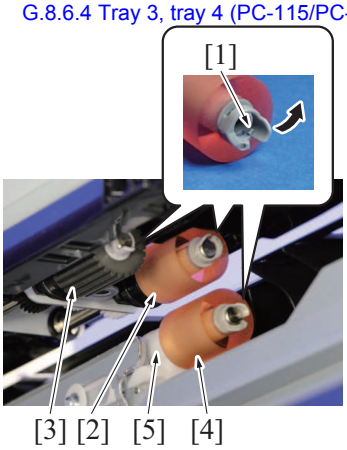
- Tray 3 feed roller: Every 300,000 counts
- Tray 3 pick-up roller: Every 300,000 counts
- Tray 3 separation roller + torque limiter: Every 300,000 counts

NOTE

- **Replace the tray 3 feed roller, tray 3 pick-up roller, and tray 3 separation roller at the same time.**

(2) Procedure

1. Open the right door.
2. Remove the tray 3.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
3. Remove the tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



4. While unlocking the claw [1], remove the tray 3 feed roller [2], tray 3 pick-up roller [3], and tray 3 separation roller [4].
   NOTE
   - **When replacing the tray 3 separation roller, replace the torque limiter [5] at the same time.**
5. To reinstall, reverse the order of removal.
6. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [3rd.].
   I.5.17.2 Life

13.1.2 Replacing the tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller

(1) Periodically replacing parts/cycle

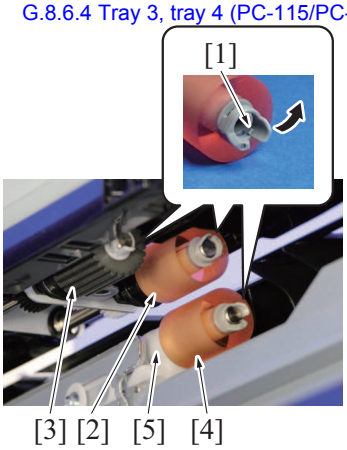
- Tray 4 feed roller: Every 300,000 counts
- Tray 4 pick-up roller: Every 300,000 counts
- Tray 4 separation roller + torque limiter: Every 300,000 counts

NOTE

- **Replace the tray 4 feed roller, tray 4 pick-up roller, and tray 4 separation roller at the same time.**

(2) Procedure

1. Open the right door.
2. Remove the tray 3 and tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



3. While unlocking the claw [1], remove the tray 4 feed roller [2], tray 4 pick-up roller [3], and tray 4 separation roller [4].
   NOTE
   - **When replacing the tray 4 separation roller, replace the torque limiter [5] at the same time.**
4. To reinstall, reverse the order of removal.
5. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [4th.].
   I.5.17.2 Life

14. Periodical maintenance procedure PC-410

14.1 Paper feed section

14.1.1 Replacing the feed roller, pick-up roller, separation roller

(1) Periodically replacing parts/cycle

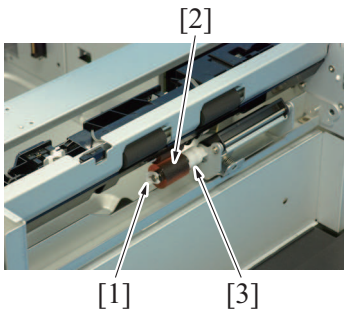
- Feed roller: Every 300,000 counts
- Pick-up roller: Every 300,000 counts
- Separation roller + torque limiter: Every 300,000 counts

NOTE

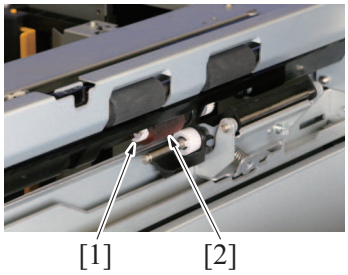
- **Replace the feed roller, pick-up roller and separation roller at the same time.**

(2) Procedure

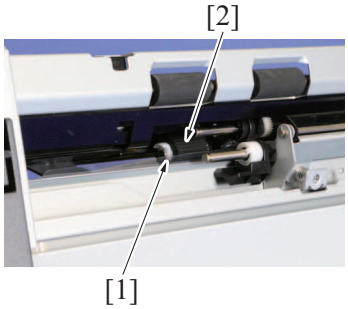
1. Slide out the paper feed tray.
2. Remove the right door.
   G.8.7.1 Right door (PC-410)



3. Remove the C-clip [1], and remove the separation roller [2].
   NOTE
   - **When replacing the separation roller, replace the torque limiter [3] at the same time.**



4. Remove the C-clip [1], and remove the feed roller [2].



5. Remove the C-clip [1], and remove the pick-up roller [2].
6. To reinstall, reverse the order of removal.
7. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [3rd.].

15. Periodical maintenance procedure PC-415

15.1 Paper feed section

15.1.1 Replacing the feed roller, pick-up roller, separation roller

(1) Periodically replacing parts/cycle

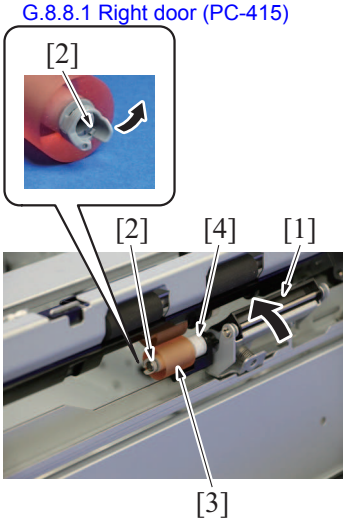
- Feed roller: Every 300,000 counts
- Pick-up roller: Every 300,000 counts
- Separation roller + torque limiter: Every 300,000 counts

NOTE

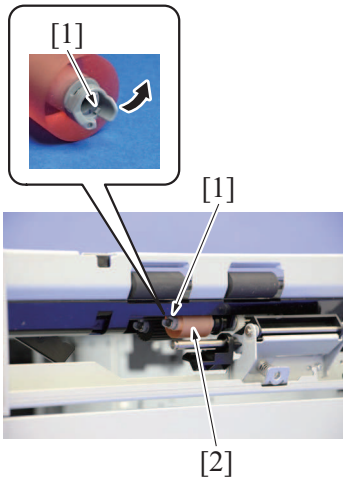
- **Replace the feed roller, pick-up roller, and separation roller at the same time.**

(2) Procedure

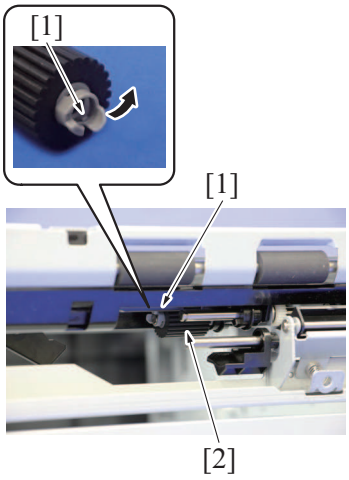
1. Slide out the paper feed tray.
2. Remove the right door.
   G.8.8.1 Right door (PC-415)



3. While pushing down the separation roller assy [1] and unlocking the claw [2], remove the separation roller [3].
   NOTE
   - **When replacing the separation roller, replace the torque limiter [4] at the same time.**



4. While unlocking the claw [1], remove the feed roller [2].



5. While unlocking the claw [1], remove the pick-up roller [2].

6. To reinstall, reverse the order of removal.
7. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [3rd.].
   I.5.17.2 Life

16. Periodical maintenance procedure LU-207

16.1 Paper feed section

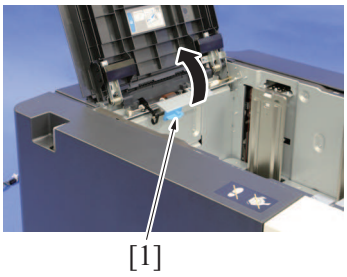
16.1.1 Replacing the pick-up roller

(1) Periodically replacing parts/cycle

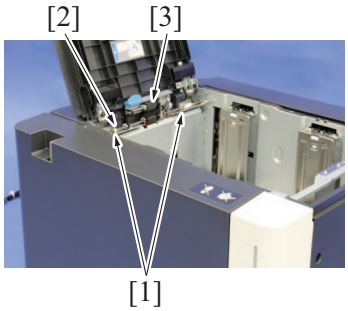
- Pick-up roller: Every 300,000 counts

(2) Procedure

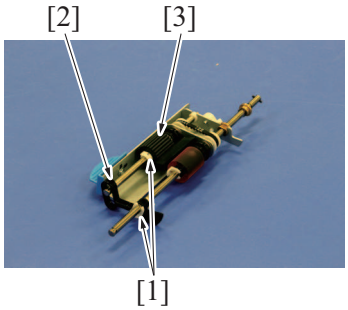
1. Open the upper door.
2. Move the feed roller [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove two C-clips [1], the actuator [2] and remove the pick-up roller [3].



5. To reinstall, reverse the order of removal.

16.1.2 Replacing the feed roller

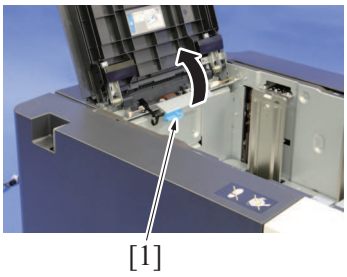
(1) Periodically replacing parts/cycle

- Feed roller: Every 300,000 counts

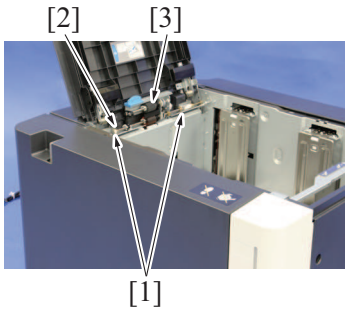
(2) Procedure

1. Open the upper door.

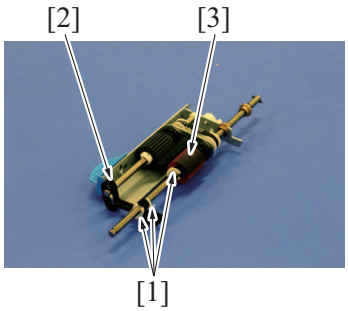
2. Move the feed roller [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove three C-clips [1], the actuator [2] and remove the feed roller [3].



5. To reinstall, reverse the order of removal.

16.1.3 Replacing the separation roller

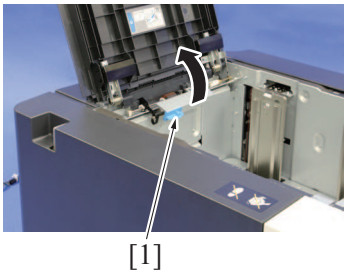
(1) Periodically replacing parts/cycle

- Separation roller: Every 300,000 counts

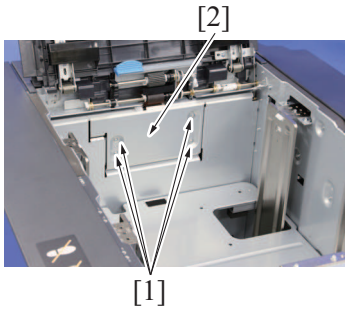
(2) Procedure

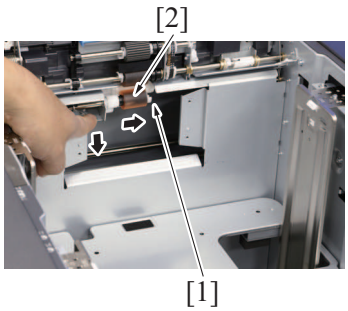
1. Open the upper door.

2. Move the feed roller [1] up.



3. Remove four screws [1], and remove the plate [2].





4. Remove the C-clip [1] while pressing the separation roller down to remove the separation roller [2].

5. To reinstall, reverse the order of removal.

17. Periodical maintenance procedure LU-302

17.1 Paper feed section

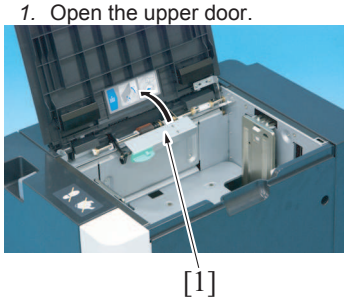
17.1.1 Replacing the pick-up roller

(1) Periodically replacing parts/cycle

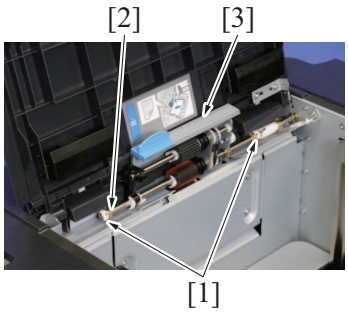
- Pick-up roller: Every 300,000 counts

(2) Procedure

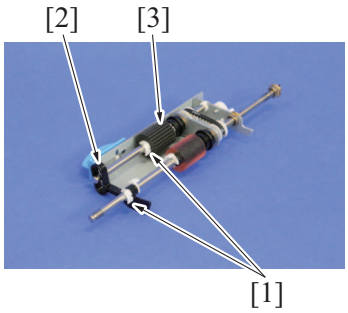
1. Open the upper door.



2. Move the feed roller assy [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove the actuator [2] and remove the pick-up roller [3].

5. To reinstall, reverse the order of removal.

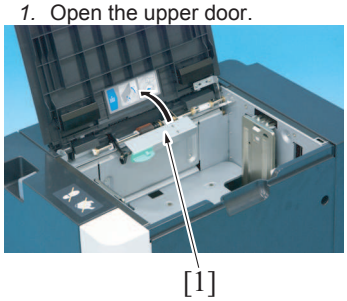
17.1.2 Replacing the feed roller

(1) Periodically replacing parts/cycle

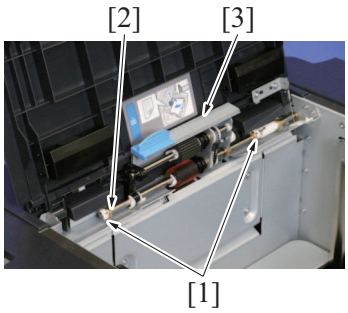
- Feed roller: Every 300,000 counts

(2) Procedure

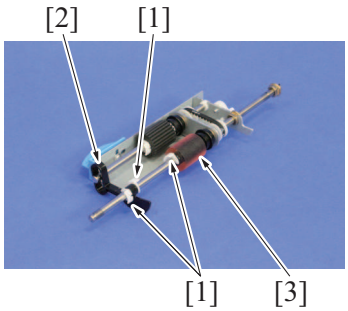
1. Open the upper door.



2. Move the feed roller assy [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove three C-clips [1], the actuator [2] and remove the feed roller [3].

5. To reinstall, reverse the order of removal.

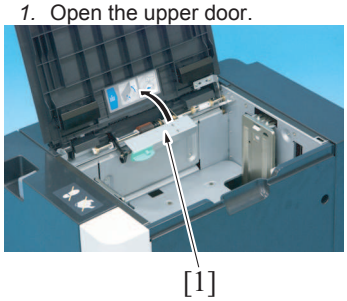
17.1.3 Replacing the separation roller

(1) Periodically replacing parts/cycle

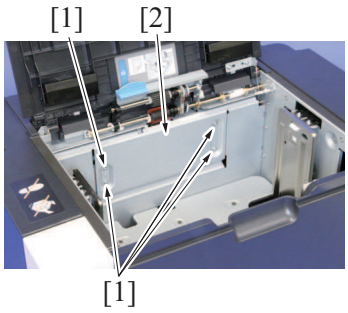
- Separation roller: Every 300,000 counts

(2) Procedure

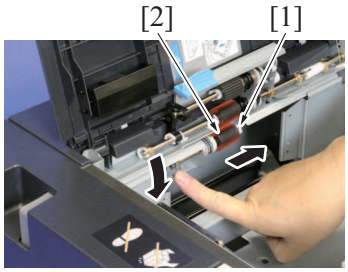
1. Open the upper door.



2. Move the feed roller assy [1] up.



3. Remove four screws [1], and remove the plate [2].



4. Remove the C-clip [1] while pressing the separation roller down to remove the separation roller [2].

5. To reinstall, reverse the order of removal.

18. Periodical maintenance procedure FS-534/FS-534SD

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

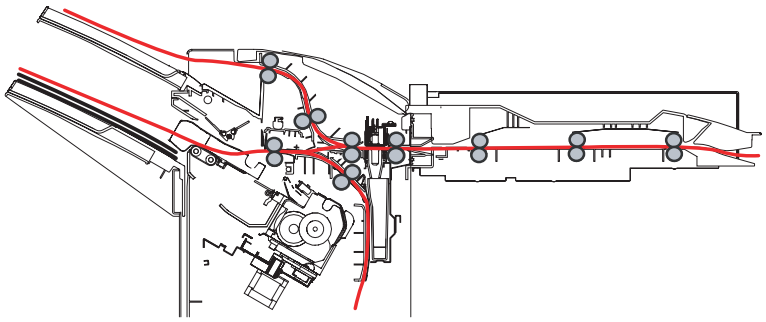
18.1 Paper exit section

18.1.1 Cleaning procedure for each rollers/each rolls

(1) Periodically cleaning parts/cycle

- Each rollers/Each rolls: Every 300,000 counts

(2) Cleaning point

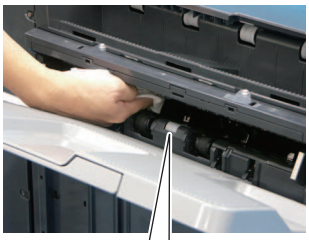


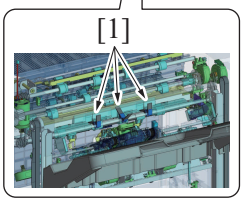
18.1.2 Cleaning the paddles

(1) Periodically cleaning parts/cycle

- Paddle: Every 300,000 counts

(2) Procedure





1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

18.1.3 Replacing the paddle units

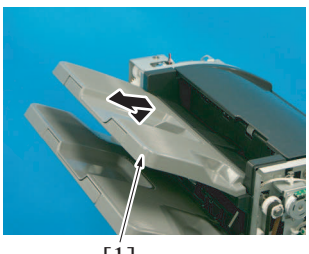
(1) Periodically replacing parts/cycle

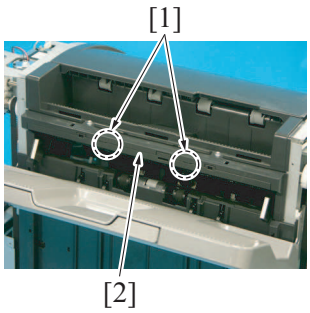
- Paddle units: Every 2,000,000 counts

(2) Procedure

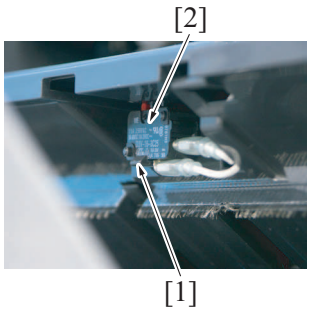
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door of the finisher.
   G.8.14.2 Front door (FS-534/FS-534SD)
3. Remove the front upper cover of the finisher.
   G.8.14.3 Front upper cover (FS-534/FS-534SD)
4. Remove the rear cover of the finisher.
   G.8.14.1 Rear cover (FS-534/FS-534SD)

5. Remove the paper exit tray [1].

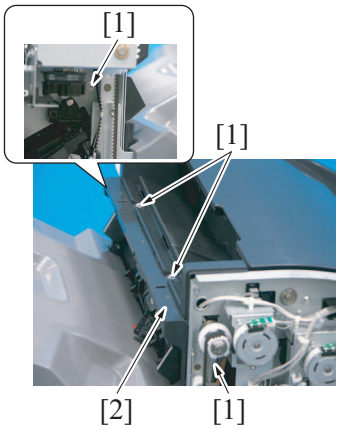




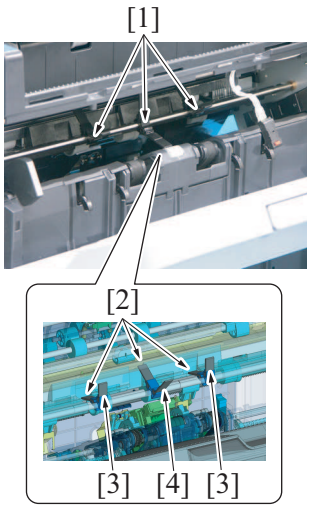
6. Remove two tabs [1], and remove the cover [2].



7. Release the tab [1], and remove the main tray upper position detect switch [2].



8. Remove four screws [1], and remove the cover [2].



9. Remove three paddle units [1].
NOTE
- **When reinstalling the paddle units, be careful not to attach them at an incorrect location or in an incorrect orientation. Length: [4] > [2] > [3]**

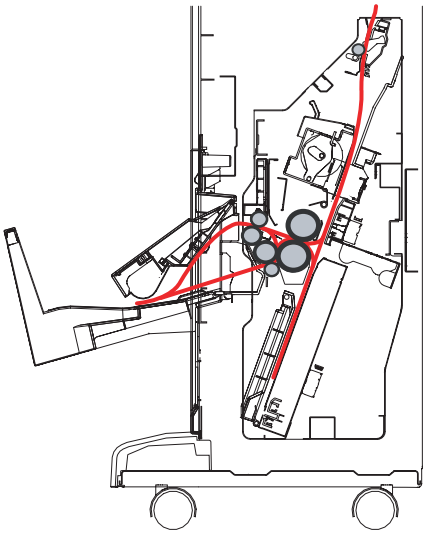
10. To reinstall, reverse the order of removal.

18.1.4 Cleaning procedure for each rollers/each rolls

(1) Periodically cleaning parts/cycle

- Each rollers/Each rolls: Every 300,000 counts

(2) Cleaning point



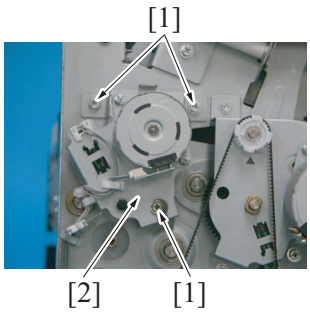
18.1.5 Cleaning the upper paddle

(1) Periodically cleaning parts/cycle

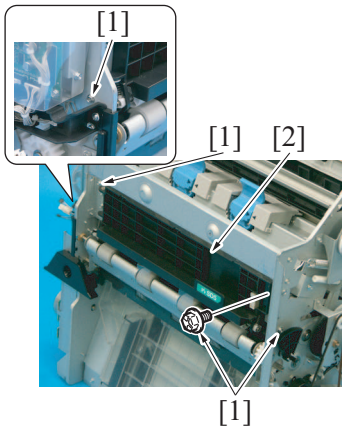
- Upper paddle: Every 300,000 counts

(2) Procedure

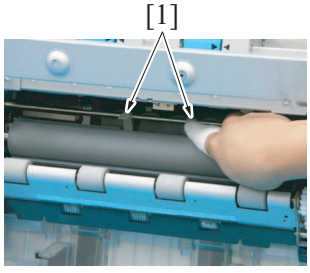
1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)



3. Remove three screws [1], and remove the tri-fold guide motor assy [2].



4. Remove four screws [1], and remove the conveyance assy [2].



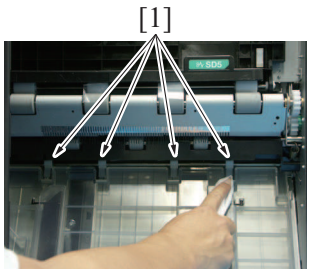
5. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

18.1.6 Cleaning the lower paddle

(1) Periodically cleaning parts/cycle

- Lower paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

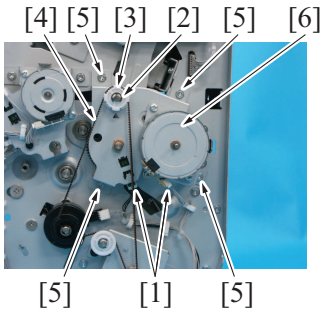
18.1.7 Replacing the upper paddle assy

(1) Periodically replacing parts/cycle

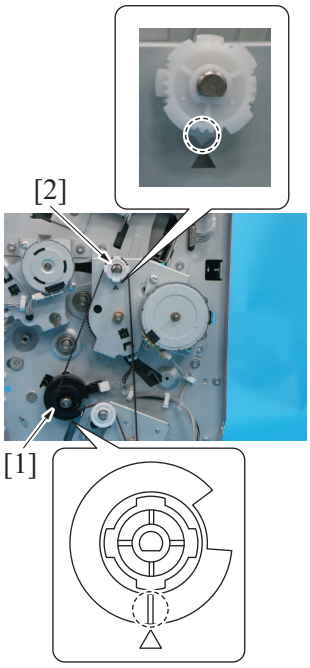
- Upper paddle assy: Every 2,000,000 counts

(2) Procedure

1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)

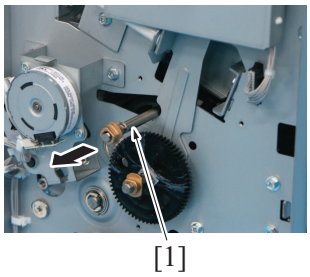


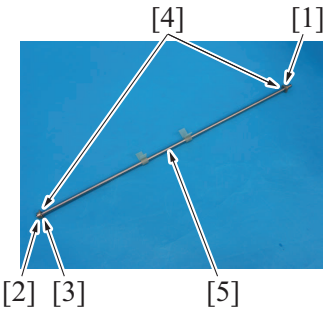
3. Disconnect two connectors [1].
4. Remove the E-ring [2].
5. Remove the gear [3] and the belt [4].
6. Remove four screws [5], and remove the center fold guide motor assy [6].



7. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

8. Remove the upper paddle assy [1].





9. Remove the bushing [1].
10. Remove the E-ring [2], and remove the bushing [3].
11. Remove two E-rings [4].
12. Replace the upper paddle assy [5].

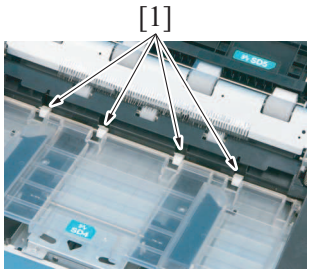
13. To reinstall, reverse the order of removal.

18.1.8 Replacing the lower paddle unit

(1) Periodically replacing parts/cycle

- Lower paddle unit: Every 2,000,000 counts

(2) Procedure



1. Remove four lower paddle units [1].

19. Periodical maintenance procedure FS-533

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

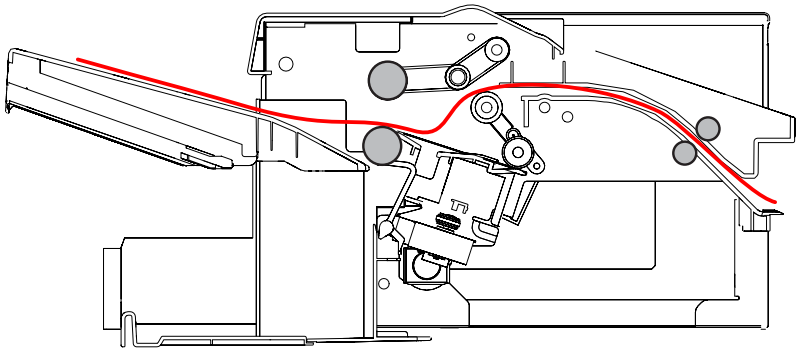
19.1 Paper exit section

19.1.1 Cleaning procedure for each parts

(1) Periodically cleaning parts/cycle

- Each rollers/Each rolls: Every 300,000 counts

(2) Cleaning point



NOTE

- **Do not clean the alignment roller F/R.**

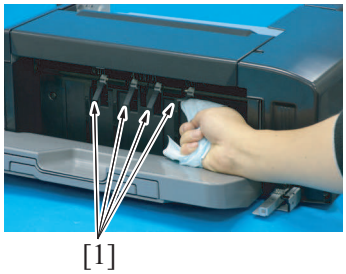
19.1.2 Cleaning the paper exit paddle

(1) Periodically cleaning parts/cycle

- Paper exit paddle: Every 300,000 counts

(2) Procedure

1. Using a cleaning pad dampened with alcohol, wipe the paper exit paddle [1].

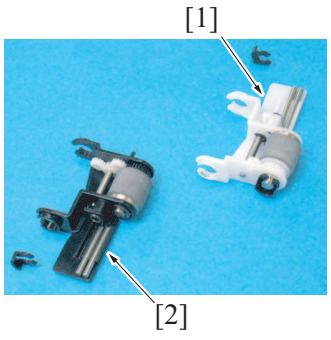


19.2 Alignment section

19.2.1 Replacing the alignment roller assy F/R

(1) Periodically replacing parts/cycle

- Alignment roller assy F/R: Every 1,000,000 counts

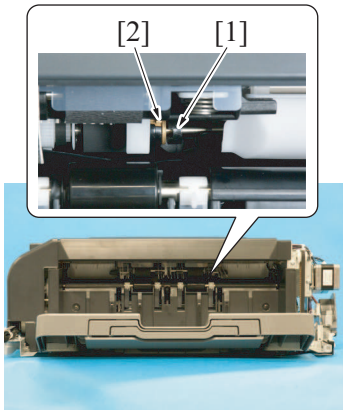


[1]	Alignment roller assy R	[2]	Alignment roller assy F

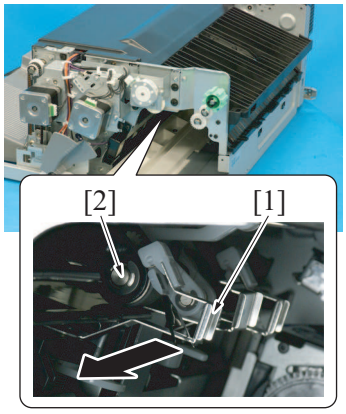
(2) Removal procedure

1. Remove the front cover.

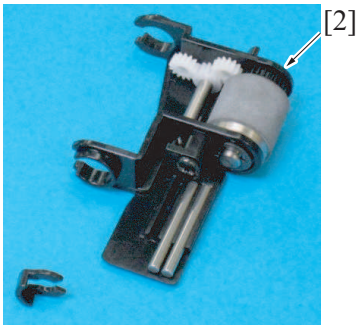
Front cover (FS-533)

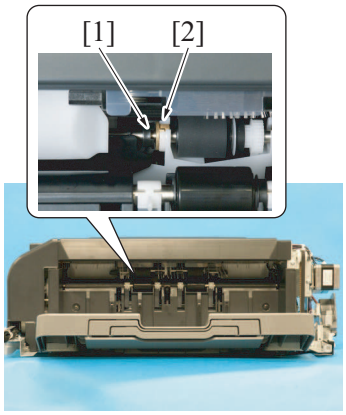


2. Remove the C-clip [1].
3. Move the bushing [2] to the right.

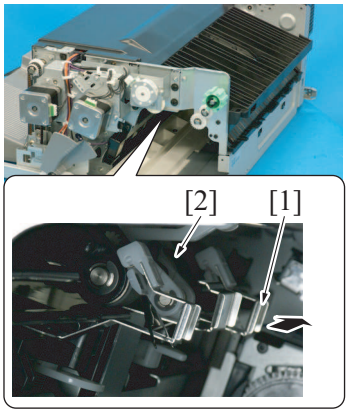


4. Pull the paper stopper [1] and remove the alignment roller assy /F [2].

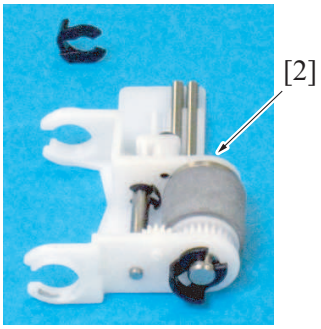




5. Remove the C-clip [1].
6. Move the bushing [2] to the left.



7. Press the paper stopper [1] to the rear and remove the alignment roller assy /R [2].



8. To reinstall, reverse the order of removal.

20. Periodical maintenance procedure FS-537/FS-537SD

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

20.1 Paper exit section

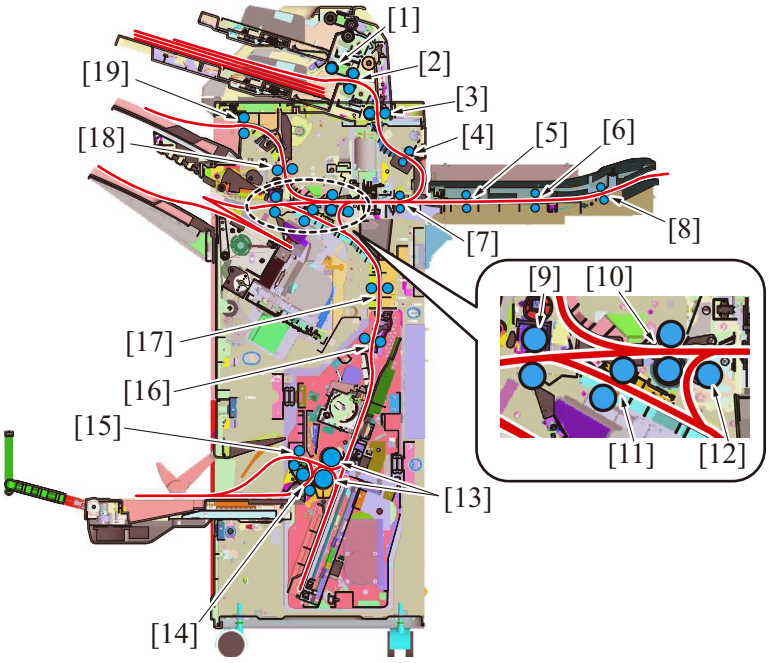
20.1.1 Cleaning procedure for each rollers/each rolls (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

- Cleaning each roller/roll: Every 300,000 prints

(2) Cleaning point

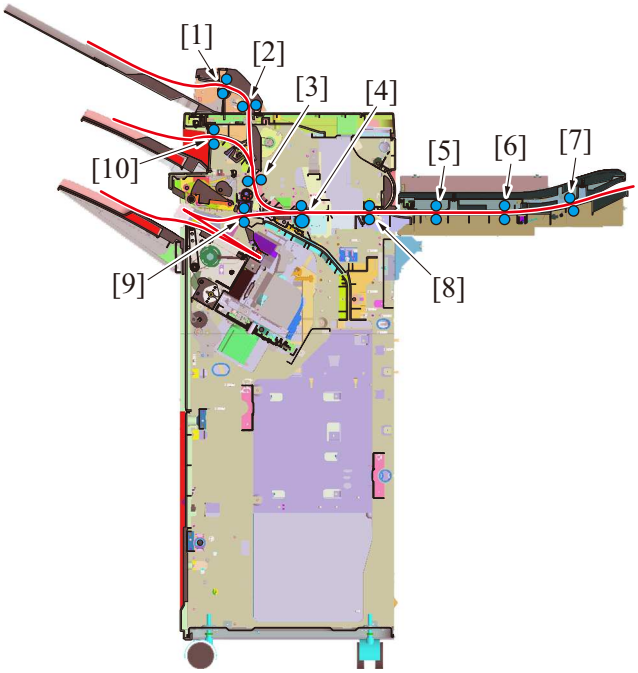
FS-537SD (when PK-523/ZU-609/PI-507 is installed)



[1]	Pick-up roller/Lw (Post Inserter) *	[2]	Paper feed roller/Lw, Separation roller/Lw (Post Inserter) *
[3]	Transport roller, transport roll (Post Inserter) *	[4]	PI transport roller, PI transport roll
[5]	RU transport roller 3, transport roll 3 (Relay Unit) *	[6]	RU transport roller 2, transport roll 2 (Relay Unit) *
[7]	FNS entry roller, roll	[8]	RU transport roller 1, transport roll 1 (Relay Unit) *
[9]	Receiving roller, Receiving roll	[10]	Transport roller 1/transport roller 2
[11]	Saddle section exit roller 1, roll	[12]	Z-folding roller (Z Folding Unit)
[13]	Center folding roller	[14]	Tri-folding roller, roll
[15]	Sub tray exit roller, roll	[16]	Saddle section paper feed roller, roll
[17]	Saddle section exit roller 2, roll	[18]	Sub tray transport roller, roll
[19]	Sub tray exit roller, roll	-	-

- * : Option

FS-537 (when JS-602 is installed)



[1]	Job separator exit roller, roll (Job Separator) *	[2]	Job separator transport roller, roll (Job Separator) *
[3]	Sub tray transport roller, roll	[4]	Transport roller 1/transport roller 2
[5]	RU transport roller 3, transport roll 3 (Relay Unit) *	[6]	RU transport roller 2, transport roll 2 (Relay Unit) *
[7]	RU transport roller 1, transport roll 1 (Relay Unit) *	[8]	FNS entry roller, roll
[9]	Receiving roller, Receiving roll	[10]	Sub tray exit roller, roll

- * : Option

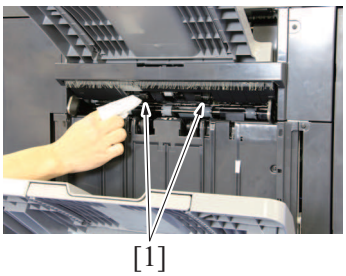
20.1.2 Cleaning the paddles (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

- Paddle: Every 300,000 prints

(2) Procedure

1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].



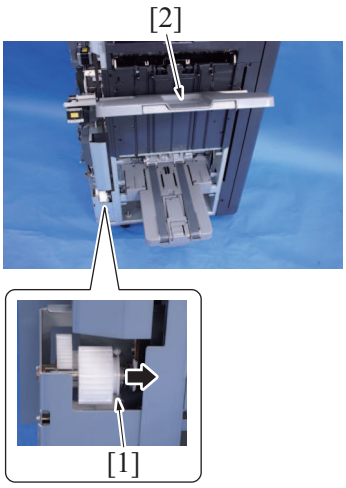
20.1.3 Replacing the paddle (FS-537SD/FS-537)

(1) Periodically replacing parts/cycle

- Paddle: Every 2,000,000 prints

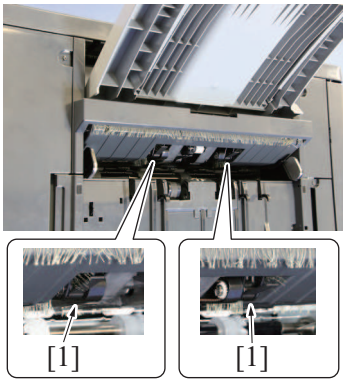
(2) Procedure

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the main tray.
   G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)

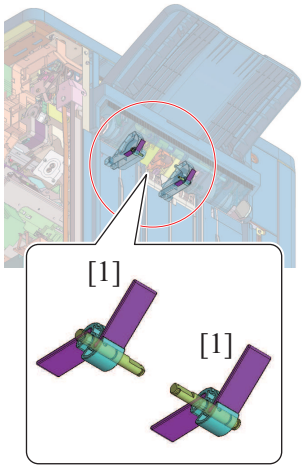


3. **NOTE**
   - **Since the main tray [2] cannot be removed if it is positioned at the top, slide the gear coupling [1] to the right and lower the tray to the lowest level to remove it.**

4. Remove the paddles [1].



5. **NOTE**
   - **Securely install the paddles [1] by aligning the direction of the paddle and the hole in the shaft.**



6. To reinstall, reverse the order of removal.

⚠CAUTION

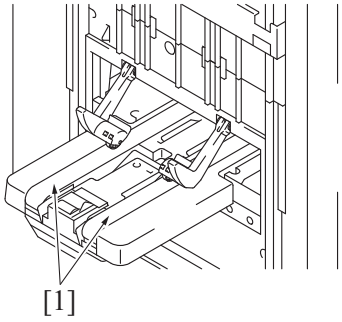
- Always carry out this procedure while supporting the main tray with your hand since the main will strongly come down when you slide the coupling.

20.1.4 Cleaning the exit tray conveyance belt (FS-537SD)

(1) Periodically cleaning parts/cycle

- Exit tray transport belt: Every 300,000 counts

(2) Procedure

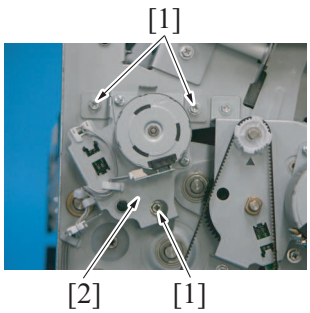


1. Clean the exit tray conveyance belt [1] with a cleaning pad dampened with alcohol.

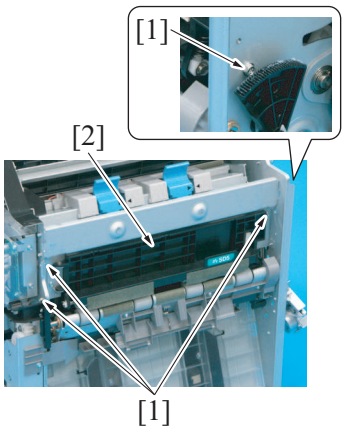
20.1.5 Cleaning the upper paddle (FS-537SD)

(1) Procedure

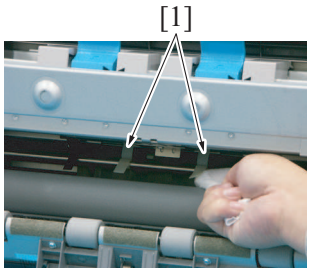
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



3. Remove three screws [1], and remove the tri-folding guide motor assy [2].



4. Remove four screws [1], and remove the conveyance assy [2].



5. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

(2) Periodically cleaning parts/cycle

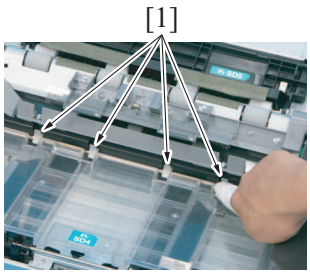
- Upper paddle: Every 300,000 counts

20.1.6 Cleaning the lower paddle (FS-537SD)

(1) Periodically cleaning parts/cycle

- Lower paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

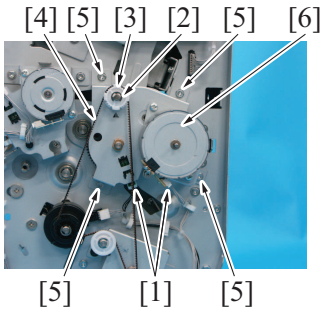
20.1.7 Replacing the upper paddle (FS-537SD)

(1) Periodically replacing parts/cycle

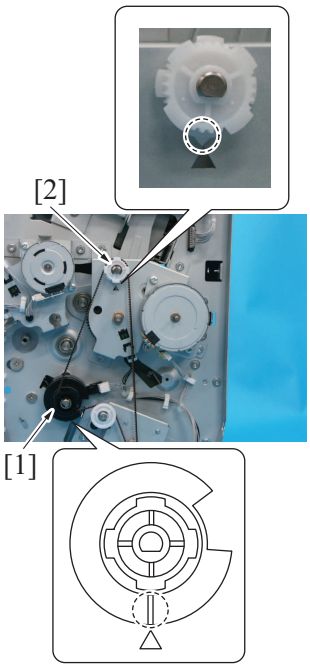
- Upper paddle: Every 2,000,000 counts

(2) Procedure

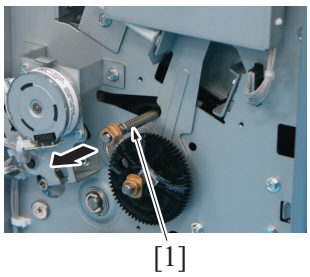
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



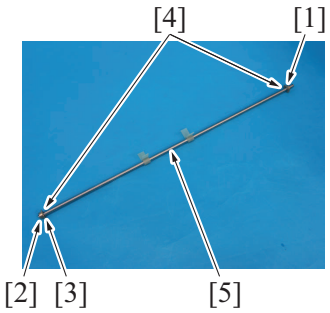
3. Disconnect two connectors [1].
4. Remove the E-ring [2].
5. Remove the gear [3] and the belt [4].
6. Remove four screws [5] and remove the center fold guide motor assy [6].



7. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**



8. Remove the upper paddle assy [1].



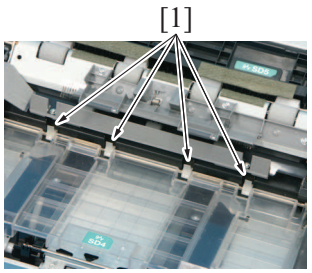
9. Remove the bushing [1].
10. Remove the E-ring [2], and remove the bushing [3].
11. Remove two E-rings [4].
12. Replace the upper paddle [5].
13. To reinstall, reverse the order of removal.

20.1.8 Replacing the lower paddle (FS-537SD)

(1) Periodically replacing parts/cycle

- Lower paddle: Every 2,000,000 counts

(2) Procedure



1. Remove the lower paddle [1].

20.2 Sensor section

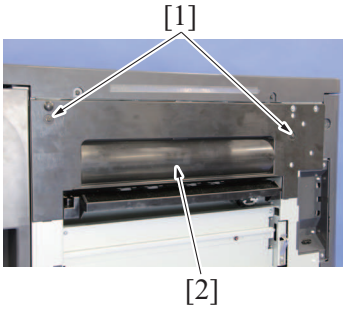
20.2.1 FNS entrance sensor (PS34) (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

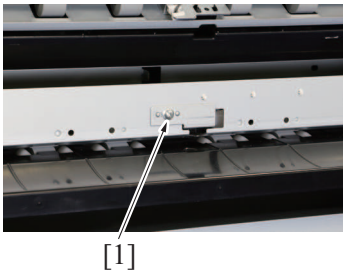
- FNS entrance sensor (PS34): Every 300,000 printouts

(2) Procedure

1. Remove the finisher from the main body.
   Finisher (FS-537/FS-537SD)

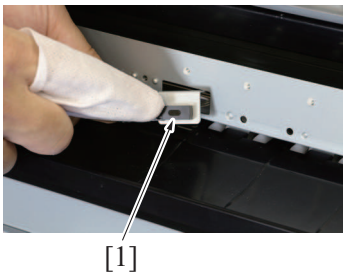


2. Remove two screws [1], and remove the cover [2].



3. Remove the screw [1].

4. Clean the FNS entrance sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**



5. Reinstall the above parts following the removal steps in reverse.

20.2.2 FNS middle sensor (PS36) (FS-537SD/FS-537)

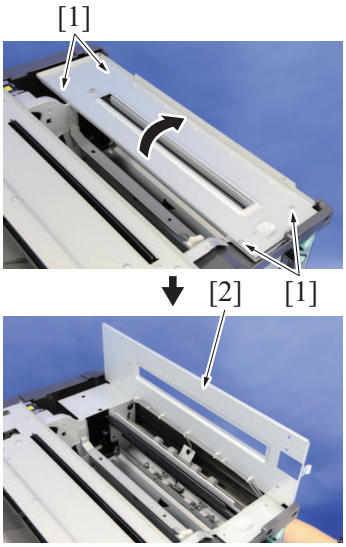
(1) Periodically cleaning parts/cycle

- FNS middle sensor (PS36): Every 300,000 printouts

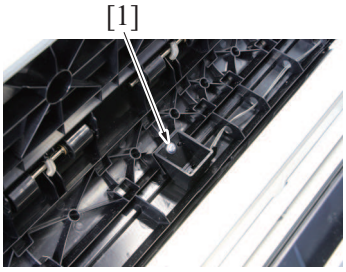
(2) Procedure

1. Remove the finisher from the main body.
Finisher (FS-537/FS-537SD)
2. Remove the upper cover/1.
G.8.19.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
G.8.19.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
G.8.19.3 Upper cover/3 (FS-537/FS-537SD)

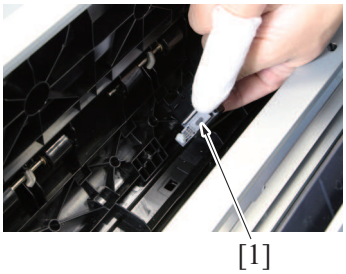
5. Remove four screws [1] and raise the metal plate [2].



6. Remove the screw [1].



7. Clean the FNS middle sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**



8. Reinstall the above parts following the removal steps in reverse.

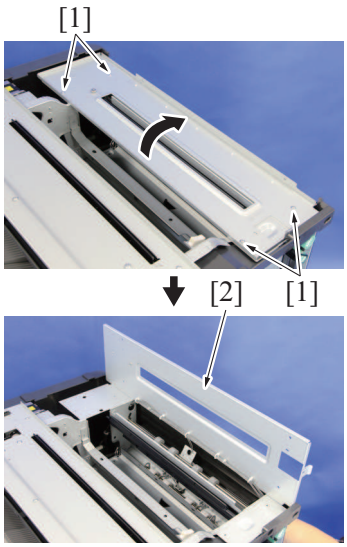
20.2.3 Main tray exit sensor (PS37) (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

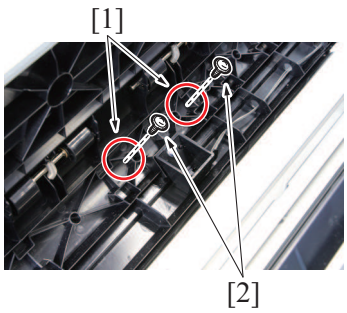
- Main tray exit sensor (PS37): Every 300,000 printouts

(2) Procedure

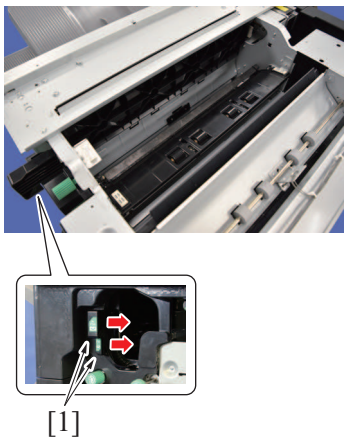
1. Remove the finisher from the main body.
   Finisher (FS-537/FS-537SD)
2. Remove the upper cover/1.
   G.8.19.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
   G.8.19.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
   G.8.19.3 Upper cover/3 (FS-537/FS-537SD)
5. Remove four screws [1] and raise the metal plate [2].

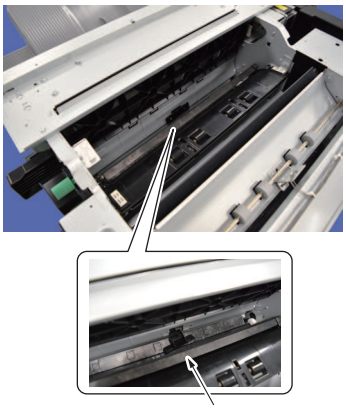


6. Remove two screws [2] from the two guide holes [1].



7. Open the front door of the finisher, and open the guide lever (FS4/FS5) [1].





8. Pull out and clean the main tray exit sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**

9. Reinstall the above parts following the removal steps in reverse.

21. Periodical maintenance procedure ZU-609

21.1 Roller section

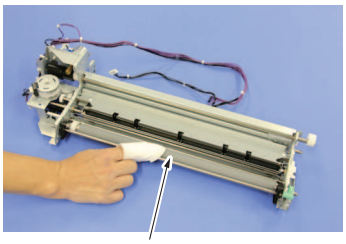
21.1.1 Cleaning of the Z fold roller (ZU-609)

(1) Periodically cleaning parts/cycle

- Z fold roller: Every 300,000 counts

(2) Procedure

1. Remove the Z folding unit.
   Z Folding Unit (ZU-609)
2. Using a cleaning pad dampened with alcohol, wipe the Z fold roller [1] clean of dirt.



3. Reinstall the above parts following the removal steps in reverse.

22. Periodical maintenance procedure JS-602

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

22.1 Paper exit section

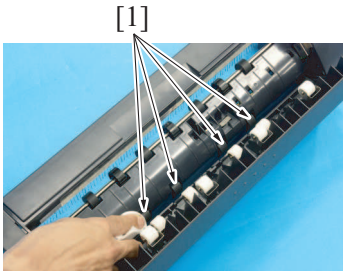
22.1.1 Cleaning conveyance roller/paper exit roller (JS-602)

(1) Periodically cleaning parts/cycle

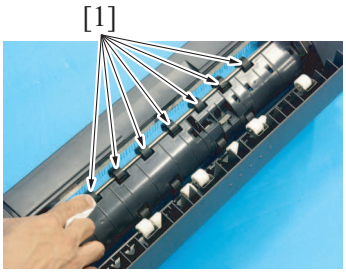
- Conveyance roller: Every 100,000 counts
- Paper exit roller: Every 100,000 counts

(2) Procedure

1. Open the cover.



2. Using a cleaning pad dampened with alcohol, wipe the conveyance roller [1].



3. Using a cleaning pad dampened with alcohol, wipe the paper exit roller [1].

23. Periodical maintenance procedure PI-507

23.1 Paper feed section

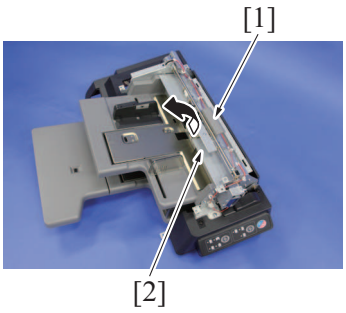
23.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)

(1) Periodically replacing parts/cycle

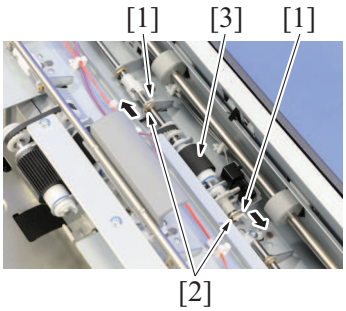
- Pick-up roller/Lw: Every 200,000 counts
- Feed roller/Lw: Every 100,000 counts

(2) Procedure

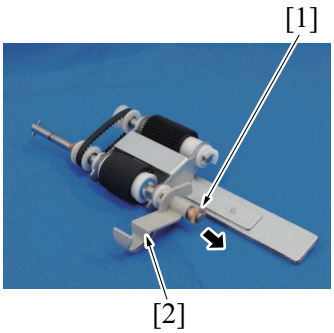
1. Remove the upper cover.
   G.8.24.1 Upper cover (PI-507)



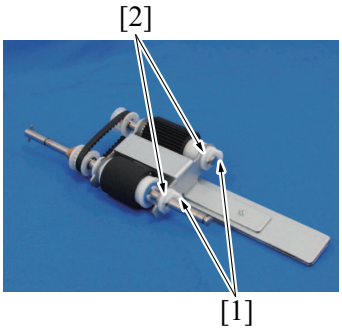
2. Pull the unlock lever [1] and open the upper door [2].



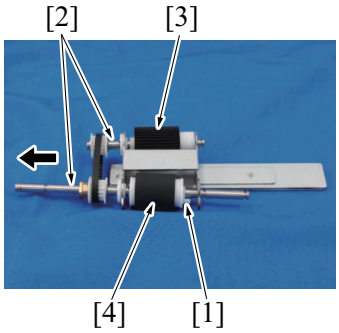
3. Remove two C-clips [1], shift the two bushings [2] at left and right side, and remove the feed roller assy/Lw [3].



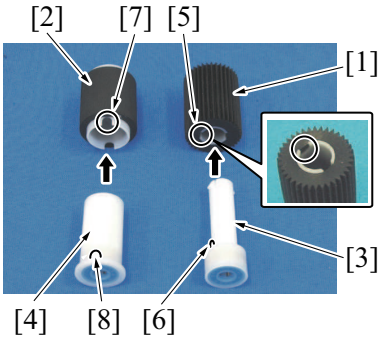
4. Remove the bushing [1] and remove the actuator [2].



5. Remove two C-clips [1] and the two bushings [2].



6. Remove the C-clip [1].
7. Slide the two roller shafts [2] toward the direction of the arrow and remove the pick-up roller/Lw [3] and the feed roller/Lw [4].
   NOTE
   - **Install with the blue side of the one-way clutch of the pick-up roller and the feed roller to face front when installing.**



8. Remove the pick-up roller [1] and the feed roller [2] from the one-way clutch [3] [4].
   NOTE
   - **Insert the pick-up roller [1] so the cut out [5] of the pick-up roller to align with the protrusion [6] of the one-way clutch when installing the pick-up roller.**
   - **Insert the feed roller [2] so the cut out [7] of the feed roller to align with the protrusion [8] of the one-way clutch when installing the feed roller.**
9. To reinstall, reverse the order of removal.

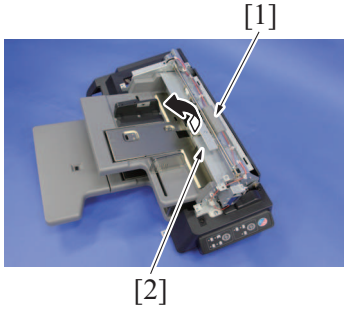
23.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)

(1) Periodically replacing parts/cycle

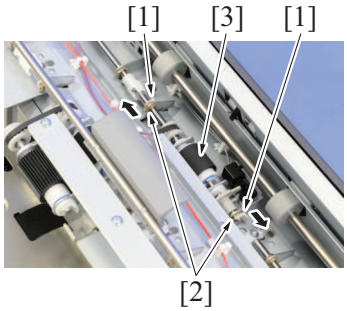
- Separation roller/Lw: Every 100,000 counts
- Torque limiter/Lw: Every 600,000 counts

(2) Procedure

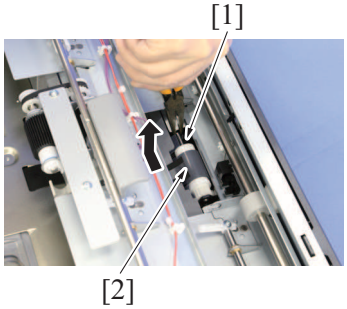
1. Remove the upper cover.
   G.8.24.1 Upper cover (PI-507)



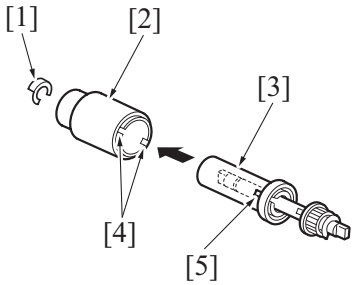
2. Pull the unlock lever [1] and open the upper door [2].



3. Remove two C-clips [1], shift the two bushings [2] at left and right side toward outside, and remove the feed roller assy/Lw [3].



4. Unlock the hook [1] and remove the separation roller assy/Lw [2] by moving it in a direction of the arrow.



6. To reinstall, reverse the order of removal.

5. Remove the C-clip [1] and remove the separation roller/Lw [2] and the torque limiter/Lw [3].

NOTE

- **Install the separation roller/Lw so the two cut outs [4] will be facing forward and aligned to the protrusion [5].**

24. Periodical maintenance procedure FS-536/FS-536SD

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

24.1 Paper exit section

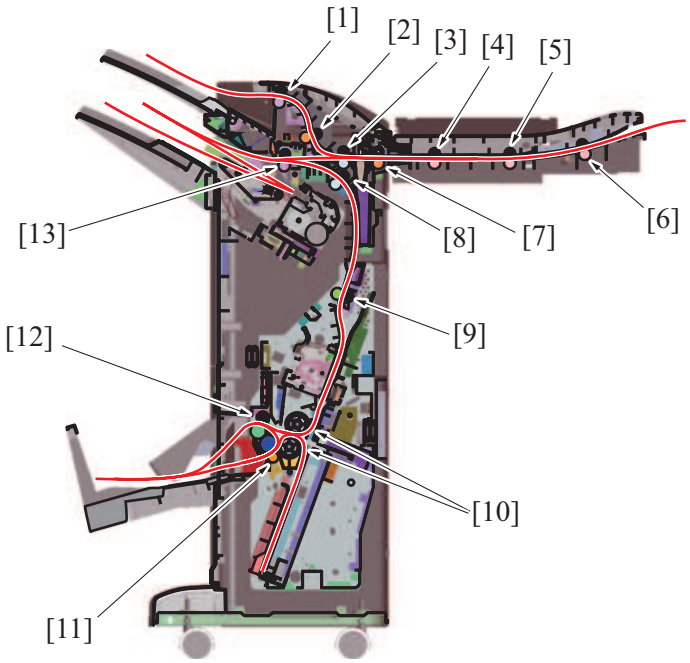
24.1.1 Cleaning procedure for each rollers/each rolls (FS-536/FS-536SD)

(1) Periodically cleaning parts/cycle

- Each rollers/Each rolls: Every 300,000 counts

(2) Cleaning point

FS-536/FS-536SD (when PK-520/RU-515 is installed)



[1]	Sub tray exit roller, roll	[2]	Sub tray transport roller, roll
[3]	Transport roller, roll	[4]	RU transport roller 3, transport roll 3 (RU-515) *
[5]	RU transport roller 2, transport roll 2 (RU-515) *	[6]	RU transport roller 1, transport roll 1 (RU-515) *
[7]	FNS entry roller, roll	[8]	Saddle section exit roller, roll
[9]	Saddle section paper feed roller, roll	[10]	Center folding roller
[11]	Tri-folding roller, roll	[12]	Sub tray exit roller, roll
[13]	Receiving roller, Receiving roll	-	-

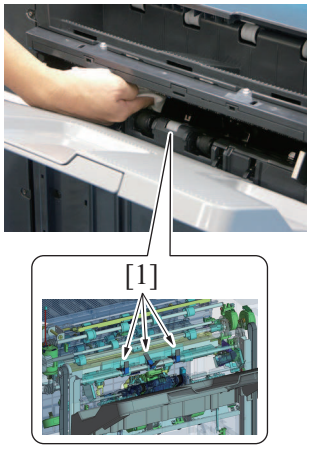
- *: Option

24.1.2 Cleaning the paddle (FS-536/FS-536SD)

(1) Periodically cleaning parts/cycle

- Paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

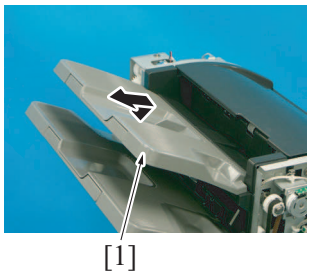
24.1.3 Replacing the paddle (FS-536/FS-536SD)

(1) Periodically replacing parts/cycle

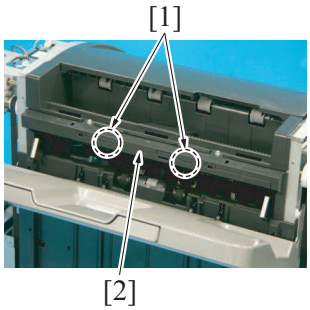
- Paddle: Every 2,000,000 counts

(2) Procedure

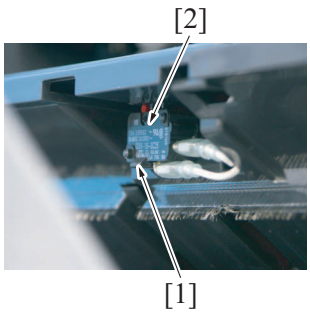
1. Remove the finisher from the main body.
   Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
5. Remove the exit tray [1].



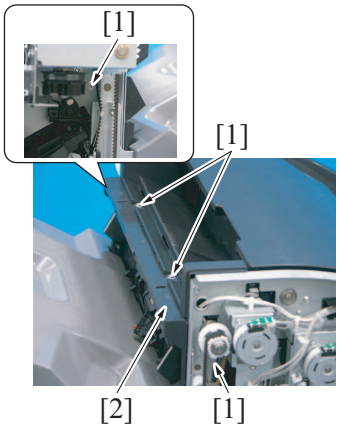
6. Remove two tabs [1], and remove the cover [2].

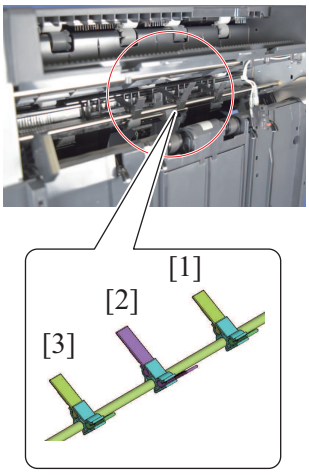


7. Release the tab [1], and remove the main tray upper position detect switch [2].

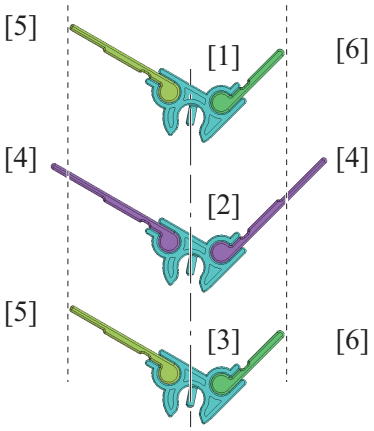


8. Remove four screws [1], and remove the cover [2].





9. Remove the paddle assy. (Front) [1], the paddle assy. (Center) [2] and the paddle assy. (Rear) [3].



10. **NOTE**
    - **When reinstalling the paddles, be careful not to attach them at an incorrect location or in an incorrect orientation.**
      [1]: Paddle Assy. (Front)
      [2]: Paddle Assy. (Center)
      [3]: Paddle Assy. (Rear)
      [4]: Paddle (Long)
      [5]: Paddle (Middle)
      [6]: Paddle (Short)

11. To reinstall, reverse the order of removal.

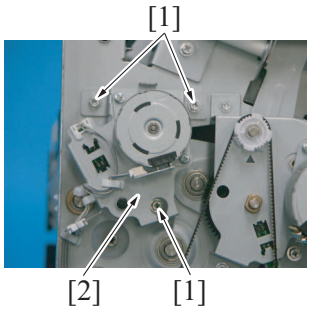
24.1.4 Cleaning the upper paddle (FS-536SD)

(1) Periodically cleaning parts/cycle

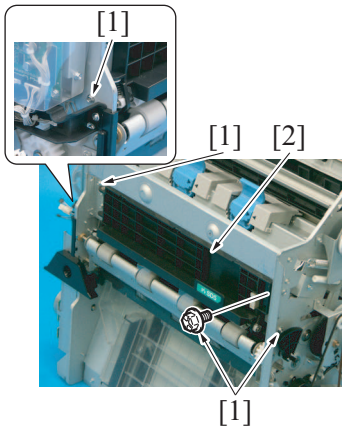
- Upper paddle: Every 300,000 counts

(2) Procedure

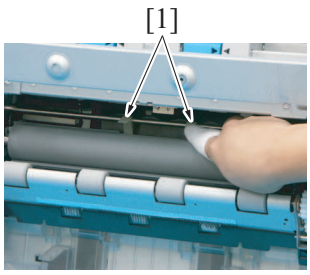
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



3. Remove three screws [1], and remove the tri-fold guide motor assy [2].



4. Remove four screws [1], and remove the conveyance assy [2].



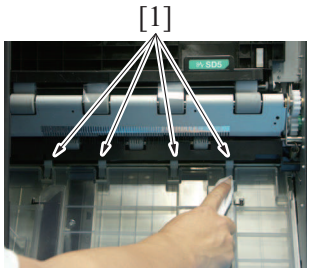
5. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

24.1.5 Cleaning the lower paddle (FS-536SD)

(1) Periodically cleaning parts/cycle

- Lower paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

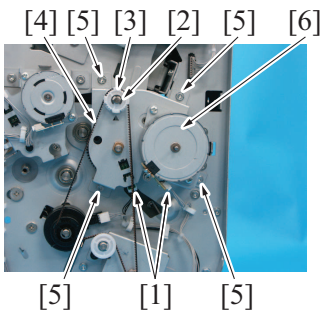
24.1.6 Replacing the upper paddle (FS-536SD)

(1) Periodically replacing parts/cycle

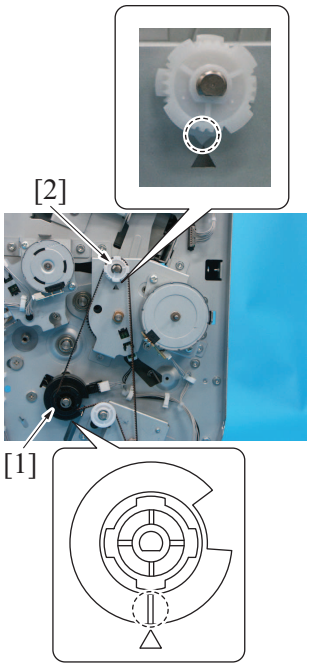
- Upper paddle: Every 2,000,000 counts

(2) Procedure

1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)

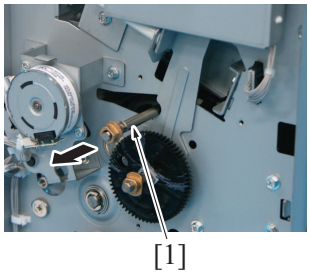


3. Disconnect two connectors [1].
4. Remove the E-ring [2].
5. Remove the gear [3] and the belt [4].
6. Remove four screws [5], and remove the center fold guide motor assy [6].

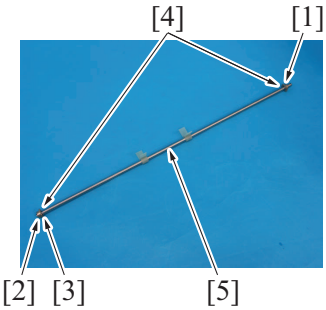


7. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

8. Remove the upper paddle assy [1].



9. Remove the bushing [1].
10. Remove the E-ring [2], and remove the bushing [3].
11. Remove two E-rings [4].
12. Replace the upper paddle [5].



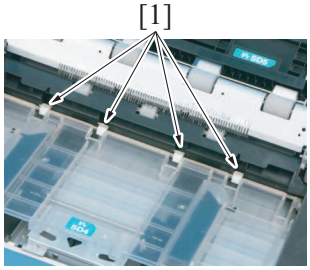
13. To reinstall, reverse the order of removal.

24.1.7 Replacing the lower paddle (FS-536SD)

(1) Periodically replacing parts/cycle

- Lower paddle: Every 2,000,000 counts

(2) Procedure



1. Remove four lower paddles [1].

24.2 Sensor section

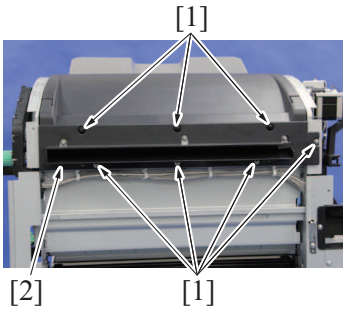
24.2.1 FNS entrance sensor (PS4) (FS-536SD/FS-536)

(1) Periodically cleaning parts/cycle

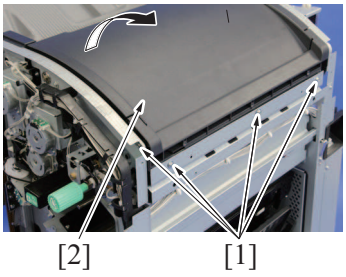
- FNS entrance sensor: Every 300,000 counts

(2) Procedure

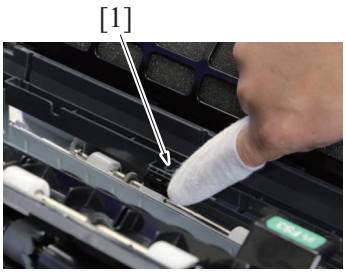
1. Remove the finisher from the main body.
   Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
5. Remove seven screws [1], and remove the cover [7].



6. Remove four screws [1] and open the cover [2].



7. Using a cleaning pad dampened with alcohol, wipe the FNS entrance sensor [1] clean of dirt.



8. To reinstall, reverse the order of removal.

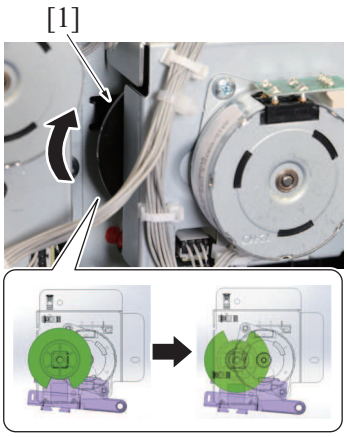
24.2.2 Main tray exit sensor (PS16) (FS-536SD/FS-536)

(1) Periodically cleaning parts/cycle

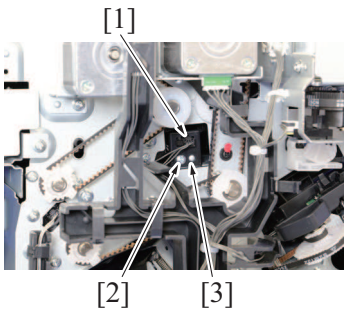
- Main tray exit sensor: Every 300,000 counts

(2) Procedure

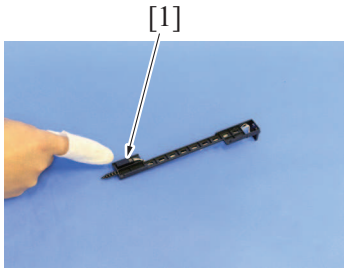
1. Remove the finisher from the main body.
   Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.8.16.1 Rear cover (FS-536/FS-536SD)



5. Rotate the douser [1] by 180 degrees.



6. Disconnect the connector [1], and remove the screw [2] and the guide [3].



7. Using a cleaning pad dampened with alcohol, clean the main tray exit sensor [1].

8. To reinstall, reverse the order of removal.

G DISASSEMBLY/REASSEMBLY

1. Disassembly/adjustment prohibited items

1.1 Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

1.2 Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

1.3 Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

1.4 Warnings for disassembly

⚠WARNING

- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs on the frame and parts.

  They may injure your hands or fingers.

⚠WARNING

- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.

  A normally protected part may cause unexpected hazards.

⚠WARNING

- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit.

  You may be injured by a falling part or unit.

1.5 Warnings / Precautions during setup or transportation

⚠WARNING

- Whenever mounting an option on the machine, be attentive to the motion of the other workers performing the task.

  Another worker may be injured by a pinch point between the machine and the option.

⚠WARNING

- When mounting an option on the machine, be careful about the clearance between the machine and the option.

  You may be injured with your finger or hand pinched between the machine and the option.

⚠CAUTION

- Do not leave the machine unattended during transportation, installation, and/or inspection. If the machine is left unattended, face protrusions toward the wall or take other necessary precautions to prevent.

  A user or other person in the area from stumbling over a protrusion of the machine or being caught by a cable, possibly causing a fall to the floor or other personal injury.

2. Units from which removing is prohibited

2.1 CCD board

2.1.1 Reason for prohibition

- Since the accuracy of the CCD board is guaranteed as a unit, no accuracy is guaranteed if it is disassembled. Therefore, screws that lead to the disassembly of the CCD board must not be removed.

2.2 PH unit

2.2.1 Reason for prohibition

- The laser runs inside the PH unit. Opening the cover may cause dust to enter and interrupt the laser. Do no remove any screw which may disassemble the PH unit.

2.3 Fusing unit

2.3.1 Reason for prohibition

- Inner part of the fusing unit and the position of the fusing belt are adjusted prior to shipping. Do not remove any screw which may disassemble the fusing unit.

3. Disassembly/assembly warning/caution items

3.1 Removal/installing of PWBs

CAUTION

- When removing or installing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal or installing procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

4. Notes when transporting the machine

NOTE

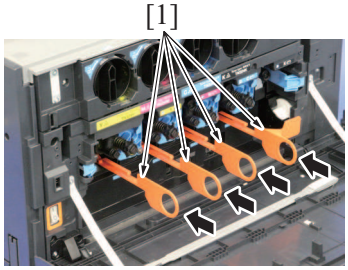
- **When transporting a machine to reinstall it in another location, attach the following protective materials to the machine in order to prevent the machine from being damaged or spilling out by vibration during transportation.**
- **The protective materials are removed when the machine is set up. However, be sure to keep the protective materials after finishing the set-up.**

4.1 Protective materials

4.1.1 Protective materials for the photo conductors

Reinstall procedure

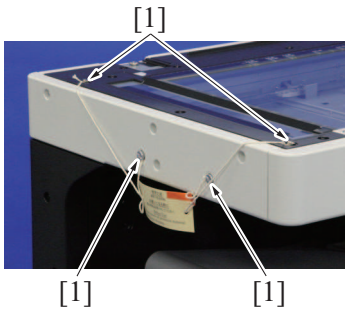
1. Open the front door.
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box



3. Insert the protective materials for the photo conductors [1] in the indicated position and push it as far as it will go.

4.1.2 Scanner packing bracket

1. Check that the exposure unit is at the home position.
2. Remove four caps.



3. Attach the scanner packing brackets [1] to fix the scanner.

5. bizhub C368/C308/C258

5.1 Disassembly/reassembly parts list

5.1.1 Exterior parts

No.	Part name	Ref. page
1	Scanner rear cover	G.5.2.1 Scanner rear cover
2	Scanner right cover	G.5.2.2 Scanner right cover
3	Scanner front cover	G.5.2.3 Scanner front cover
4	Scanner left cover	G.5.2.4 Scanner left cover
5	Scanner upper rear cover	G.5.2.5 Scanner upper rear cover
6	Control panel left cover/1	G.5.2.6 Control panel left cover/1
7	Control panel left cover/2	G.5.2.7 Control panel left cover/2
8	Control panel right cover	G.5.2.8 Control panel right cover
9	Control panel upper cover	G.5.2.9 Control panel upper cover
10	Control panel front cover	G.5.2.10 Control panel front cover
11	Control panel unit	G.5.2.11 Control panel unit
12	Original glass	G.5.2.12 Original glass
13	Front door	G.5.2.13 Front door
14	Front lower cover	G.5.2.14 Front lower cover
15	Front cover	G.5.2.15 Front cover
16	Left cover	G.5.2.16 Left cover
17	Exit tray	G.5.2.17 Exit tray
18	Rear right cover	G.5.2.18 Rear right cover
19	Upper right cover	G.5.2.19 Upper right cover
20	Lower rear cover	G.5.2.20 Lower rear cover
21	Protective sheet	G.5.2.21 Protective sheet
22	Upper rear cover	G.5.2.22 Upper rear cover
23	Tray 1	G.5.2.23 Tray 1
24	Tray 2	G.5.2.24 Tray 2

5.1.2 Units

No.	Part name	Ref. page
1	LED exposure unit	G.5.3.1 LED exposure unit
2	Paper feed unit	G.5.3.2 Paper feed unit
3	PH unit	G.5.3.3 PH unit
4	Sub hopper unit	G.5.3.4 Sub hopper unit
5	Right door unit	G.5.3.5 Right door unit
6	Manual bypass tray unit	G.5.3.6 Manual bypass tray unit
7	Regist unit	G.5.3.7 Regist unit
8	Hard disk (A)	G.5.3.9 Hard disk (A) Cover type
9	How to open the PWB box	G.5.3.10 How to open the PWB box
10	Main drive unit	G.5.3.11 Main drive unit
11	Transport unit	G.5.3.12 Transport unit
12	Fusing drive unit	G.5.3.13 Fusing drive unit
13	Hopper drive unit	G.5.3.14 Hopper drive unit

5.1.3 Boards

No.	Part name	Ref. page
1	CCD board (CCDB)	G.5.4.1 CCD board (CCDB)
2	Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)	G.5.4.2 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)
3	DC power supply (DCPU)	G.5.4.3 DC power supply (DCPU)
4	EEPROM/1, EEPROM/2	G.5.4.4 EEPROM/1, EEPROM/2
5	eMMC board (eMMC)	G.5.4.5 eMMC board (eMMC)
6	Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)	G.5.4.6 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)
7	Front side board (FRB)	G.5.4.7 Front side board (FRB)
8	High voltage unit (HV)	G.5.4.8 High voltage unit (HV)
9	Machine condition monitor board (MCMB)	G.5.4.9 Machine condition monitor board (MCMB)

No.	Part name	Ref. page
10	MFP board (MFPB)	G.5.4.10 MFP board (MFPB)
11	Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)	G.5.4.12 Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)
12	PH relay board (PHRYB)	G.5.4.13 PH relay board (PHRYB)
13	Scanner drive board (SCDB)	G.5.4.14 Scanner drive board (SCDB)

5.1.4 Motors

No.	Part name	Ref. page
1	Transport motor (M1)	G.5.5.1 Transport motor (M1)
2	PC motor (M2)	G.5.5.2 PC motor (M2)
3	Fusing motor (M3)	G.5.5.3 Fusing motor (M3)
4	Switchback motor (M4)	G.5.5.4 Switchback motor (M4)
5	ADU transport motor (M5)	G.5.5.5 ADU transport motor (M5)
6	Toner supply motor/K (M6)	G.5.5.6 Toner supply motor/K (M6)
7	Toner supply motor/C (M7)	G.5.5.7 Toner supply motor/C (M7)
8	Toner supply motor/M (M8)	G.5.5.8 Toner supply motor/M (M8)
9	Toner supply motor/Y (M9)	G.5.5.9 Toner supply motor/Y (M9)
10	Toner cartridge motor/Y,M,C (M10)	G.5.5.10 Toner cartridge motor/Y,M,C (M10)
11	Fusing pressure motor (M11)	G.5.5.11 Fusing pressure motor (M11)
12	Tray 1 lift-up motor (M12)	G.5.5.12 Tray 1 lift-up motor (M12)
13	Tray 2 lift-up motor (M13)	G.5.5.13 Tray 2 lift-up motor (M13)
14	Developing motor (M21)	G.5.5.14 Developing motor (M21)
15	Toner cartridge motor/K (M25)	G.5.5.15 Toner cartridge motor/K (M25)
16	Scanner motor (M201)	G.5.5.16 Scanner motor (M201)

5.1.5 Clutches

No.	Part name	Ref. page
1	Tray 2 paper feed clutch (CL1)	G.5.6.1 Tray 2 paper feed clutch (CL1)
2	Tray 2 vertical transport clutch (CL2)	G.5.6.2 Tray 2 vertical transport clutch (CL2)
3	Tray 1 paper feed clutch (CL3)	G.5.6.3 Tray 1 paper feed clutch (CL3)
4	Registration clutch (CL4)	G.5.6.4 Registration clutch (CL4)
5	1st transfer pressure clutch (CL5)	G.5.6.5 1st transfer pressure clutch (CL5)
6	ADU transport clutch (CL6)	G.5.6.6 ADU transport clutch (CL6)
7	Bypass paper feed clutch (CL7)	G.5.6.7 Bypass paper feed clutch (CL7)
8	Paper exit clutch (CL8)	G.5.6.8 Paper exit clutch (CL8)

5.1.6 Fan

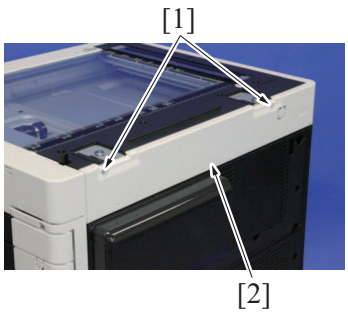
No.	Part name	Ref. page
1	Power supply cooling fan (FM1)	G.5.7.1 Power supply cooling fan (FM1)
2	Transfer belt cleaner cooling fan (FM2)	G.5.7.2 Transfer belt cleaner cooling fan (FM2)
3	Machine rear side cooling fan (FM3)	G.5.7.3 Machine rear side cooling fan (FM3)
4	Toner cartridge cooling fan (FM4)	G.5.7.4 Toner cartridge cooling fan (FM4)
5	Paper cooling fan (FM8)	G.5.7.5 Paper cooling fan (FM8)

5.1.7 etc.

No.	Part name	Ref. page
1	Bypass pick-up solenoid (SD1)	G.5.8.1 Bypass pick-up solenoid (SD1)
2	IDC sensor shutter solenoid (SD2)	G.5.8.2 IDC sensor shutter solenoid (SD2)
3	Gate switch solenoid (SD3)	G.5.8.3 Gate switch solenoid (SD3)
4	Developing solenoid (SD4)	G.5.8.4 Developing solenoid (SD4)
5	FAX speaker (SP1)	G.5.8.5 FAX speaker (SP1)
6	Bypass CD paper size VR (VR1)	G.5.8.6 Bypass CD paper size VR (VR1)
7	UFP filter/ Deodorant filter	G.5.8.7 UFP filter/ Deodorant filter

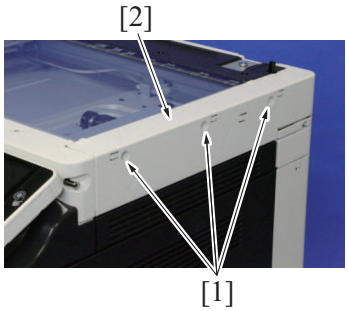
5.2 Disassembly/reassembly procedure (Exterior parts)

5.2.1 Scanner rear cover



1. Remove two screws [1], and remove the scanner rear cover [2].
2. To reinstall, reverse the order of removal.

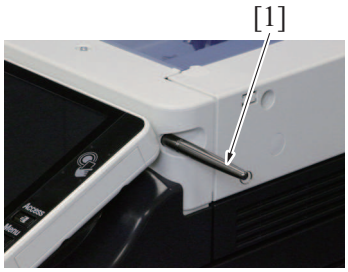
5.2.2 Scanner right cover



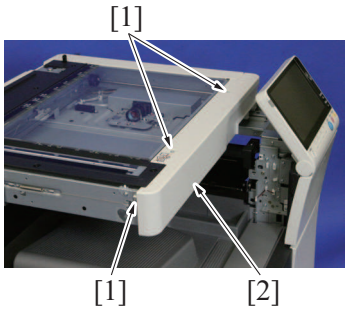
1. Remove three screws [1], and remove the scanner right cover [2].
2. To reinstall, reverse the order of removal.

5.2.3 Scanner front cover

1. Remove the scanner left cover.
   G.5.2.4 Scanner left cover
2. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
3. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
4. Remove the control panel upper cover.
   G.5.2.9 Control panel upper cover

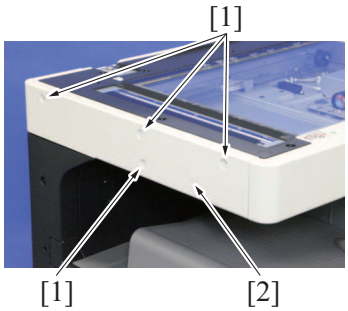


5. Remove the stylus pen [1].



6. Remove three screws [1], and remove the scanner front cover [2].
7. To reinstall, reverse the order of removal.

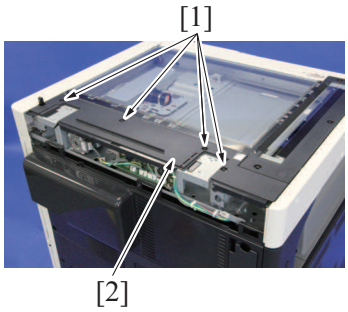
5.2.4 Scanner left cover



1. Remove four screws [1], and remove the scanner left cover [2].
2. To reinstall, reverse the order of removal.

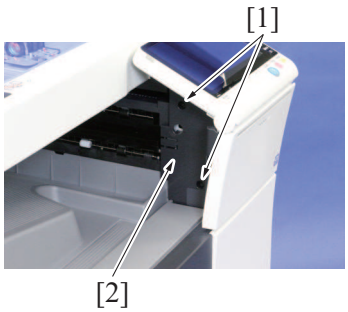
5.2.5 Scanner upper rear cover

1. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover



2. Remove four screws [1], and remove the scanner upper rear cover [2].
3. To reinstall, reverse the order of removal.

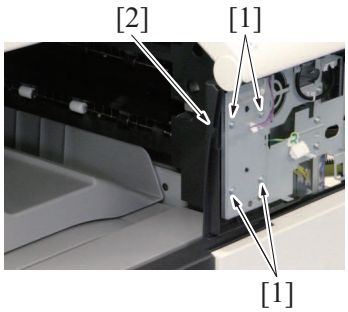
5.2.6 Control panel left cover/1



1. Remove two screws [1], and remove the control panel left cover/1 [2].
2. To reinstall, reverse the order of removal.

5.2.7 Control panel left cover/2

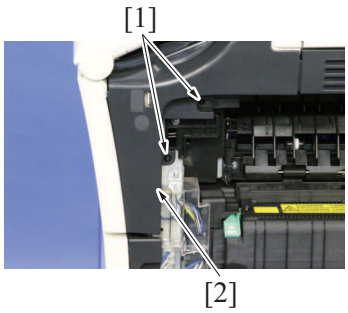
1. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
2. Remove the control panel front cover.
   G.5.2.10 Control panel front cover



3. Remove four screws [1], and remove the control panel left cover/2 [2].
4. To reinstall, reverse the order of removal.

5.2.8 Control panel right cover

1. Open the right door.

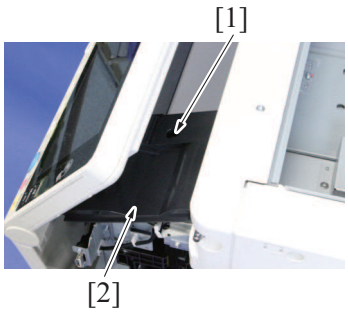


2. Remove two screws [1], and remove the control panel right cover [2].

3. To reinstall, reverse the order of removal.

5.2.9 Control panel upper cover

1. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
2. Remove the control panel right cover.
   G.5.2.8 Control panel right cover

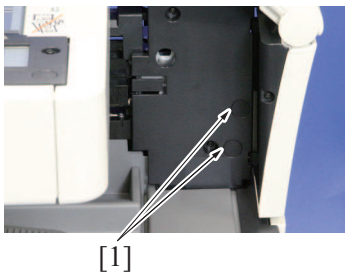


3. Remove the screw [1], and remove the control panel upper cover [2].

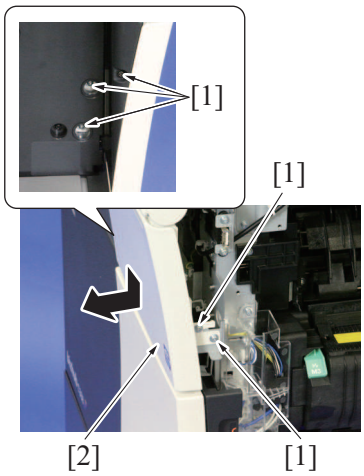
4. To reinstall, reverse the order of removal.

5.2.10 Control panel front cover

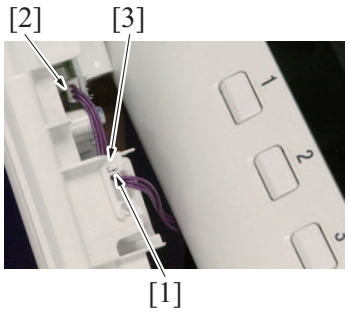
1. Remove the control panel right cover.
   G.5.2.8 Control panel right cover



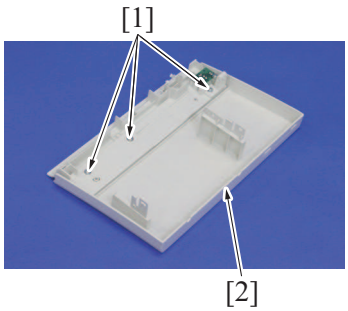
2. Remove two caps [1].



3. Remove five screws [1] from the control panel front cover [2] and remove the cover by releasing the tabs.



4. Remove the harness from the wire saddle [1].
5. Disconnect the connector [2], and remove the control panel front cover assy [3].

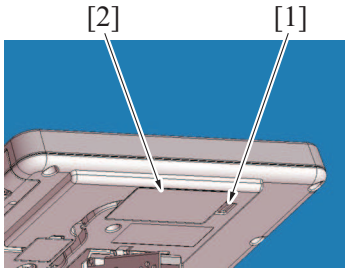


6. Remove three screws [1], and remove the control panel front cover [2].

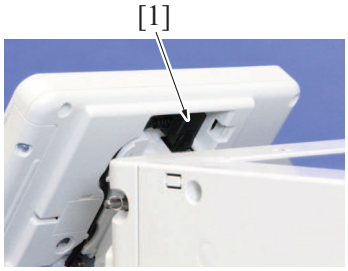
7. To reinstall, reverse the order of removal.

5.2.11 Control panel unit

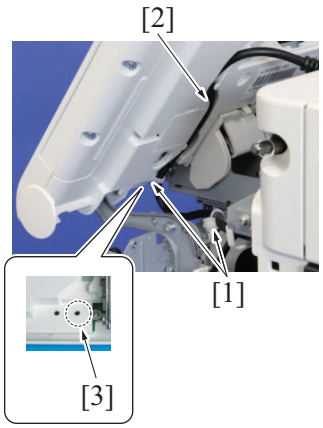
1. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
2. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
3. Remove the control panel upper cover.
   G.5.2.9 Control panel upper cover
4. Remove the control panel front cover.
   G.5.2.10 Control panel front cover
5. Remove the control panel left cover/2.
   G.5.2.7 Control panel left cover/2



6. Unhook the claw [1], and remove the connector cover [2].



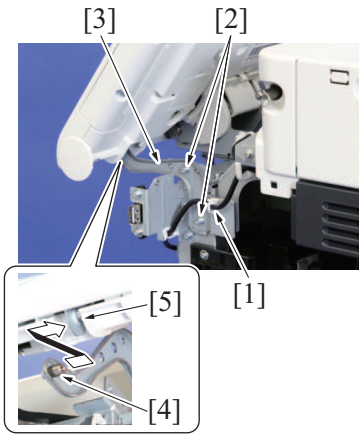
7. Disconnect the connector [1].



8. Remove two cable ties [1] from the control panel.
9. Remove the cable from the cable guide [2].

NOTE

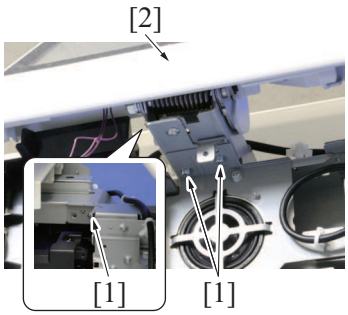
- **At installation of the control panel unit, insert the cable tie [1] to the hole [3] shown in the illustration.**



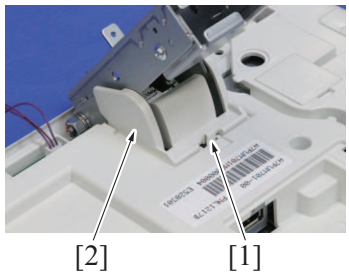
10. Remove the harness from the wire saddle [1].
11. Remove two screws [2], and remove the metal plate [3].

NOTE

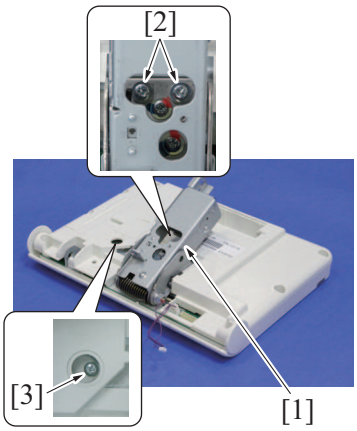
- **When installing the control panel, install the shaft [4] into the hole [5] in the figure.**



12. Remove three screws [1], and remove the control panel unit [2].



13. Unhook the claw [1], and remove the hinge cover [2].



14. Tilt down the hinge [1], and remove two screws [2].
15. Remove the screw [3], and remove the hinge [1].
16. To reinstall, reverse the order of removal.
17. Carry out the touch panel calibration.
    G.5.2.11 (1) Touch panel calibration

(1) Touch panel calibration

- After replacing the control panel unit, you must perform the touch panel calibration. Perform one of the calibration procedures described below.

(a) Panel Calibration by using USB memory

1. Connect the USB memory containing the MFP firmware data to the service port.
   For information on how to store the firmware data into a USB memory, refer to “USB memory”.
2. While pressing the ‘Reset’ key, turn the main power switch ON.
3. As the calibration screen appears, press the Start key, perform calibration and wait for a while.
4. Confirm that the completion message. Touch [Close].
5. Turn OFF the main power switch, and remove the USB memory.

NOTE

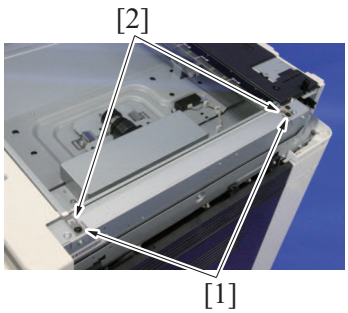
- **Once the panel calibration has been completed, panel screen transit to the firmware writing mode and start to update automatically after 30 seconds.**

(b) Panel Calibration by manual operation

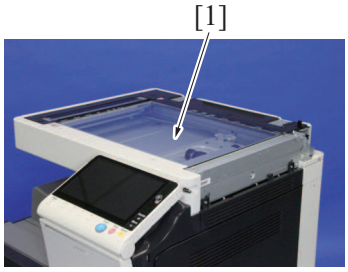
1. Press [Menu] -> [Counter] -> [Display Keypad].
2. Press Stop -> Clear -> 1 -> 1 -> 6 -> 6 -> Start key, then calibration starts.
3. After 30 seconds, turn OFF the main power switch.

5.2.12 Original glass

1. Remove the scanner right cover.
   G.5.2.2 Scanner right cover



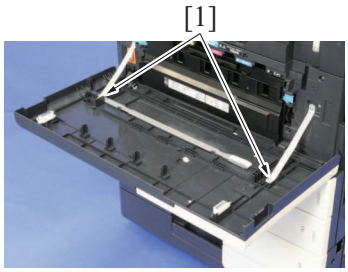
2. Remove the screw [1] each, and remove two original glass fixing brackets [2].



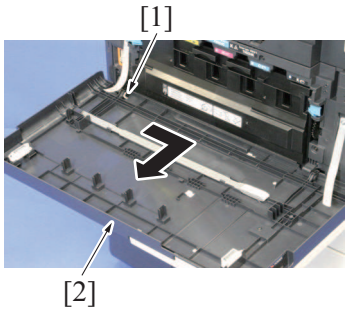
3. Remove the original glass [1].
4. To reinstall, reverse the order of removal.
5. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge].
6. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge].

5.2.13 Front door

1. Open the front door and remove two screws [1]



2. Remove the C-clip [1], and remove the front door [2].

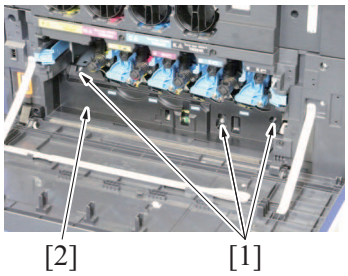


3. To reinstall, reverse the order of removal.

5.2.14 Front lower cover

1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box

2. Remove three screws [1], and remove the lower front cover [2].

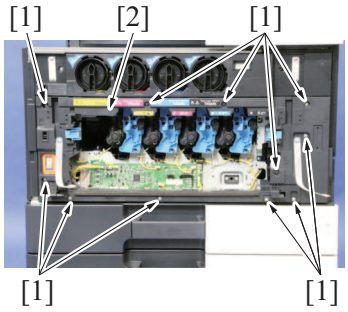


3. To reinstall, reverse the order of removal.

5.2.15 Front cover

1. Remove the front door.
   G.5.2.13 Front door
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
3. Remove the front lower cover.
   G.5.2.14 Front lower cover

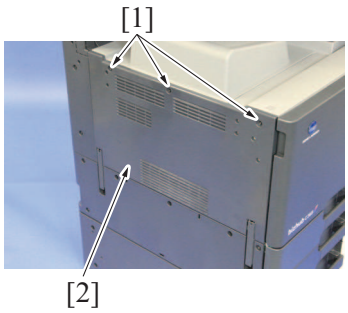
4. Remove 11 screws [1], and remove the front cover [2].



5. To reinstall, reverse the order of removal.

5.2.16 Left cover

1. Open the front door.

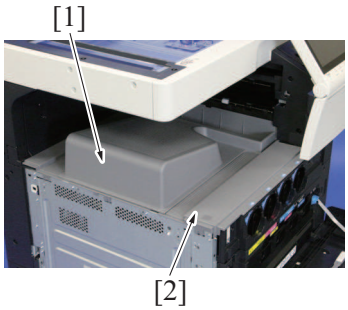


2. Remove three screws [1], and remove the left cover [2].

3. To reinstall, reverse the order of removal.

5.2.17 Exit tray

1. Open the front door.
2. Remove the left cover.
G.5.2.16 Left cover

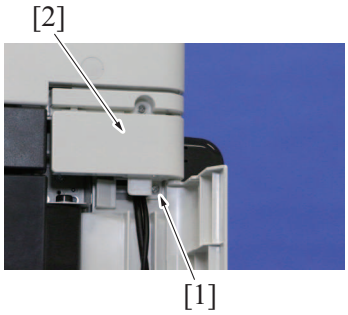


3. Remove the exit tray/1 [1].
4. Remove the exit tray/2 [2].

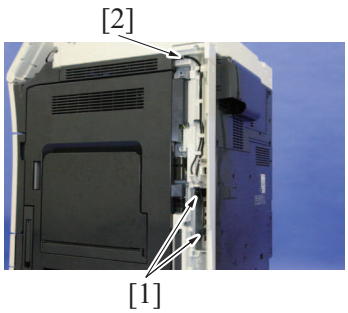
5. To reinstall, reverse the order of removal.

5.2.18 Rear right cover

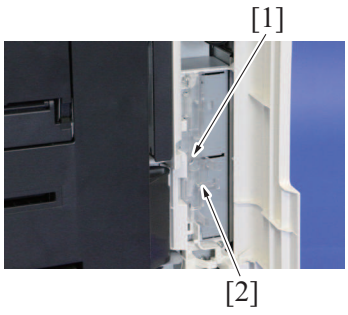
1. Open the right rear cover.



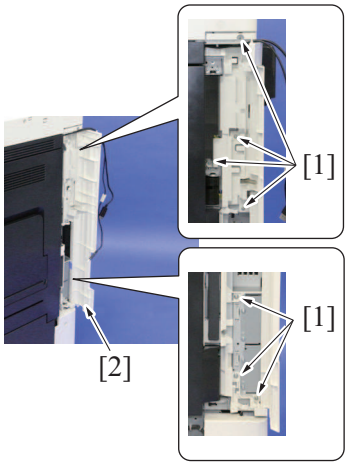
2. Remove the screw [1], and open the upper right rear cover [2].



3. Disconnect two connectors [1], and remove the harness from the wire saddle [2] and the harness guide.



4. Remove the screw [1], and remove the connector cover [2].

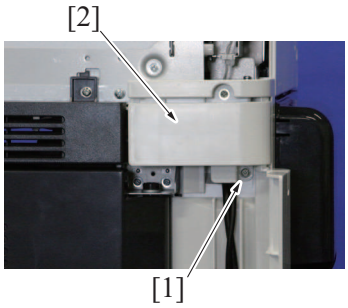


5. Remove seven screws [1], and remove the right rear cover [2] as clearing the harness.

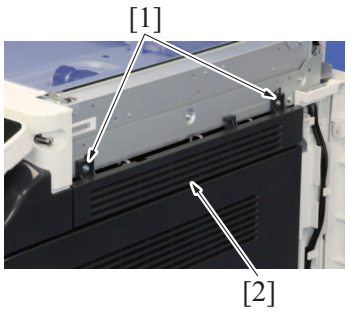
6. To reinstall, reverse the order of removal.

5.2.19 Upper right cover

1. Remove the scanner right cover.
G.5.2.2 Scanner right cover



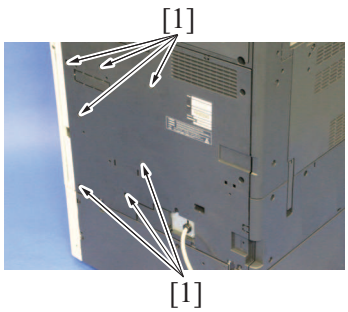
2. Remove the screw [1], and open the upper right rear cover [2].



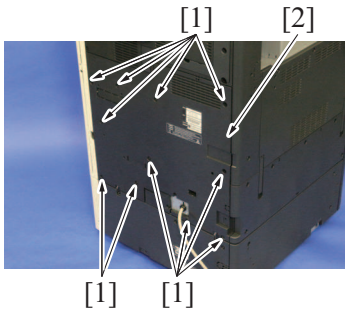
3. Remove two screws [1], and remove the upper right cover [2].

4. To reinstall, reverse the order of removal.

5.2.20 Lower rear cover



1. Remove seven caps [1].

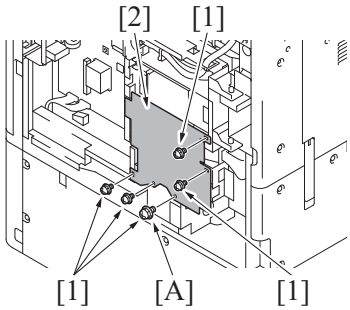


2. Remove 11 screws [1], and remove the lower rear cover [2].

3. To reinstall, reverse the order of removal.

5.2.21 Protective sheet

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover

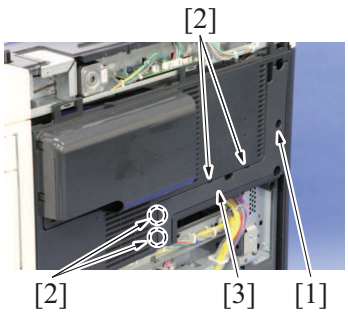


2. Remove five screws [1], and remove the protective sheet [2].
   NOTE
   - **When attaching the protective sheet, note that only the size of the screw "A" is different.**

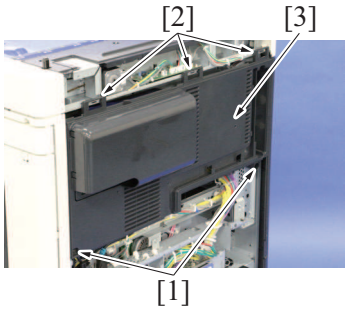
3. To reinstall, reverse the order of removal.

5.2.22 Upper rear cover

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover



3. Remove the screw [1] and four tabs [2], and remove the DF cable cover [3].



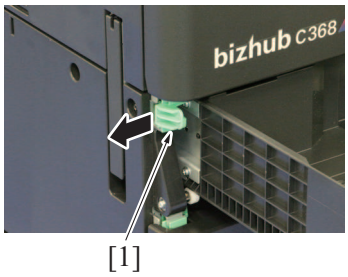
4. Remove two screws [1] and three tabs [2], and remove the upper rear cover [3].

5. To reinstall, reverse the order of removal.

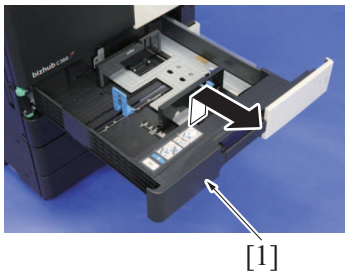
5.2.23 Tray 1

1. Slide out the tray 1, and remove the paper.

2. Unlock the stopper [1].



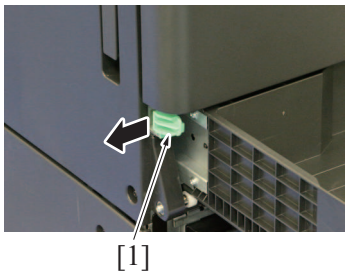
3. Hold up the tray 1 [1] to remove it.



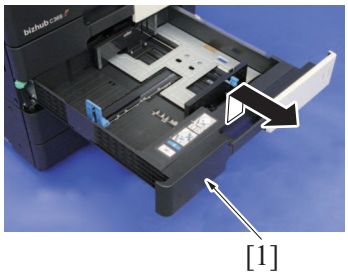
4. To reinstall, reverse the order of removal.

5.2.24 Tray 2

1. Slide out the tray 2, and remove the paper.
2. Unlock the stopper [1].



3. Hold up the tray 2 [1] to remove it.



4. To reinstall, reverse the order of removal.

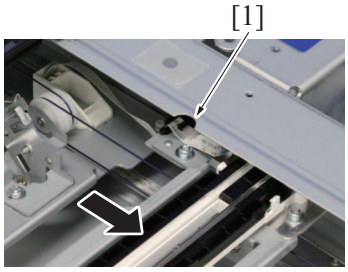
5.3 Disassembly/reassembly procedure (Units)

5.3.1 LED exposure unit

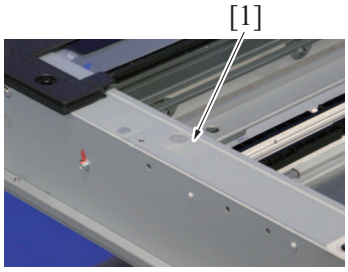
1. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
2. Remove the scanner upper rear cover.
   G.5.2.5 Scanner upper rear cover
3. Remove the scanner left cover.
   G.5.2.4 Scanner left cover
4. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
5. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
6. Remove the control panel upper cover.
   G.5.2.9 Control panel upper cover
7. Remove the scanner front cover.
   G.5.2.3 Scanner front cover
8. Remove the scanner right cover.

G.5.2.2 Scanner right cover

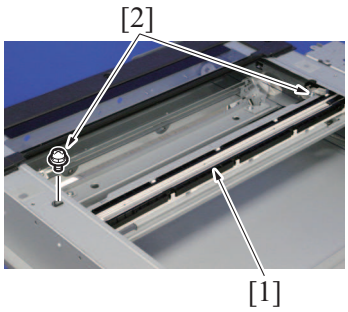
9. Remove the original glass.
G.5.2.12 Original glass



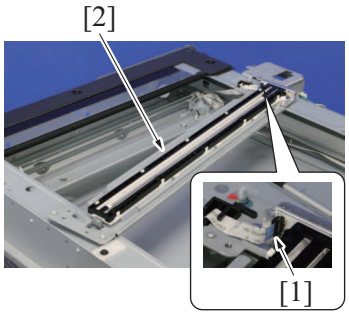
10. Move the LED exposure unit assy to screw access point [1].



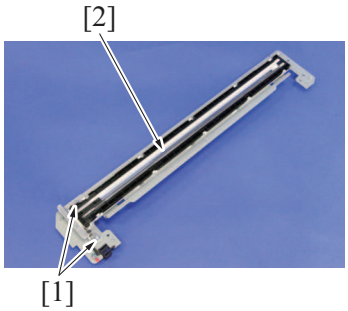
11. Peel off seal [1].



12. Remove two screws [2] of the LED exposure unit assy [1].



13. Disconnect the flat cable [1], and remove the LED exposure unit assy [2].



14. Remove two screws [1], and remove the LED exposure unit [2].

15. To reinstall, reverse the order of removal.

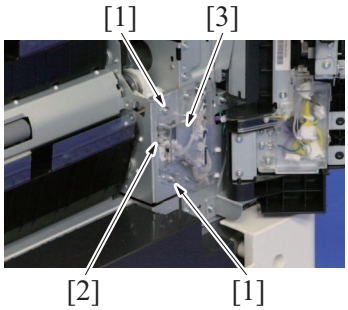
NOTE

- **When installing the LED exposure unit, be careful not to pinch the flat cable with the screws.**
- **When replacing the LED exposure unit with a brand-new one, peel the protective film from the unit after attaching it.**
- **When replacing the LED exposure unit, order a replacement seal (Parts number: 4581 1625 ##).**

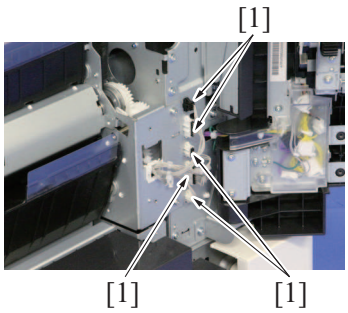
5.3.2 Paper feed unit

1. Slide out the tray 1 and tray 2.

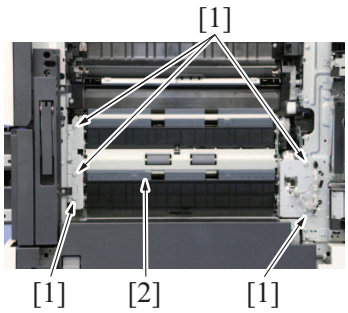
2. Open the right door and the regist unit.



3. Remove two screws [1] and the tab [2], and remove the connector cover [3].



4. Disconnect five connectors [1].



5. Remove five screws [1], and remove the paper feed unit [2].

6. To reinstall, reverse the order of removal.

5.3.3 PH unit

⚠CAUTION

- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.

  The laser light can enter your eye, leading to a risk of loss of eyesight.

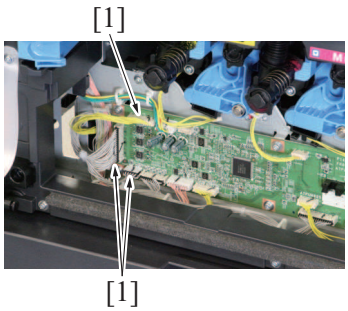
⚠CAUTION

- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.

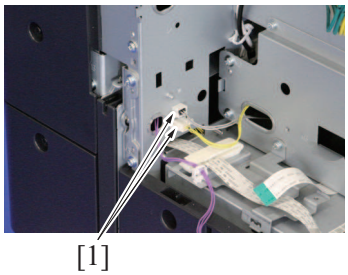
  The laser light can enter your eye, leading to a risk of loss of eyesight.

(1) Removal procedure

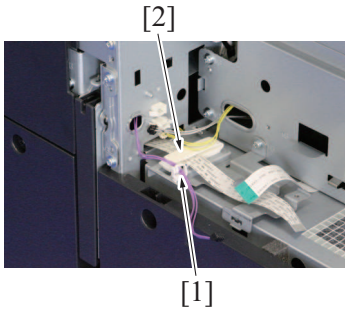
1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
2. Remove the front lower cover.
   G.5.2.14 Front lower cover
3. Remove the left cover.
   G.5.2.16 Left cover
4. Remove the exit tray.
   G.5.2.17 Exit tray
5. Remove the DC power supply.
   G.5.4.3 DC power supply (DCPU)
6. Remove the PH relay board.
   G.5.4.13 PH relay board (PHRYB)



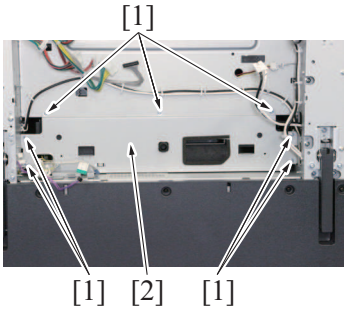
7. Disconnect three connectors [1] on the front side board.



8. Disconnect two connectors [1].

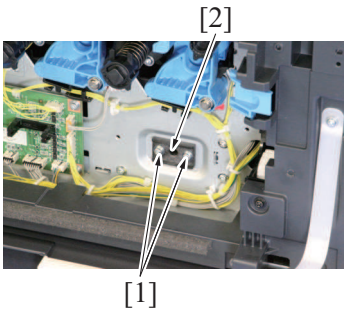


9. Remove the harness from the wire saddle [1].
10. Remove the flat cable from the cable clamp [2].

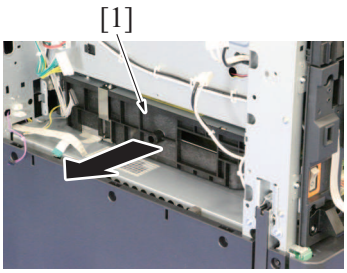


11. Remove seven screws [1], and remove the metal plate [2].

12. Remove two screws [1], and remove the set pin [2] for the PH unit.



13. Remove the PH unit [1].

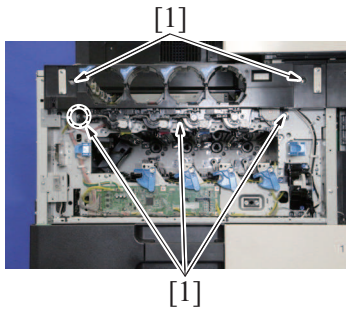


14. To reinstall, reverse the order of removal.
15. Carry out the [Print Head Skew Reset] after selecting [Service Mode] -> [Machine] -> [Skew adjustment].
16. Carry out the [Service Mode] -> [Machine] -> [Printer Area] -> [Leading Edge Adjustment].
17. Carry out the [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1].

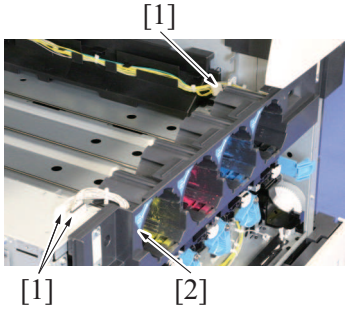
5.3.4 Sub hopper unit

1. Remove the front door.
   G.5.2.13 Front door
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
3. Remove the front lower cover.
   G.5.2.14 Front lower cover
4. Remove the front cover.
   G.5.2.15 Front cover
5. Remove the toner cartridge/Y,M,C,K.
   F.7.3.1 Replacing the toner cartridge
6. Remove the drum unit/Y,M,C,K.
   F.7.1.1 Replacing the drum unit
7. Remove the developing unit/Y,M,C,K.
   F.7.2.1 Replacing the developing unit
8. Remove the left cover.
   G.5.2.16 Left cover
9. Remove the exit tray.
   G.5.2.17 Exit tray

10. Remove five screws [1] of the sub hopper unit.



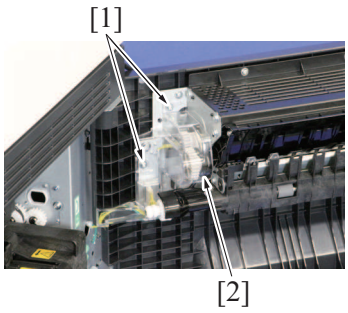
11. Disconnect three connectors [1], and remove the sub hopper unit [2].



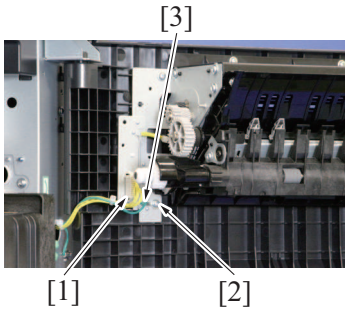
12. To reinstall, reverse the order of removal.

5.3.5 Right door unit

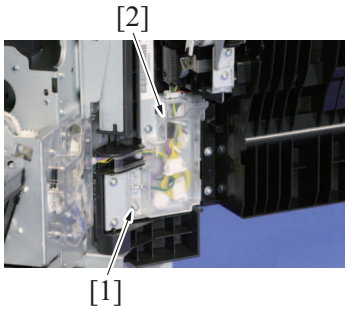
1. Remove the rear right cover.
   G.5.2.18 Rear right cover
2. Open the right door.



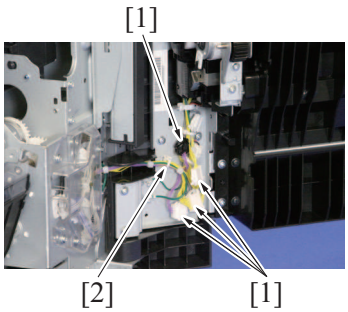
3. Remove two screws [1], and remove the connector cover/1 [2].



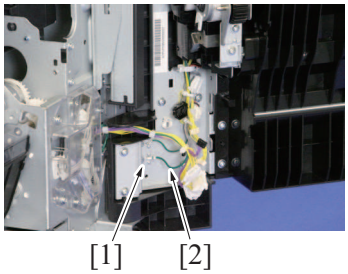
4. Disconnect the connector [1].
5. Remove the screw [2], and remove the ground terminal [3].



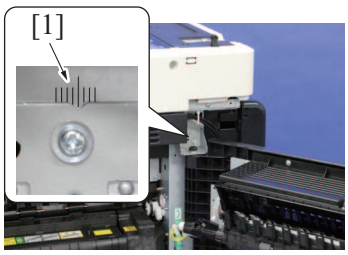
6. Remove the screw [1], and remove the connector cover/2 [2].



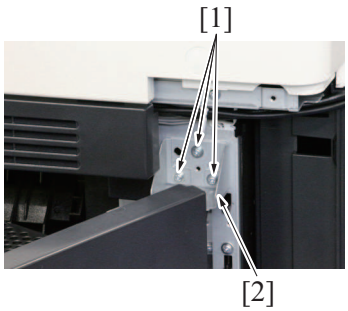
7. Disconnect four connectors [1], and remove the harness from the wire saddle [2].



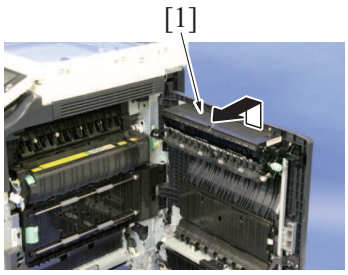
8. Remove the screw [1], and remove the ground terminal [2].



9. Draw the gauge line to the hinge mounting part [1] along the cutout of the hinge on the frame of the main body.



10. Remove three screws [1], and remove the hinge (upper section) [2].

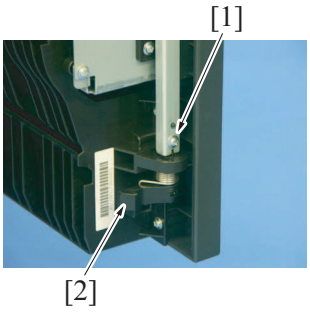


11. Hold up the right door unit [1] to remove it.

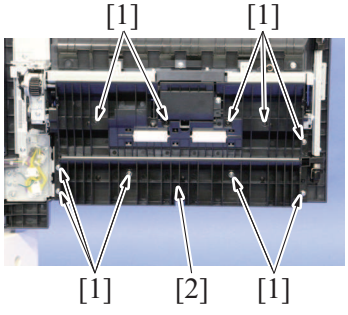
12. To reinstall, reverse the order of removal.
NOTE
- **When installing the right door unit, align it with the guide lines drawn on the scales indicated on the machine frame. Open and close the right door to check for any interference and correct if necessary.**

5.3.6 Manual bypass tray unit

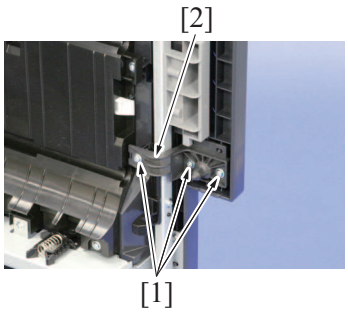
1. Open the right door.



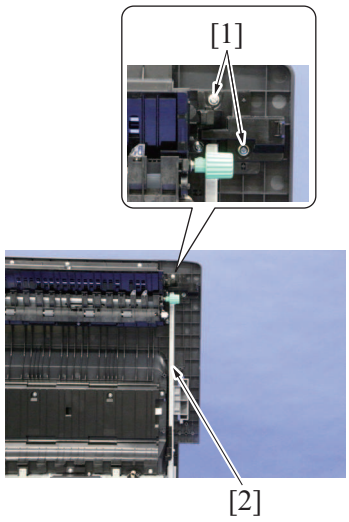
2. Remove the screw [1], and remove the shaft holder/1 [2].



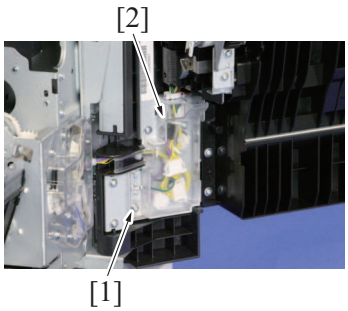
3. Remove 10 screws [1], and remove the vertical transport roll assy [2].



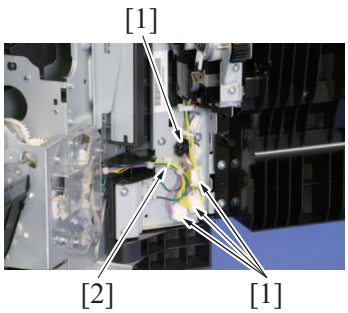
4. Remove three screws [1], and remove the shaft holder/2 [2].



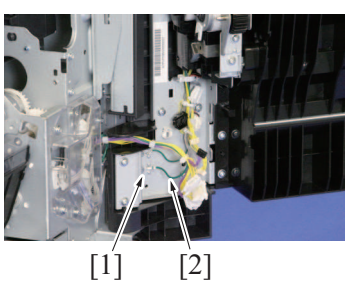
5. Remove two screws [1], and remove the right door lever assy [2].



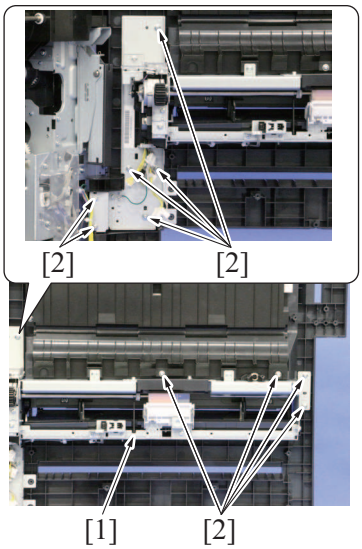
6. Remove the screw [1], and remove the connector cover [2].



7. Disconnect four connectors [1], and remove the harness from the wire saddle [2].

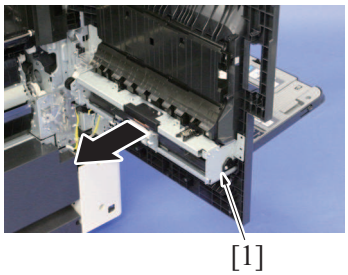


8. Remove the screw [1], and remove the ground terminal [2].



9. Remove 10 screws [2] of the manual bypass tray unit [1].

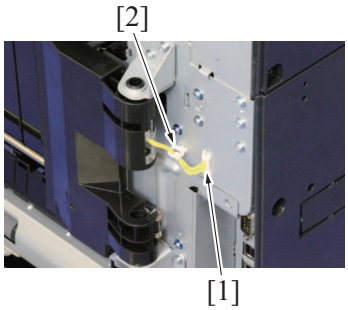
10. Remove the manual bypass tray unit [1].



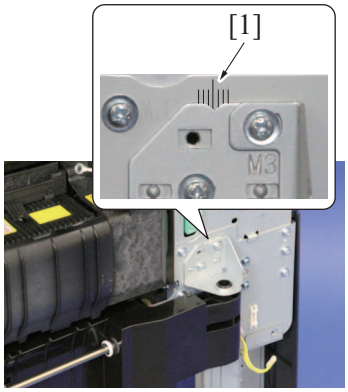
11. To reinstall, reverse the order of removal.

5.3.7 Regist unit

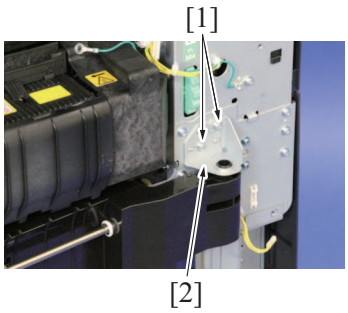
1. Remove the rear right cover.
   G.5.2.18 Rear right cover
2. Remove the right door unit.
   G.5.3.5 Right door unit



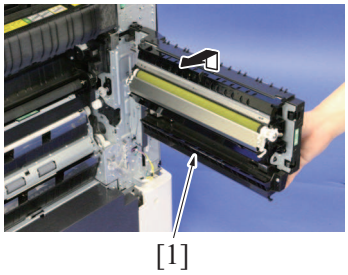
3. Disconnect the connector [1], and remove the harness from the wire saddle [2].



4. Draw the gauge line to the hinge mounting part [1] along the cutout of the hinge on the frame of the main body.



5. Remove two screws [1], and remove the hinge [2].

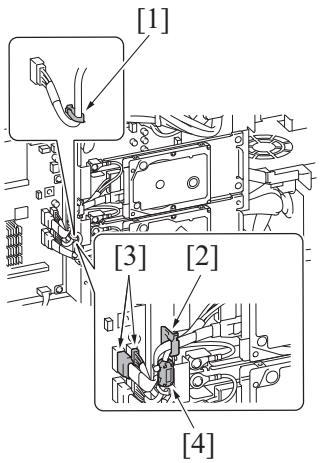


6. Hold up the regist unit [1] to remove it.

7. To reinstall, reverse the order of removal.

5.3.8 Hard disk (A)

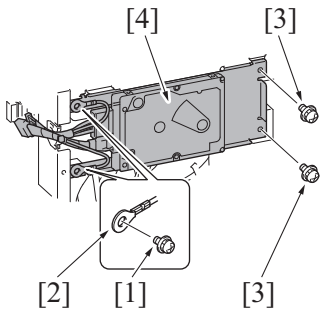
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the protective sheet.
   G.5.2.21 Protective sheet



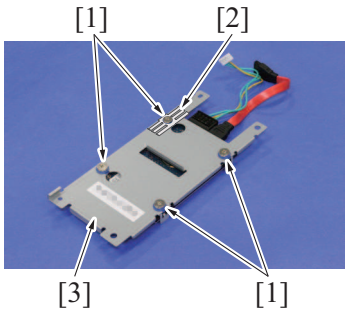
3. Remove the harness from the wire saddle [1].
4. Remove the harness from the edge cover [2].
5. Disconnect two connectors [3].

NOTE

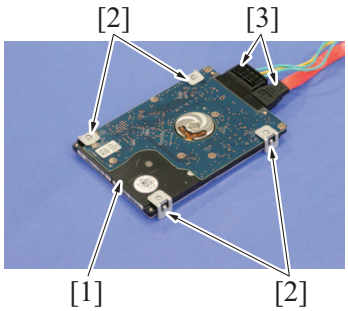
- **When the ferrite core [4] has been installed, be sure to install the hard disk at the position shown in the illustration.**
- **Ensure that the cables do not contact with the MFP board at connecting the connectors [3].**
- **When the security kit SC-508 has been installed, ensure that the cables do not contact with the DSC board at connecting the connectors [3].**



6. Remove two screws [1], and remove two ground wires [2].
7. Remove two screws [3], and remove the hard disk assy [4].



8. Remove four screws [1].
9. Remove the plate spring [2], and remove the plate [3].

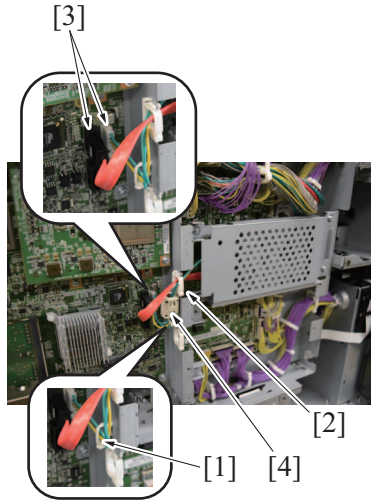


10. Remove four metal plates [2] and two connectors [3] from the hard disk [1].

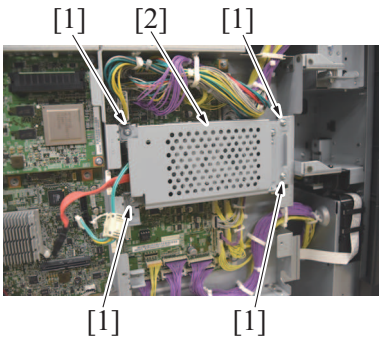
11. To reinstall, reverse the order of removal.
12. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format], and conduct the HDD format function.
13. [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check]

5.3.9 Hard disk (A) Cover type

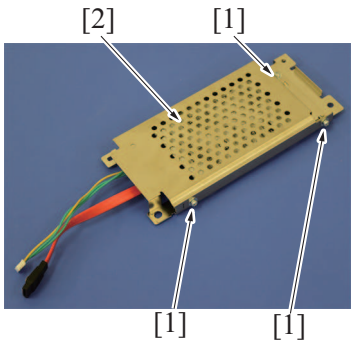
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover



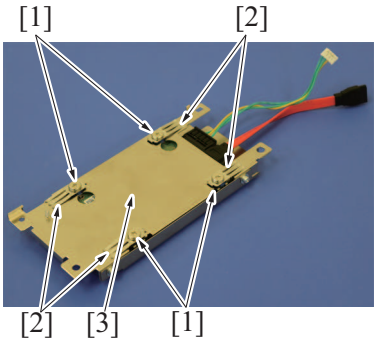
2. Remove the harness from the wire saddle [1].
3. Remove the harness from the edge cover [2].
4. Disconnect two connectors [3].
   NOTE
   - **When the ferrite core [4] has been installed, be sure to install the hard disk at the position shown in the illustration.**
   - **Ensure that the cables do not contact with the MFP board at connecting the connectors [3].**
   - **When the security kit SC-508 has been installed, ensure that the cables do not contact with the DSC board at connecting the connectors [3].**



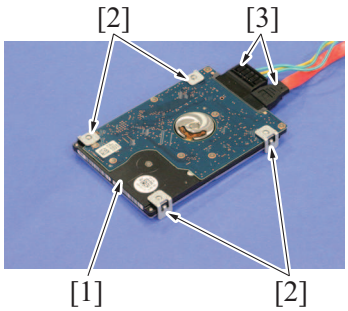
5. Remove four screws [1], and remove the hard disk assy [2].



6. Remove three screws [1], and remove the cover [2].



7. Remove four screws [1].
8. Remove the plate spring [2], and remove the plate [3].

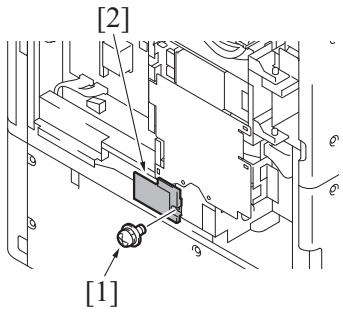


9. Remove four metal plates [2] and two connectors [3] from the hard disk [1].

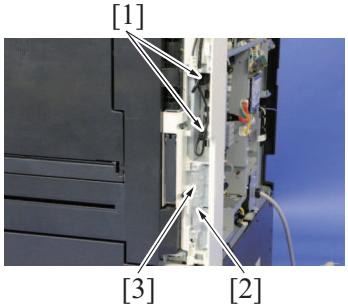
10. To reinstall, reverse the order of removal.
11. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format], and conduct the HDD format function.
12. [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check]

5.3.10 How to open the PWB box

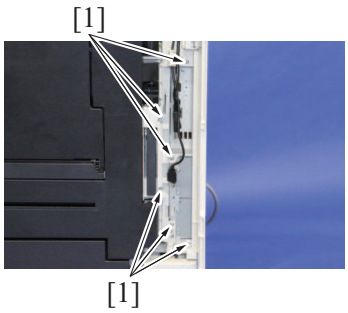
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover



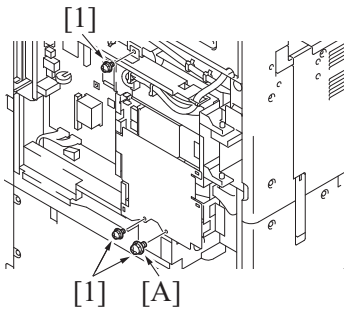
2. Remove the screw [1], and remove the connector cover [2].



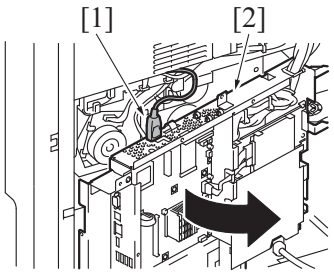
3. Disconnect two connectors [1] from the PWB box side panel.
4. Remove the screw [2], and remove the connector cover [3].



5. Remove six screws [1] from the PWB box side panel.



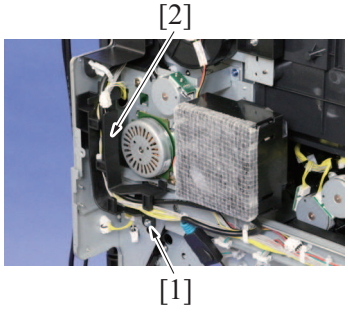
6. Remove three screws [1] from the PWB box front panel.
NOTE
- **Note that only the size of the screw "A" is different.**



7. Disconnect the connector [1].
8. Open the PWB box [2].

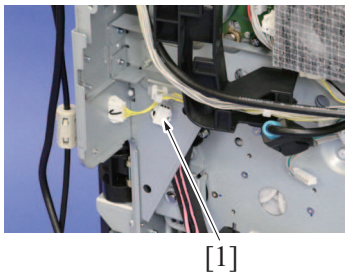
5.3.11 Main drive unit

1. Remove the drum unit.
   F.7.1.1 Replacing the drum unit
2. Remove the rear right cover.
   G.5.2.18 Rear right cover
3. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
4. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
5. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
6. Open the PWB box.
   G.5.3.10 How to open the PWB box
7. Remove the high voltage unit.
   G.5.4.8 High voltage unit (HV)
8. Remove the transport motor.
   G.5.5.1 Transport motor (M1)
9. Remove the PC motor.
   G.5.5.2 PC motor (M2)
10. Remove the developing motor.
    G.5.5.14 Developing motor (M21)

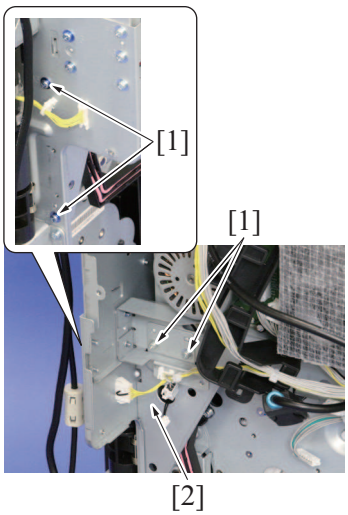


11. Remove the screw [1].
12. Remove the harness guide [2] as clearing the harness.

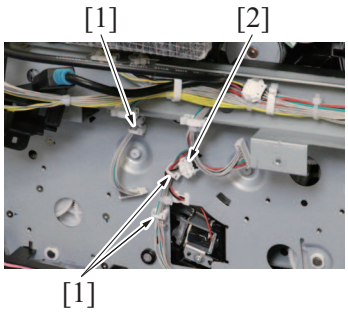
13. Disconnect the connector [1].



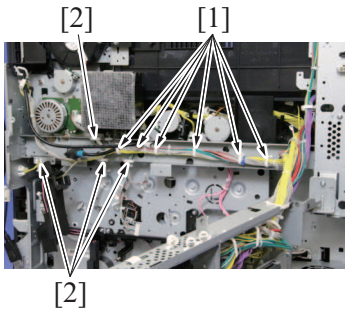
14. Remove four screws [1], and remove the metal plate [2].



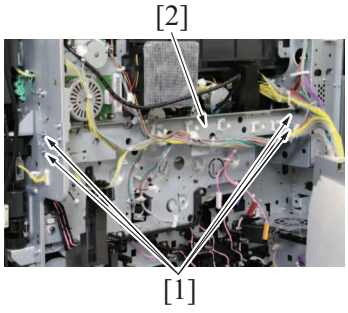
15. Remove the harness from the three wire saddles [1].
16. Disconnect the connector [2].

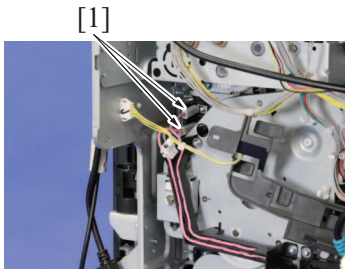


17. Remove the harness from six wire saddles [1] and four edge covers [2].

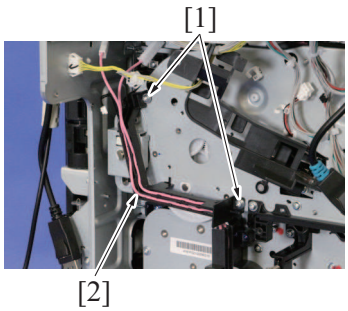


18. Remove four screws [1].
19. Remove the reinforcing plate [2] as clearing the harness.

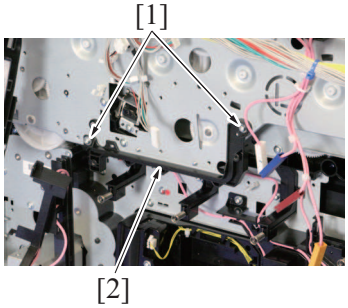




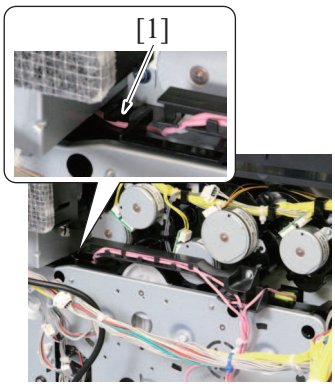
20. Remove two solderless terminals [1].



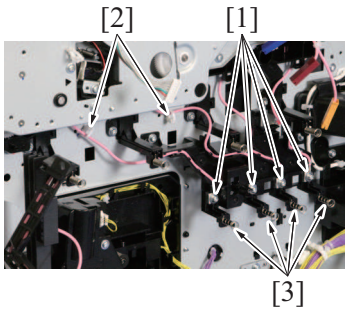
21. Remove two screws [1], and remove the harness guide [2].



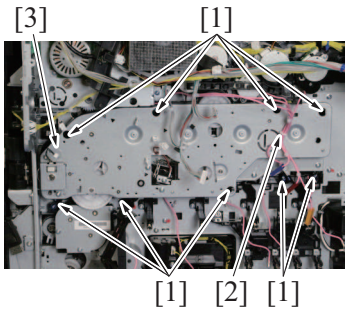
22. Remove two screws [1], and remove the bracket [2].



23. Remove the harness from harness guide [1].



24. Remove four screws [1], and remove the harness from the harness guide.
25. Remove the harness from two wire saddles [2].
NOTE
- **Make sure not to lose the spring [3].**

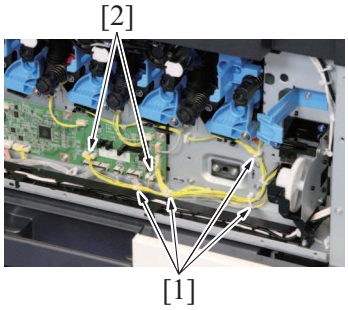


26. Remove nine screws [1], and remove the harness from the wire saddle [2].
27. Remove the main drive unit [3].

28. To reinstall, reverse the order of removal.

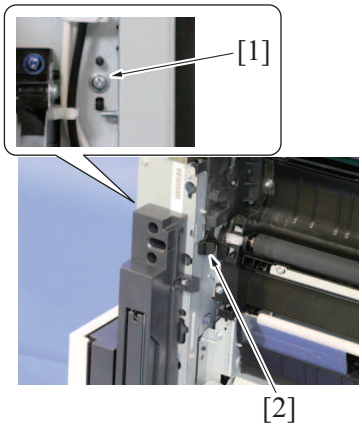
5.3.12 Transport unit

1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
2. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit
3. Remove the front door.
   G.5.2.13 Front door
4. Remove the front lower cover.
   G.5.2.14 Front lower cover
5. Remove the front cover.
   G.5.2.15 Front cover

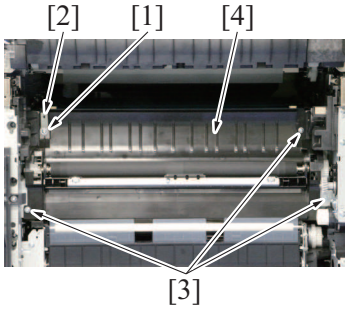


6. Remove the harness from four wire saddles [1].
7. Disconnect two connectors (CN8, CN11) [2] on the front side board.

8. Open the right door and the regist unit.



9. Remove the screw [1], and remove the stopper [2].



10. Remove the screw [1], and remove the plate spring [2].
11. Remove three screws [3], and remove the transport unit [4].
    NOTE
    - **When removing the transport unit [4], be careful not to damage or deform the guide sheet of the tray 1 paper feed unit.**

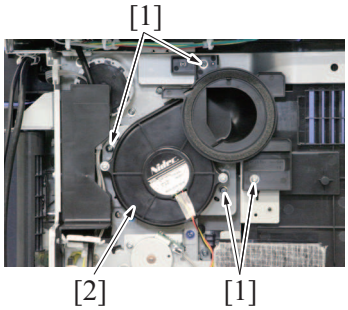
12. To reinstall, reverse the order of removal.

5.3.13 Fusing drive unit

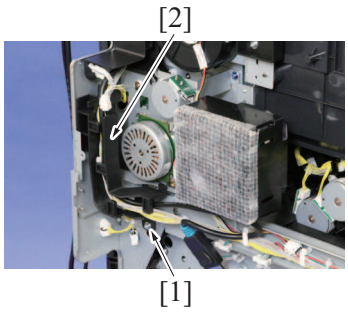
1. Remove the fusing unit.

F.7.9.1 Replacing the fusing unit

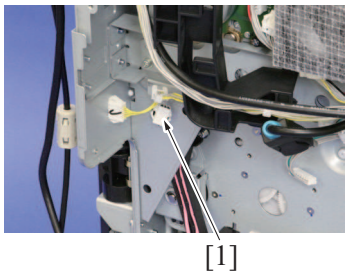
2. Remove the rear right cover.
   G.5.2.18 Rear right cover
3. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
4. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
5. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
6. Open the PWB box.
   G.5.3.10 How to open the PWB box
7. Remove the toner cartridge cooling fan.
   G.5.7.4 Toner cartridge cooling fan (FM4)
8. Remove the fusing motor.
   G.5.5.3 Fusing motor (M3)
9. Remove the fusing pressure motor.
   G.5.5.11 Fusing pressure motor (M11)
10. Remove the transport motor.
    G.5.5.1 Transport motor (M1)
11. Remove the PC motor.
    G.5.5.2 PC motor (M2)
12. Remove the developing motor.
    G.5.5.14 Developing motor (M21)



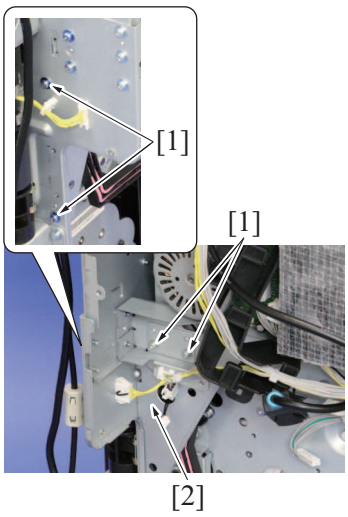
13. Remove four screws [1], and remove the paper cooling fan assy [2].



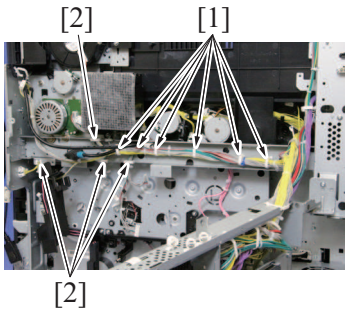
14. Remove the screw [1].
15. Remove the harness guide [2] as clearing the harness.



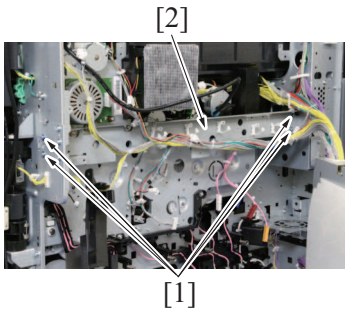
16. Disconnect the connector [1].



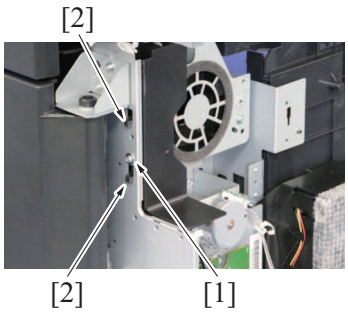
17. Remove four screws [1], and remove the metal plate [2].



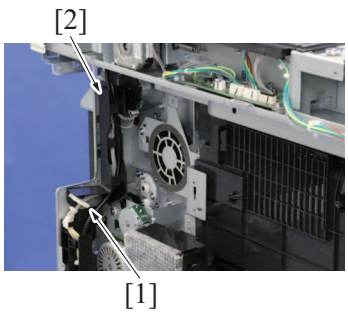
18. Remove the harness from six wire saddles [1] and four edge covers [2].



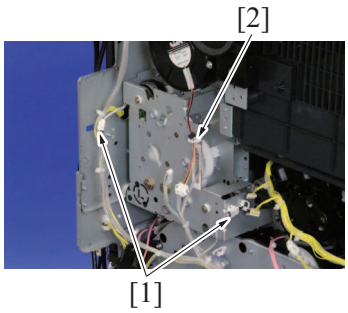
19. Remove four screws [1].
20. Remove the reinforcing plate [2] as clearing the harness.



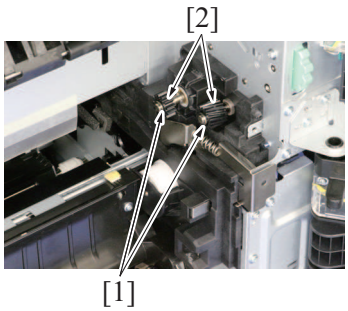
21. Remove the screw [1], and remove two tabs [2].



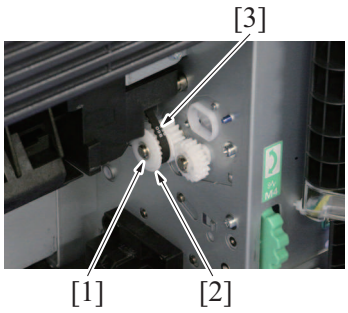
22. Remove the harness from the wire saddle [1].
23. Remove the harness and cables together with the harness guide [2].



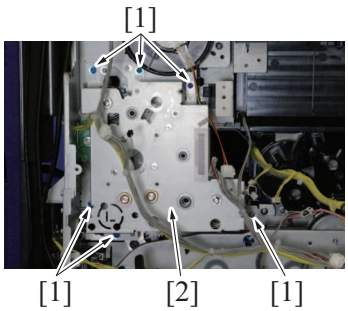
24. Disconnect two connectors [1].
25. Remove the harness from the wire saddle [2].



26. Remove the E-ring [1] each, and remove two gears [2].



27. Remove the E-ring [1], and remove the flange [2].
28. Remove the belt [3] from the gear.



29. Remove six screws [1], and remove the fusing drive unit [2].

30. To reinstall, reverse the order of removal.

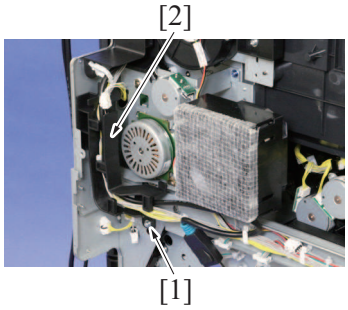
5.3.14 Hopper drive unit

1. Remove the toner cartridge.
   F.7.3.1 Replacing the toner cartridge
2. Remove the rear right cover.
   G.5.2.18 Rear right cover
3. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
4. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
5. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
6. Remove the left cover.
   G.5.2.16 Left cover
7. Remove the exit tray.
   G.5.2.17 Exit tray
8. Open the PWB box.
   G.5.3.10 How to open the PWB box
9. Toner cartridge cooling fan
   G.5.7.4 Toner cartridge cooling fan (FM4)
10. Remove the transport motor.
    G.5.5.1 Transport motor (M1)
11. Remove the PC motor.

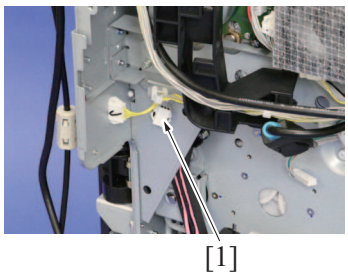
G.5.5.2 PC motor (M2)

12. Remove the developing motor.

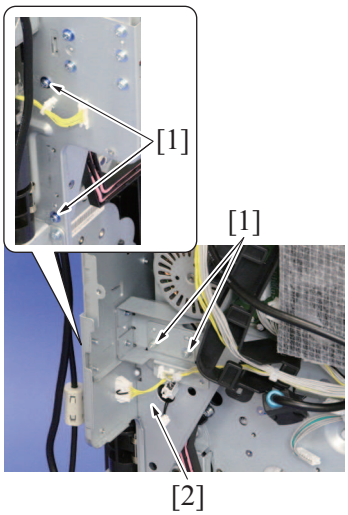
G.5.5.14 Developing motor (M21)



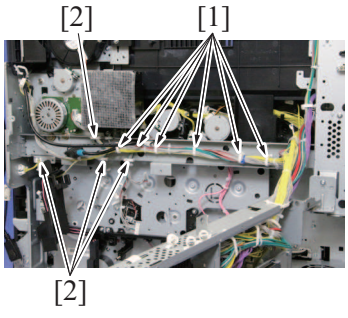
13. Remove the screw [1].
14. Remove the harness guide [2] as clearing the harness.



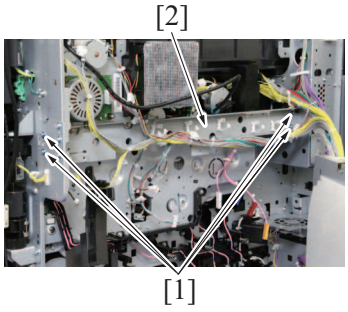
15. Disconnect the connector [1].



16. Remove four screws [1], and remove the metal plate [2].

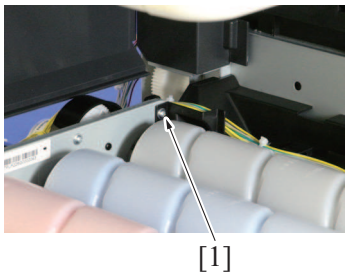


17. Remove the harness from six wire saddles [1] and four edge covers [2].



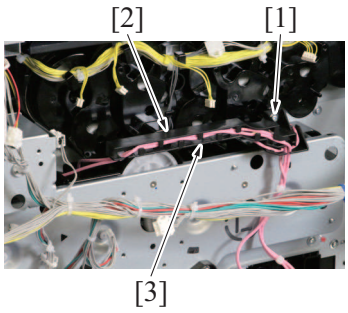
18. Remove four screws [1].
19. Remove the reinforcing plate [2] as clearing the harness.

20. Remove the screw [1].

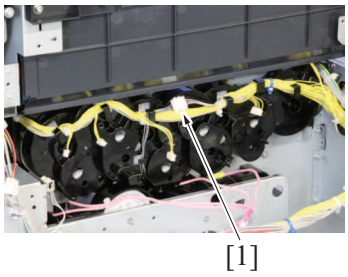


21. Remove the toner cartridge motor/Y,M,C.
G.5.5.10 Toner cartridge motor/Y,M,C (M10)
22. Remove the toner supply motor/C.
G.5.5.7 Toner supply motor/C (M7)
23. Remove the toner cartridge motor/K.
G.5.5.15 Toner cartridge motor/K (M25)
24. Remove the toner supply motor/M.
G.5.5.8 Toner supply motor/M (M8)
25. Remove the toner supply motor/Y.
G.5.5.9 Toner supply motor/Y (M9)

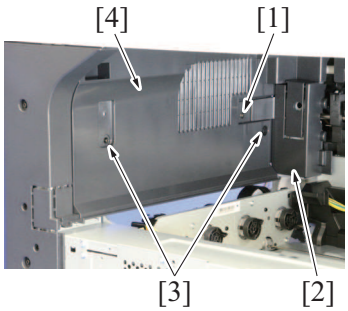
26. Remove the screw [1] and the tab [2], and remove the harness guide [3].

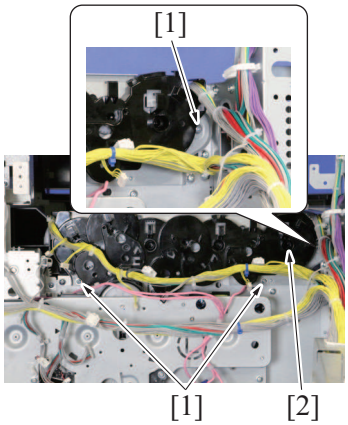


27. Remove the connector [1] to move the harness out of the working area.



28. Remove the screw [1], and remove the cover [2].
29. Remove two screws [3], and remove the cover [4].





30. Remove three screws [1], and remove the hopper drive unit [2].

31. To reinstall, reverse the order of removal.

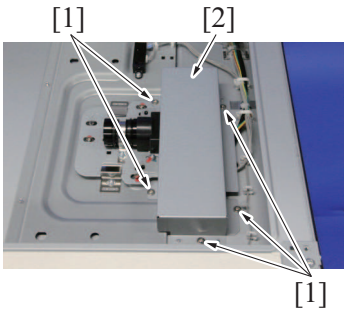
5.4 Disassembly/reassembly procedure (Boards)

5.4.1 CCD board (CCDB)

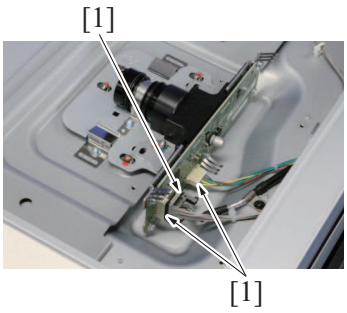
(1) Removal procedure

1. Remove the scanner right cover.
G.5.2.2 Scanner right cover

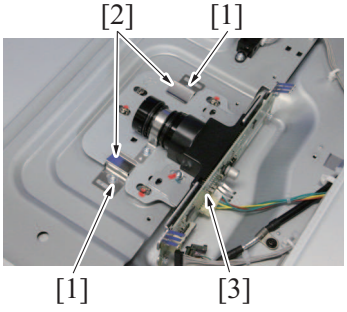
2. Remove the original glass.
G.5.2.12 Original glass



3. Remove five screws [1], and remove the CCD board protective shield [2].

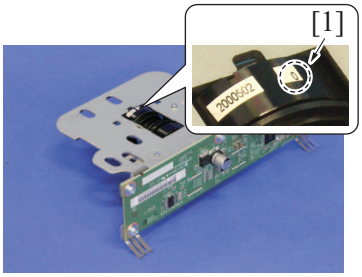


4. Disconnect three connectors [1].

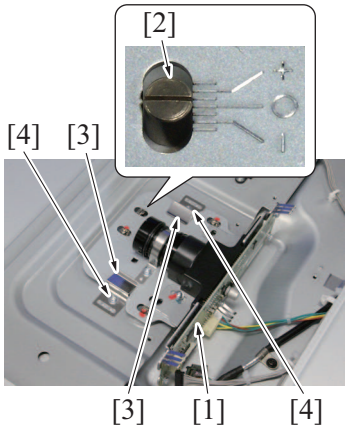


5. Remove the screw [1] each, and remove two retainer plates [2].
6. Remove the CCD board [3].

(2) Reinstall procedure



1. Check the mark [1] on lens of the CCD board.
   NOTE
   - **The mark is be "-", "0", or "+".**



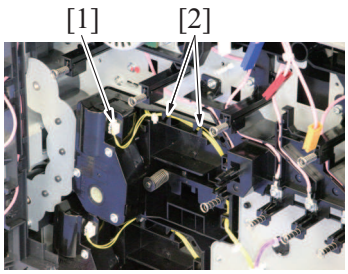
2. Install the CCD board [1] to the main body.
3. Set the scale [2] of the CCD board to the same position as the mark checked on step 1, and secure it with two retainer plates [3] and the screw [4] at two points.
4. For the rest of the mounting procedure, reverse the order of removal.
5. Reinstall the original glass.
6. Turn ON the main power switch.
7. Set the [Service Mode] -> [System 2] -> [CCD Calibration] to [OFF].
8. Set the [Service Mode] -> [System 2] -> [Line Mag Setting] to [OFF].
9. Carry out the [Service Mode] -> [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].
10. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.]. If the specifications are not met, loosen the CCD board mounting screws and move the CCD board in the sub scan direction as necessary.
    NOTE
    - **Hold the CCD board by hand when moving it. NEVER use a screwdriver or similar tool to tap to move it, as a varied distance between the CCD sensor and lens results.**
11. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge].

5.4.2 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)

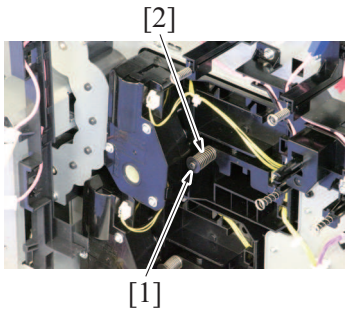
NOTE

- **The tray 1 CD paper size board and the tray 2 CD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 CD paper size board.**

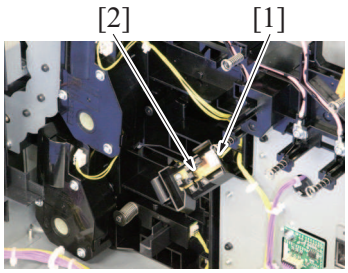
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Open the PWB box.
   G.5.3.10 How to open the PWB box
3. Remove the high voltage unit.
   G.5.4.8 High voltage unit (HV)
4. Slide out the tray 1.



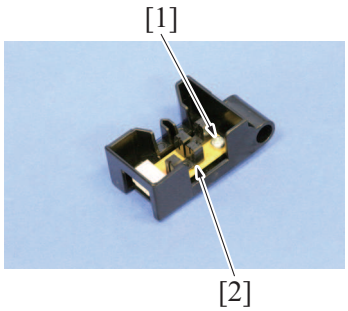
5. Disconnect the connector [1], and remove the harness from the harness guide [2].



6. Remove screw [1] and spring [2].



7. Remove the connector [1], and remove the tray 1 CD paper size board assy [2].

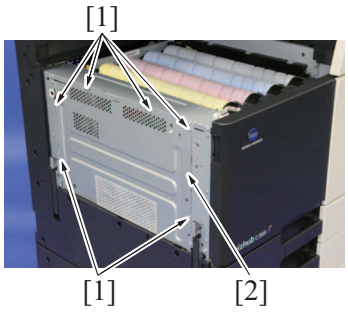


8. Remove the screw [1], and remove the tray 1 CD paper size board [2].

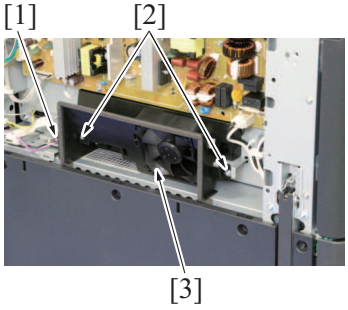
9. To reinstall, reverse the order of removal.

5.4.3 DC power supply (DCPU)

1. Remove the left cover.
   G.5.2.16 Left cover
2. Remove the exit tray.
   G.5.2.17 Exit tray

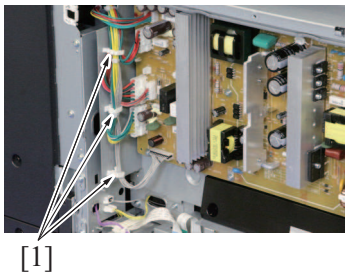


3. Remove six screws [1], and remove the DC power supply protective shield [2].

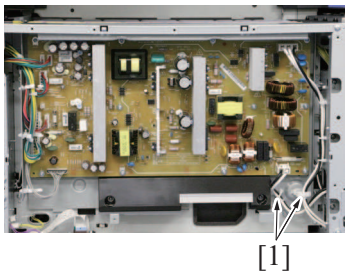


4. Disconnect the connector [1].
5. Remove two screws [2], and remove the power supply cooling fan assy [3].

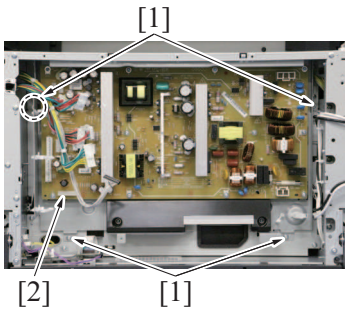
6. Remove the harness from three wire saddles [1].



7. Remove the cable from two wire saddles [1].
8. Disconnect all connectors on the DC power supply.



9. Remove four screws [1], and remove the DC power supply [2].



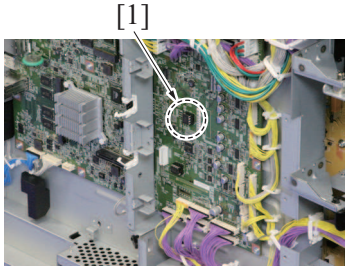
10. To reinstall, reverse the order of removal.

5.4.4 EEPROM/1, EEPROM/2

NOTE

- **Never use the combination of the used EEPROM removed from another machine and the original MFP board. This combination causes corruption of stored data.**
  Note that the combination of the original EEPROM and the used MFP board removed from another machine also causes the same problem.
- **Always replace the EEPROM/1 and EEPROM/2 as a set.**
  Replace them one at a time to prevent a mix-up between new and old and the device positions.

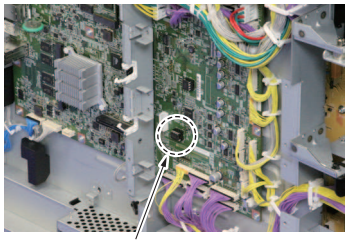
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the protective sheet.
   G.5.2.21 Protective sheet
3. Remove the hard disk (A).
   G.5.3.9 Hard disk (A) Cover type
4. Remove the optional hard disk (B) HD-524 if it is installed.
   G.8.33.2 Hard disk (B) (HD-524: Cover type) (bizhub C368/C308/C258)
5. Mark the EEPROM/1.
   NOTE
   - **Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other.**
     Marks should be helpful to making easy distinction regardless of the style of them.
6. Remove the EEPROM/1 [1].

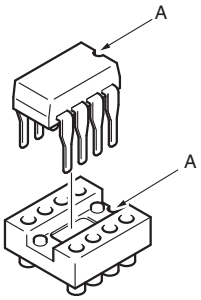


7. Mark the EEPROM/2.

NOTE
- **Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other. Marks should be helpful to making easy distinction regardless of the style of them.**

8. Remove the EEPROM/2 [1].





9. To reinstall, reverse the order of removal.

NOTE
- **When mounting EEPROM, align the notches (indicated by "A" in the illustration).**

NOTE

Since the counter will be cleared when the EEPROM is replaced with a new one, replace the following parts with new ones.
Configure [New Release] in Service Mode before replacing the transfer belt unit and the fusing unit. Besides, configure [Counter clear] before replacing the transfer roller.
- **Developing unit/Y,M,C,K**
- **Drum unit/Y,M,C,K**
- **Toner cartridge/Y,M,C,K**
- **Transfer belt unit**
- **Fusing unit**
- **Transfer roller**
- **Feed roller, pick-up roller, separation roller (including options)**

NOTE
- **When the new EEPROM is installed, the error message: "License management error occurred." is displayed. Conduct the i-Option recovery operation.**

10. Open the front door and turn on the main power supply switch.
11. Enter the Service Mode. Make individual adjustments shown in Table 1: Readjustment item in the order listed, using the machine maintenance list and the adjustment lists that were output at the time of main body installation and maintenance.

NOTE
- **Ensure the front door is opened.**

NOTE
- **Conduct the readjustment of the above adjustment items before the starting the initial warm-up operation after replacing the EEPROMs.**

12. Turn off the main power switch.
13. Turn on the main power switch and close the front door. Check to see that warm-up and image stabilization operations are completed normally.
14. Enter the Service Mode again. Make individual adjustments shown in the Table 2: Readjustment item in the order listed, using the machine management list and the adjustment lists that were output at the time of main body installation and maintenance.

Table 1: Readjustment item

Adjustment items	Service mode readjustment items			Ref. Page
1	Machine	Color Registration Adjustment	Cyan	I.5.4.8 Color Registration Adjustment
2			Magenta	
3			Yellow	
4	Imaging Process Adjustment	Image Background Adj		I.5.6.5 Image Background Adj
5		Max Image Density Adj		I.5.6.4 Max Image Density Adj
6		Grad/Dev AC Bias V Selection		I.5.6.13 Grad/Dev AC Bias V Selection
7	System 1	Change Warm Up Time		Warm-up
8	Imaging Process Adjustment	Charge AC Output fine adjustment		I.5.6.11 Charge AC Output fine adjustment
9	System 2	Unit Change	Warning Display	I.5.16.5 Unit Change

Table 2: Readjustment item

Adjustment items	Service mode readjustment items		Ref. Page
1	Machine	Manual Bypass Tray Width Adj	I.5.4.11 Manual Bypass Tray Width Adj
2		Printer Reg. Loop Adj.	I.5.4.7 Printer Reg. Loop Adj.
3		Fusing Temperature	I.5.4.2 Fusing Temperature

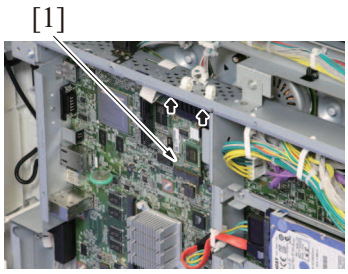
4	Finisher	FS-FN Adjustment		I.5.29 Finisher
5	Machine	Printer Area	Paper Feed Direction Adj.	I.5.4.5 (5) Paper Feed Direction Adj.
6		Fusing Transport Speed		I.5.4.3 Fusing Transport Speed
7		Printer Area	Printer Image Centering Side 1	I.5.4.5 (2) Printer Image Centering Side 1
8			Prt. Image Center. Side 2 (Dup)	I.5.4.5 (4) Prt. Image Center. Side 2 (Dup)
9			Leading Edge Adjustment	I.5.4.5 (1) Leading Edge Adjustment
10			Leading Edge Adj. Side 2 (Duplex)	I.5.4.5 (3) Leading Edge Adj. Side 2 (Duplex)
11			Tray Printing Position: Tip	I.5.4.5 (6) Tray Printing Position: Tip
12	Imaging Process Adjustment	Transfer Voltage Fine Adj	2nd Transfer Adj.	I.5.6.10 (2) 2nd Transfer Adj.
13			Primary transfer adj.	I.5.6.10 (1) Primary transfer adj.

5.4.5 eMMC board (eMMC)

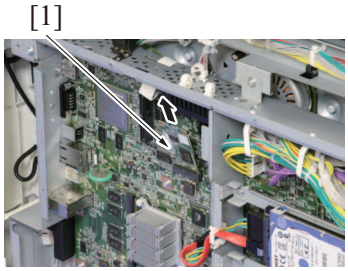
NOTE

- **Never use the combination of the used eMMC board removed from another machine and the original MFP board. This combination causes corruption of stored data.**
  Note that the combination of the original eMMC board and the used MFP board removed from another machine also causes the same problem.

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. If an optional security kit SC-508 is mounted, remove the DSC board/2.
   G.8.27.2 DSC board/2 (for back side) (SC-508) (bizhub C368/C308/C258)
3. If an optional dual scan document feeder DF-704 is mounted, remove the dual scan image processing board.
   G.8.4.11 dual scan image processing board (DSIPB) (DF-704)
4. If an optional security kit SC-508 is mounted, remove the DSC board/1.
   G.8.27.1 DSC board/1 (for front side) (SC-508) (bizhub C368/C308/C258)
5. Release the lock of the eMMC board [1].
   NOTE
   - **Be careful not to drop the eMMC board.**



6. Remove the eMMC board [1].



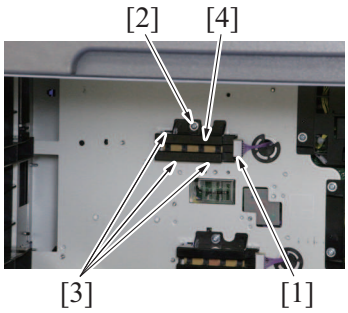
7. To reinstall, reverse the order of removal.

5.4.6 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)

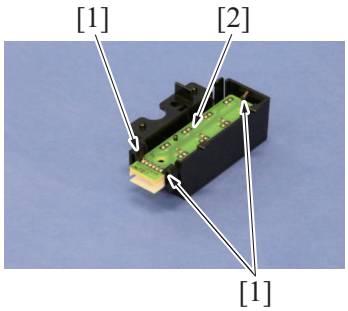
NOTE

- **The tray 1 FD paper size board and the tray 2 FD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 FD paper size board.**

1. Remove the tray 1.
   G.5.2.23 Tray 1
2. Remove the tray 2.
   G.5.2.24 Tray 2



3. Disconnect the connector [1].
4. Remove the screw [2] and three tabs [3], and remove the tray 1 FD paper size board assy [4].

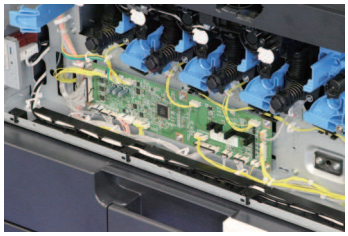


5. Remove three tabs [1], and remove the Tray 1 FD paper size board [2].

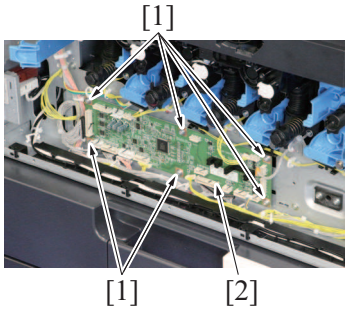
6. To reinstall, reverse the order of removal.

5.4.7 Front side board (FRB)

1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
2. Remove the front door.
   G.5.2.13 Front door
3. Remove the front lower cover.
   G.5.2.14 Front lower cover
4. Remove the front cover.
   G.5.2.15 Front cover



5. Disconnect all connectors on the front side board.



6. Remove six screws [1], and remove the front side board [2].

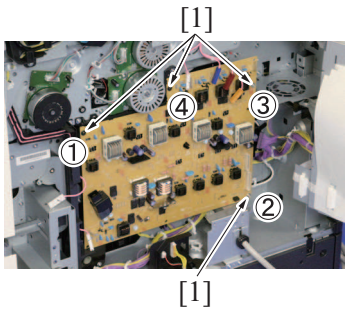
7. To reinstall, reverse the order of removal.

5.4.8 High voltage unit (HV)

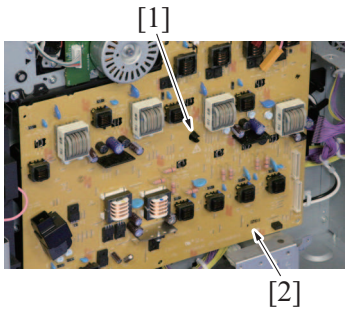
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Open the PWB box.
   G.5.3.10 How to open the PWB box

3. Disconnect all connectors and solderless terminals on the high voltage unit.





4. Remove four screws [1] of the high voltage unit.
NOTE
- **When installing the high voltage unit, tighten the screws in the order shown in the illustration.**

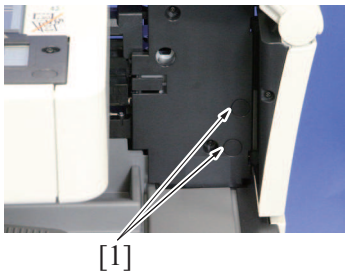


5. Unhook the tab [1], and remove the high voltage unit [2].
NOTE
- **When mounting the high voltage unit, the terminal contact point must be contacted without fail. The claw also must be firmly hooked.**

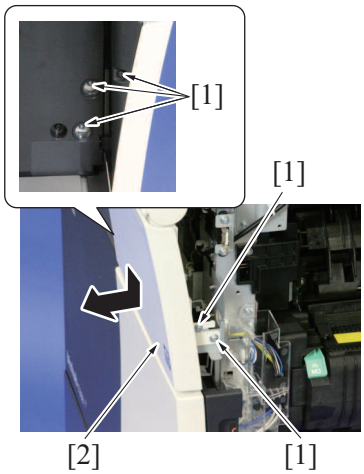
6. To reinstall, reverse the order of removal.

5.4.9 Machine condition monitor board (MCMB)

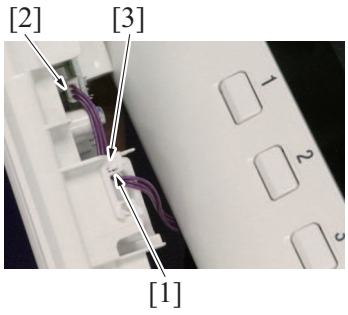
1. Remove the control panel right cover.
G.5.2.8 Control panel right cover



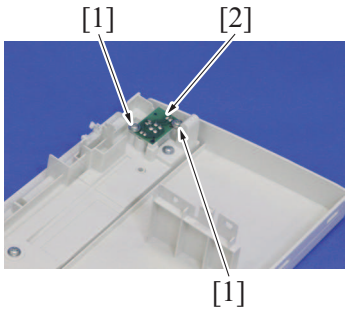
2. Remove two caps [1].



3. Remove five screws [1] from the control panel front cover [2] and remove the cover by releasing the tabs.



4. Remove the harness from the wire saddle [1].
5. Disconnect connector [2], and remove the control panel front cover assy [3].



6. Remove two screws [1], and remove the machine condition monitor board [2].

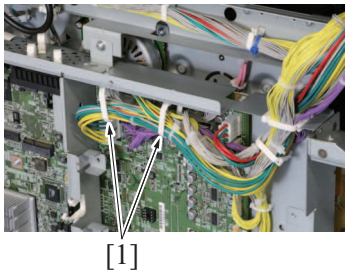
7. To reinstall, reverse the order of removal.

5.4.10 MFP board (MFPB)

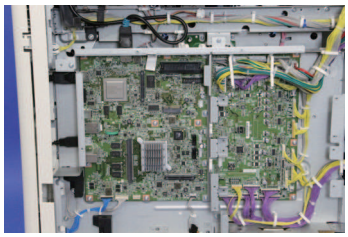
NOTE

- **Never use the combination of the used MFP board removed from another machine and the original eMMC board or EEPROM. This combination causes corruption of stored data. Note that the combination of the original MFP board and the used eMMC board or EEPROM removed from another machine also causes the same problem.**
- **Do not replace the MFP board and the eMMC board or EEPROM with new ones at the same time.**

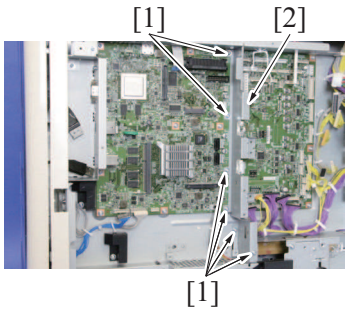
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the protective sheet.
   G.5.2.21 Protective sheet
3. Remove the hard disk (A).
   G.5.3.9 Hard disk (A) Cover type
4. If an optional security kit SC-508 is mounted, remove the DSC board/2.
   G.8.27.2 DSC board/2 (for back side) (SC-508) (bizhub C368/C308/C258)
5. If an optional dual scan document feeder DF-704 is mounted, remove the dual scan image processing board.
   G.8.4.11 dual scan image processing board (DSIPB) (DF-704)
6. If an optional security kit SC-508 is mounted, remove the DSC board/1.
   G.8.27.1 DSC board/1 (for front side) (SC-508) (bizhub C368/C308/C258)
7. If an optional FAX kit FK-514 is mounted, remove the FAX board.
   G.8.32.1 FAX Kit (Line1), FAX Kit (Line2) (FK-514)
8. Remove the optional upgrade kit UK-211 if it is installed.
   G.8.28.1 Upgrade kit (UK-211)
9. Remove the optional hard disk (B) HD-524 if it is installed.
   G.8.33.2 Hard disk (B) (HD-524: Cover type) (bizhub C368/C308/C258)
10. Remove the harness from two wire saddles [1].



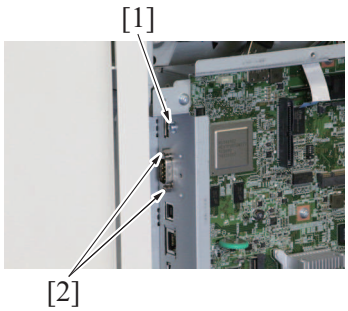
11. Remove all connectors and flat cables on the MFP board.



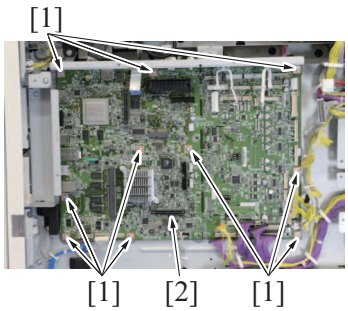
12. Remove six screws [1], and remove the plate [2].



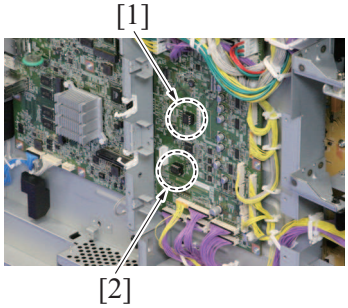
13. Remove the screw [1] and two bolts [2] of the MFP board side panel.



14. Remove 10 screws [1], and remove the MFP board [2].

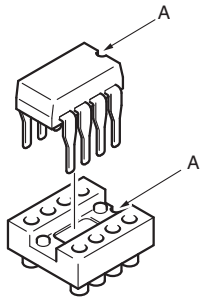


15. To reinstall, reverse the order of removal.

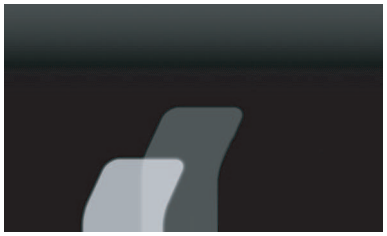


16. **NOTE**

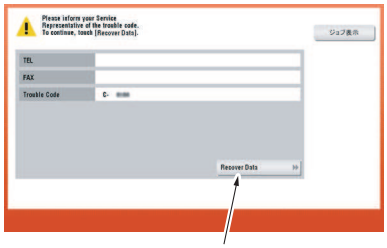
- **After replacing the MFP board (MFPB), transfer EEPROM/1 and EEPROM/2.**
- **Mark the EEPROMs to before replacing. Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other.**
- **Marks should be helpful to making easy distinction regardless of the style of them.**
- **When replacing EEPROM/1 [1], EEPROM/2 [2], replace them one at a time to prevent a mix-up in the device positions.**
- **When mounting EEPROM , align the notches (indicated by “A” in the illustration).**



17. After replacing the board, enter the machine type information.
    G.5.4.11 Entering the machine type information
18. Turn OFF the main power switch.
19. Wait 10 seconds, turn ON the main power switch.
20. After entering the machine type information, install the firmware.
    J.3.2 Procedure
21. Turn OFF the main power switch, and remove the USB memory.
22. Wait 10 seconds, turn ON the main power switch and wait 2 minutes until boot up the machine completely.



23. Wait until [Recover Data] [1] appears. (MFP will reboot maximum 2 times by itself, it may take 5 minutes.)



[1]

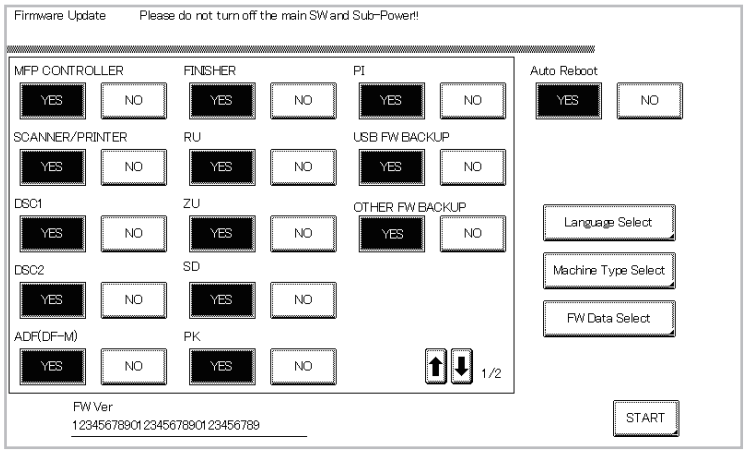
24. Touch [Recover Data] and [Yes].
25. Turn OFF the main power switch, wait 10 seconds, then turn ON the main power switch, after “Turn the main switch OFF and ON.” message is appeared.

5.4.11 Entering the machine type information

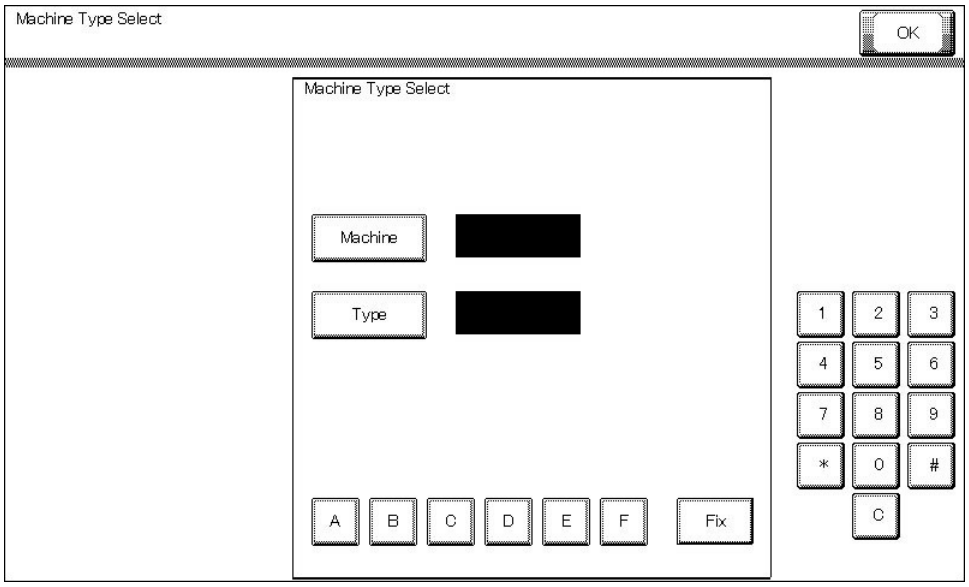
- When MFP board is replaced, it is necessary to enter the machine type information.
- Refer to the following procedures to enter the machine type information.

(1) Procedure

1. Insert the USB memory to the USB port.
2. Turn the main power switch ON while pressing the Stop key.
3. Touch [Machine Type Select].



4. Enter [Machine] and [Type] information according to the Table : Machine type information. Then touch [Fix].



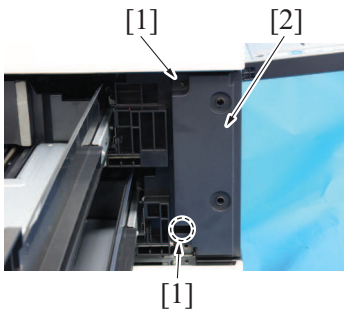
5. Touch [OK], and turn OFF the main power switch.

Table : Machine type information

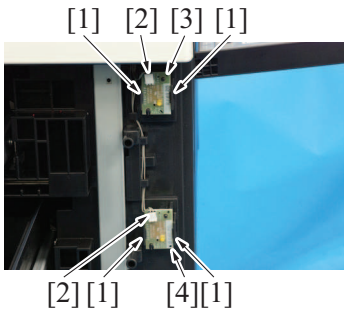
First four digits of the serial number	A7PU	A7PY	A7R0
[Machine]	6	6	6
[Type]	1	2	D

5.4.12 Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)

1. Slide out the tray 1 and the tray 2.



2. Remove two screws [1], and remove the tray right cover [2].



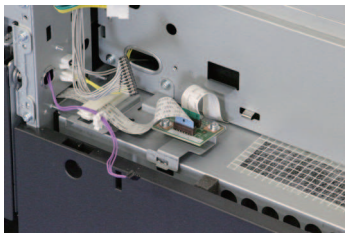
3. Unhook two tabs [1] each. Disconnect the connector [2] each, and remove the tray 1 empty indicator board [3] and the tray 2 empty indicator board [4].

4. To reinstall, reverse the order of removal.

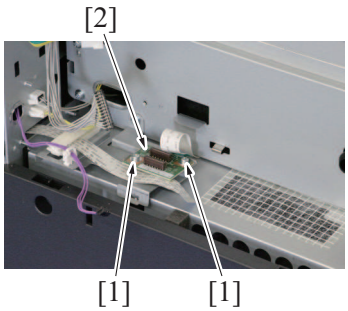
5.4.13 PH relay board (PHRYB)

1. Remove the left cover.
   G.5.2.16 Left cover
2. Remove the exit tray.
   G.5.2.17 Exit tray
3. Remove the DC power supply.
   G.5.4.3 DC power supply (DCPU)

4. Disconnect all flat cables on the PH relay board.



5. Remove two screws [1], and remove the PH relay board [2].

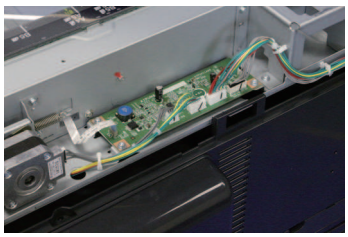


6. To reinstall, reverse the order of removal.

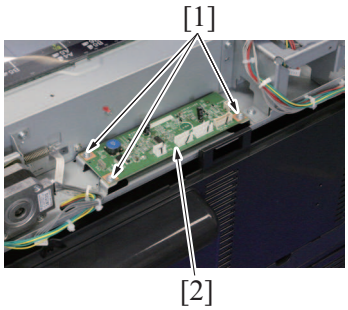
5.4.14 Scanner drive board (SCDB)

1. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
2. Remove the scanner upper rear cover.
   G.5.2.5 Scanner upper rear cover

3. Disconnect all connectors on the scanner drive board.



4. Remove three screws [1], and remove the scanner drive board [2].

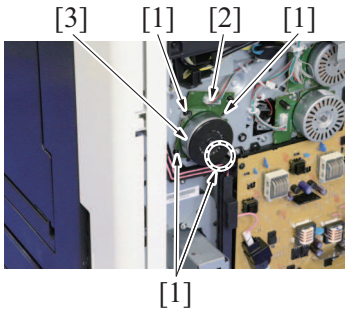


5. To reinstall, reverse the order of removal.

5.5 Disassembly/reassembly procedure (Motors)

5.5.1 Transport motor (M1)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Open the PWB box.
   G.5.3.10 How to open the PWB box

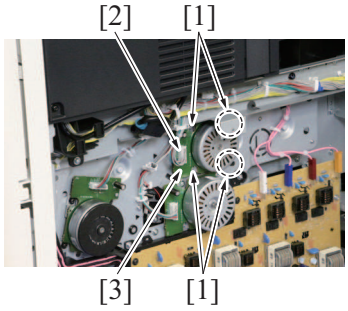


3. Remove four screws [1]. Disconnect the connector [2], and remove the transport motor [3].

4. To reinstall, reverse the order of removal.
NOTE
- **When installing the motor, use care not to mistake in the kind of the mounting screws (M3x6mm).**

5.5.2 PC motor (M2)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Open the PWB box.
G.5.3.10 How to open the PWB box

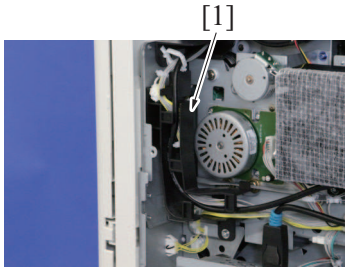


3. Remove four screws [1]. Disconnect the connector [2], and remove the PC motor [3].

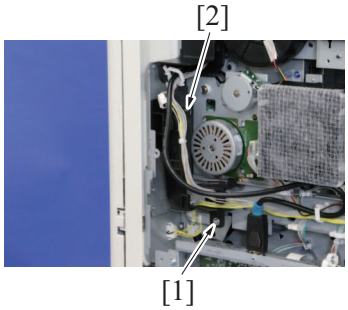
4. To reinstall, reverse the order of removal.
NOTE
- **When installing the motor, use care not to mistake in the kind of the mounting screws (M3x6mm).**

5.5.3 Fusing motor (M3)

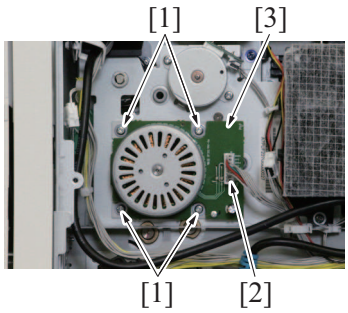
1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
G.5.2.22 Upper rear cover



4. Remove the harness from harness guide [1].



5. Remove the screw [1], and remove the harness guide [2].



6. Remove four screws [1]. Disconnect the connector [2], and remove the fusing motor [3].

7. To reinstall, reverse the order of removal.

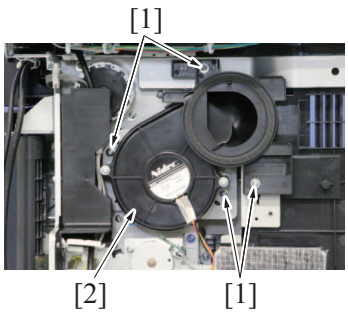
NOTE

- **When installing the motor, use care not to mistake in the kind of the mounting screws (M3x6mm).**

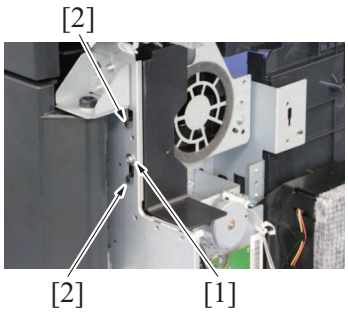
5.5.4 Switchback motor (M4)

(1) Removal procedure

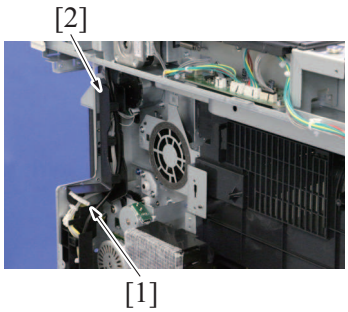
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
4. Remove the rear right cover.
   G.5.2.18 Rear right cover



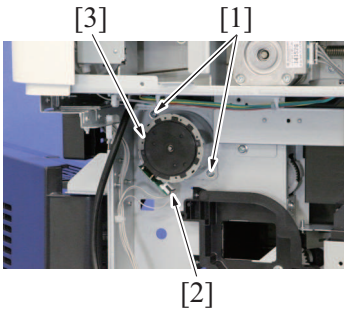
5. Remove four screws [1], and remove the paper cooling fan assy [2].



6. Remove the screw [1], and remove two tabs [2].



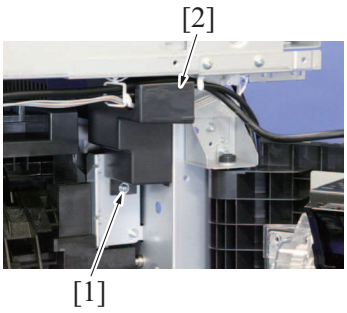
7. Remove the harness from the wire saddle [1].
8. Remove the harness guide [2] as clearing the harness.



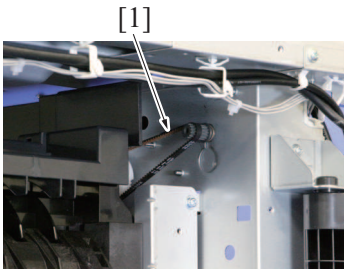
9. Remove two screws [1]. Disconnect the connector [2], and remove the switchback motor [3].

(2) Reinstall procedure

1. Remove the scanner right cover.
   G.5.2.2 Scanner right cover
2. Remove the upper right cover.
   G.5.2.19 Upper right cover



3. Remove the screw [1], and remove the cover [2].

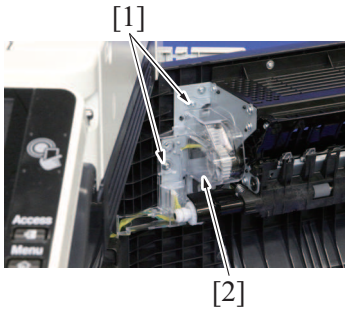


4. Attach the drive belt [1] to the gear of the switchback motor.

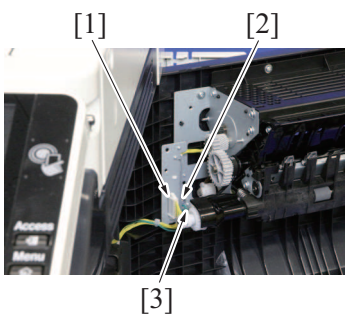
5. Attach it in reversed procedures of removal.

5.5.5 ADU transport motor (M5)

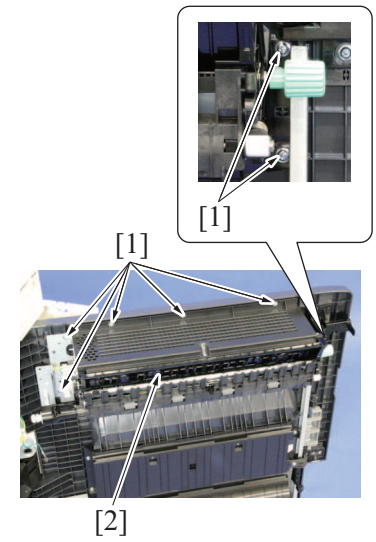
1. Open the right door.



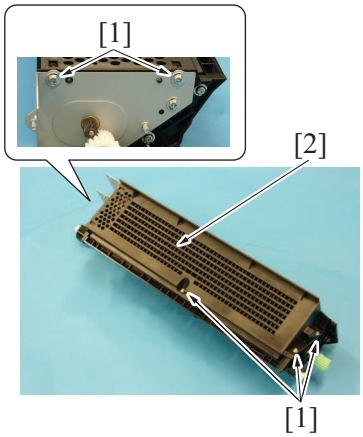
2. Remove two screws [1], and remove the gear cover [2].



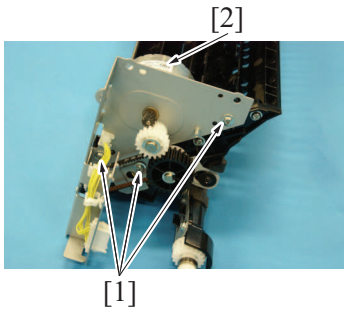
3. Disconnect the connector [1].
4. Remove the screw [2], and remove the ground terminal [3].



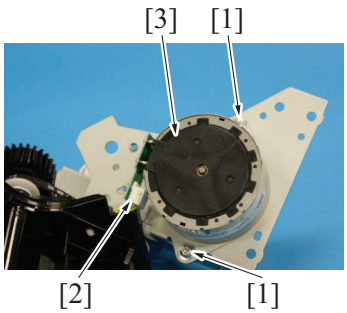
5. Remove seven screws [1], and remove the ADU transport assy [2].



6. Remove five screws [1], and remove the guide [2].



7. Remove three screws [1] to release the ADU transport motor assy [2].



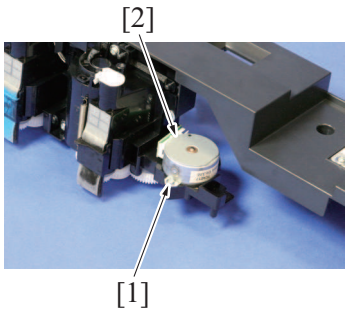
8. Remove two screws [1]. Disconnect the connector [2], and remove the ADU transport motor [3].

9. To reinstall, reverse the order of removal.

5.5.6 Toner supply motor/K (M6)

1. Remove the front door.
   G.5.2.13 Front door
2. Remove the front lower cover.
   G.5.2.14 Front lower cover
3. Remove the front cover.
   G.5.2.15 Front cover
4. Remove the toner cartridge/Y,M,C,K.
   F.7.3.1 Replacing the toner cartridge

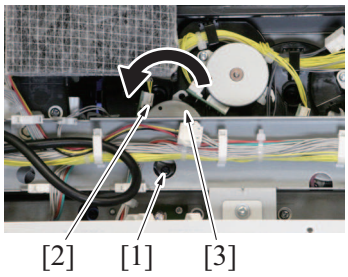
5. Remove the drum unit/Y,M,C,K.
   F.7.1.1 Replacing the drum unit
6. Remove the developing unit/Y,M,C,K.
   F.7.2.1 Replacing the developing unit
7. Remove the left cover.
   G.5.2.16 Left cover
8. Remove the exit tray.
   G.5.2.17 Exit tray
9. Remove the sub hopper unit.
   G.5.3.4 Sub hopper unit



10. Remove the screw [1], and remove the toner supply motor/K [2].
11. To reinstall, reverse the order of removal.

5.5.7 Toner supply motor/C (M7)

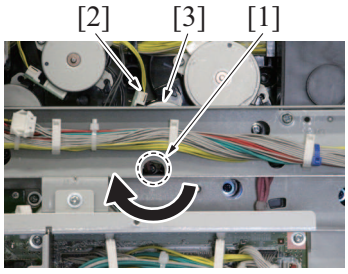
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover



4. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/C [3].
   NOTE
   - **When removing the toner supply motor/C [3], make sure to turn it in the direction shown in the illustration.**
5. To reinstall, reverse the order of removal.

5.5.8 Toner supply motor/M (M8)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover

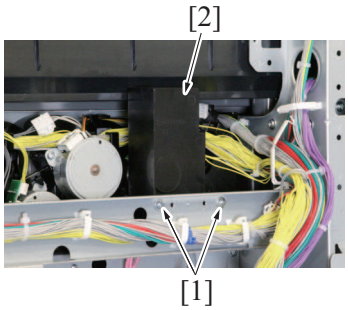


4. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/M [3].
   NOTE
   - **When removing the toner supply motor/M [3], make sure to turn it in the direction shown in the illustration.**
5. To reinstall, reverse the order of removal.

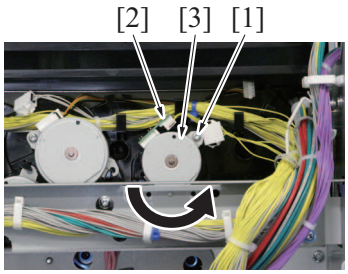
5.5.9 Toner supply motor/Y (M9)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.

G.5.2.22 Upper rear cover



4. Remove two screws [1], and remove the cover [2].

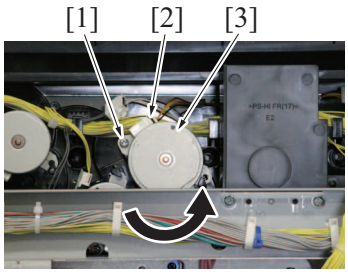


5. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/Y [3].
NOTE
- **When removing the toner supply motor/Y [3], make sure to turn it in the direction shown in the illustration.**

6. To reinstall, reverse the order of removal.

5.5.10 Toner cartridge motor/Y,M,C (M10)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
G.5.2.22 Upper rear cover

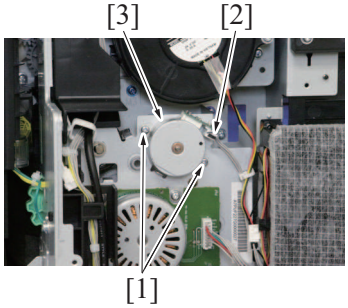


4. Remove the screw [1]. Disconnect the connector [2], and remove the toner cartridge motor/Y,M,C [3].
NOTE
- **When removing the toner cartridge motor/Y,M,C [3], make sure to turn it in the direction shown in the illustration.**

5. To reinstall, reverse the order of removal.

5.5.11 Fusing pressure motor (M11)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
G.5.2.22 Upper rear cover



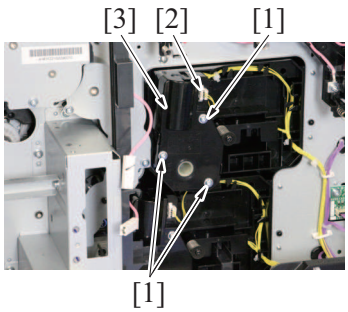
4. Remove two screws [1]. Disconnect the connector [2], and remove the fusing pressure motor [3].

5. To reinstall, reverse the order of removal.

5.5.12 Tray 1 lift-up motor (M12)

1. Remove the lower rear cover.

G.5.2.20 Lower rear cover
2. How to open the PWB box
G.5.3.10 How to open the PWB box
3. Remove the high voltage unit.
G.5.4.8 High voltage unit (HV)
4. Slide out the tray 1.

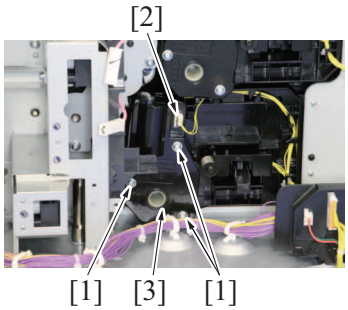


5. Remove three screws [1]. Disconnect the connector [2], and remove the tray 1 lift-up motor [3].

6. To reinstall, reverse the order of removal.

5.5.13 Tray 2 lift-up motor (M13)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. How to open the PWB box
G.5.3.10 How to open the PWB box
3. Remove the high voltage unit.
G.5.4.8 High voltage unit (HV)
4. Slide out the tray 2.

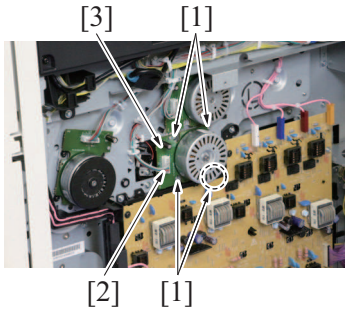


5. Remove three screws [1]. Disconnect the connector [2], and remove the tray 2 lift-up motor [3].

6. To reinstall, reverse the order of removal.

5.5.14 Developing motor (M21)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Open the PWB box.
G.5.3.10 How to open the PWB box

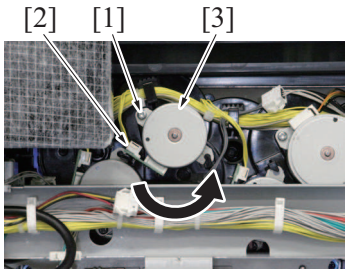


3. Remove four screws [1]. Disconnect the connector [2], and remove the developing motor [3].

4. To reinstall, reverse the order of removal.
NOTE
- **When installing the motor, use care not to mistake in the kind of the mounting screws (M3x6mm).**

5.5.15 Toner cartridge motor/K (M25)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
G.5.2.22 Upper rear cover



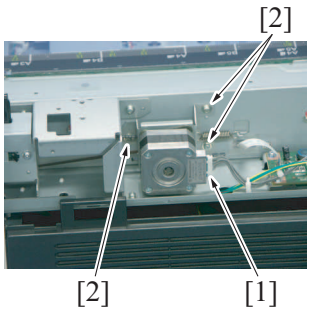
4. Remove the screw [1]. Disconnect the connector [2], and remove the toner cartridge motor/K [3].
   NOTE
   - **When removing the toner cartridge motor/K [3], make sure to turn it in the direction shown in the illustration.**

5. To reinstall, reverse the order of removal.

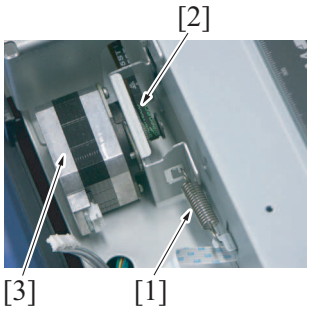
5.5.16 Scanner motor (M201)

(1) Removal procedure

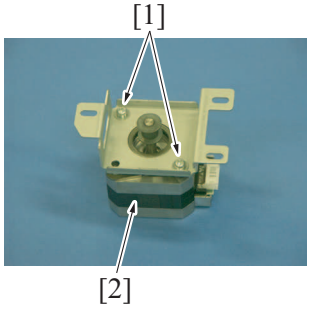
1. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.2 Scanner right cover
3. Remove the scanner upper rear cover.
   G.5.2.5 Scanner upper rear cover



4. Disconnect the connector [1], and remove three screws [2].

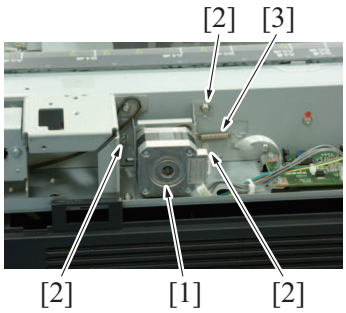


5. Remove the spring [1] and the belt [2], and remove the scanner motor assy [3].

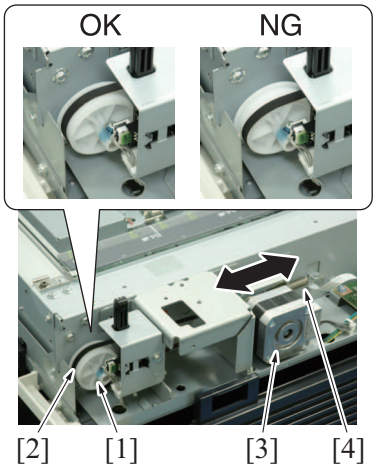


6. Remove two screws [1], and remove the scanner motor [2].

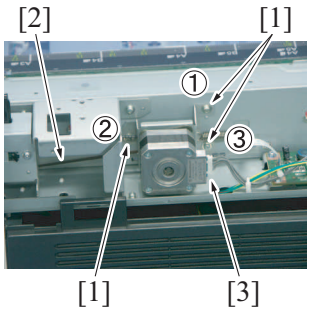
(2) Reinstall procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].
   NOTE
   - **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**
   - **When installing the scanner motor, make sure that the scanner motor is disconnected with the connector.**



3. Attach the drive belt [2] to the pulley [1] and the gear of scanner motor.
4. Move the scanner motor assy [3] in the direction shown in the illustration for two to three times, then make sure that it runs smoothly.
   NOTE
   - **Make sure that the drive belt [2] is properly kept tight by the spring [4] force.**
   - **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**
   - **Make sure that the drive belt [2] is attached to the pulley [1] correctly.**

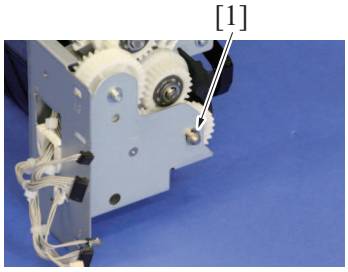


5. Tighten three screws [1] in the order shown in the illustration to fix the scanner motor assy.
   NOTE
   - **When tightening the screw [1], make sure that the scanner motor assy is not touched.**
   - **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [2] are not excessive.**
6. Connect the connector [3] to the scanner motor.
7. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.].

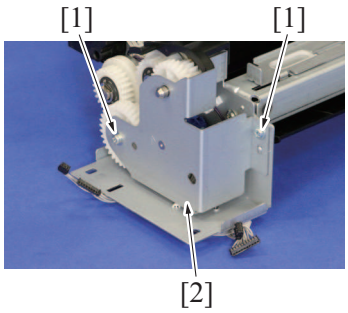
5.6 Disassembly/reassembly procedure (Clutches)

5.6.1 Tray 2 paper feed clutch (CL1)

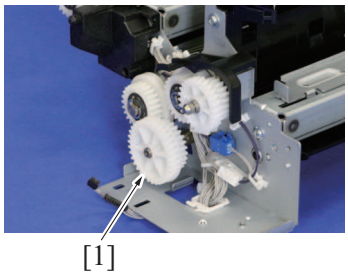
1. Remove the paper feed unit.
   G.5.3.2 Paper feed unit



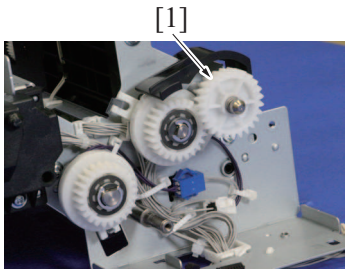
2. Remove the E-ring [1].



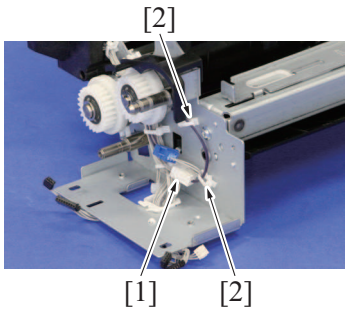
3. Remove two screws [1], and remove the gear cover [2].



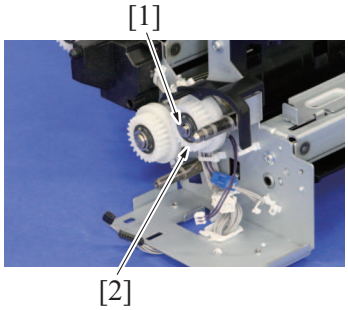
4. Remove the gear [1].



5. Remove the gear [1].



6. Disconnect the connector [1], and remove the harness from two wire saddles [2].

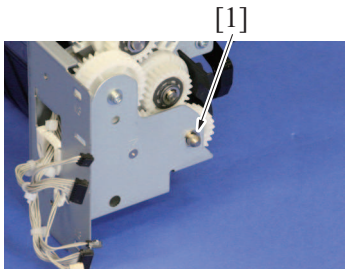


7. Remove the E-ring [1], and remove the tray 2 paper feed clutch [2].
NOTE
- **When mounting the tray 2 paper feed clutch [2], set the convex part of the stopper into the concave part of the tray 2 paper feed clutch.**

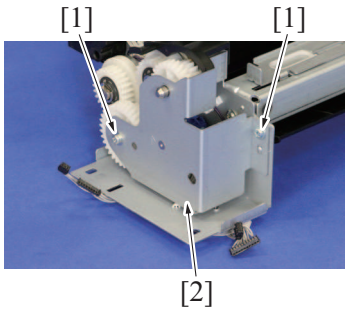
8. To reinstall, reverse the order of removal.

5.6.2 Tray 2 vertical transport clutch (CL2)

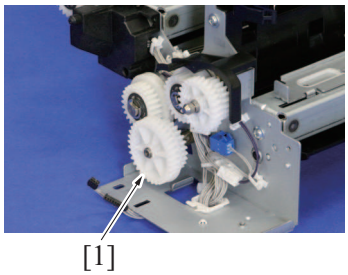
1. Remove the paper feed unit.
G.5.3.2 Paper feed unit



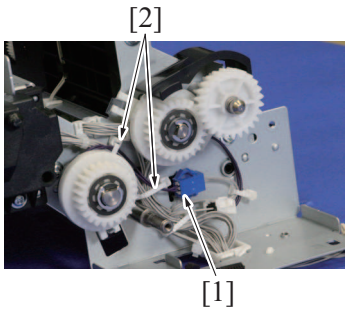
2. Remove the E-ring [1].



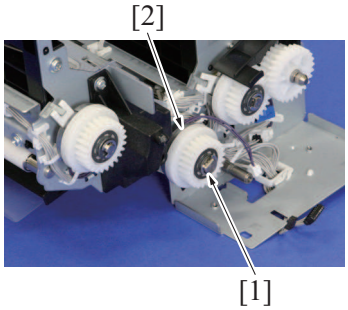
3. Remove two screws [1], and remove the gear cover [2].



4. Remove the gear [1].



5. Disconnect the connector [1], and remove the harness from two wire saddles [2].

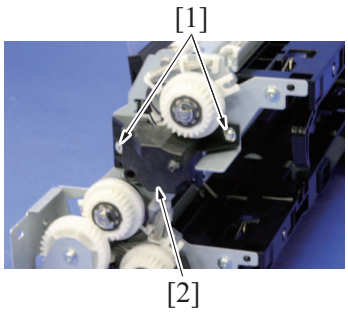


6. Remove the E-ring [1], and remove the tray 2 vertical transport clutch [2].
NOTE
- **When mounting the tray 2 vertical transport clutch [2], set the convex part of the stopper into the concave part of the tray 2 vertical transport clutch.**

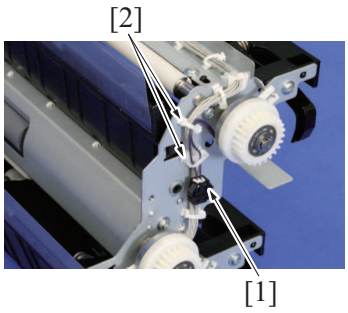
7. To reinstall, reverse the order of removal.

5.6.3 Tray 1 paper feed clutch (CL3)

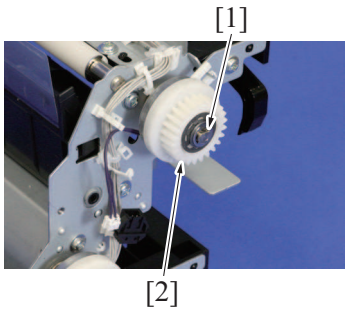
1. Remove the paper feed unit.
G.5.3.2 Paper feed unit



2. Remove two screws [1], and remove the cover [2].



3. Disconnect the connector [1], and remove the harness from two wire saddles [2].

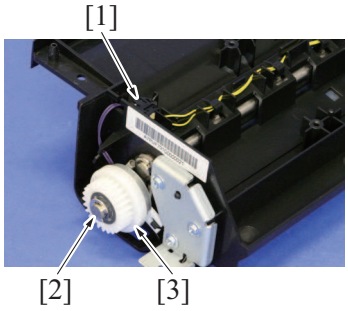


4. Remove the E-ring [1], and remove the tray 1 paper feed clutch [2].
NOTE
- **When mounting the tray 1 paper feed clutch [2], set the convex part of the stopper into the concave part of the tray 1 paper feed clutch.**

5. To reinstall, reverse the order of removal.

5.6.4 Registration clutch (CL4)

1. Remove the waste toner box.
F.7.6.1 Replacing the waste toner box
2. Remove the transfer belt unit.
F.7.4.3 Replacing the transfer belt unit
3. Remove the front door.
G.5.2.13 Front door
4. Remove the front lower cover.
G.5.2.14 Front lower cover
5. Remove the front cover.
G.5.2.15 Front cover
6. Remove the transport unit.
G.5.3.12 Transport unit



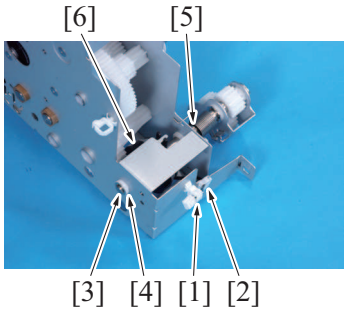
7. Remove the E-ring [2]. Disconnect the connector [1], and remove the registration clutch [3].
NOTE
- **When mounting the registration clutch, set the convex part of the stopper into the concave part of the registration clutch [3].**

8. To reinstall, reverse the order of removal.

5.6.5 1st transfer pressure clutch (CL5)

1. Remove the fusing unit.
F.7.9.1 Replacing the fusing unit
2. Remove the rear right cover.
G.5.2.18 Rear right cover
3. Remove the lower rear cover.
G.5.2.20 Lower rear cover

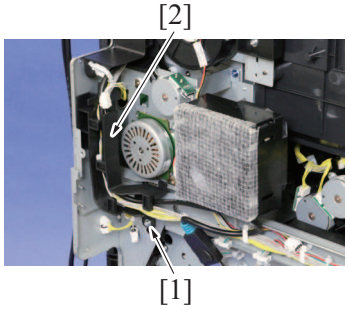
4. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
5. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
6. Open the PWB box.
   G.5.3.10 How to open the PWB box
7. Remove the toner cartridge cooling fan.
   G.5.7.4 Toner cartridge cooling fan (FM4)
8. Remove the fusing motor.
   G.5.5.3 Fusing motor (M3)
9. Remove the fusing pressure motor.
   G.5.5.11 Fusing pressure motor (M11)
10. Remove the fusing pressure motor.
    G.5.5.11 Fusing pressure motor (M11)
11. Remove the transport motor.
    G.5.5.1 Transport motor (M1)
12. Remove the PC motor.
    G.5.5.2 PC motor (M2)
13. Remove the developing motor.
    G.5.5.14 Developing motor (M21)
14. Remove the fusing drive unit.
    G.5.3.13 Fusing drive unit



15. Remove the harness from the wire saddle [1] and the edge cover [2].
16. Remove the E-ring [3] and the bushing [4], and remove the 1st transfer pressure clutch [6] while pulling out the shaft [5].
    NOTE
    - **When mounting the 1st transfer pressure clutch [6], set the convex part of the stopper into the concave part of the 1st transfer pressure clutch.**
17. To reinstall, reverse the order of removal.

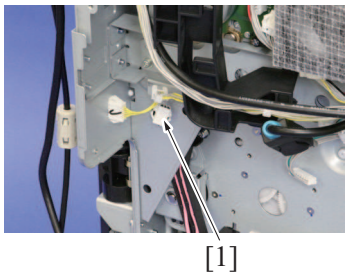
5.6.6 ADU transport clutch (CL6)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover
4. Remove the rear right cover.
   G.5.2.18 Rear right cover
5. Open the PWB box.
   G.5.3.10 How to open the PWB box
6. Remove the high voltage unit.
   G.5.4.8 High voltage unit (HV)
7. Remove the transport motor.
   G.5.5.1 Transport motor (M1)
8. Remove the PC motor.
   G.5.5.2 PC motor (M2)
9. Remove the developing motor.
   G.5.5.14 Developing motor (M21)

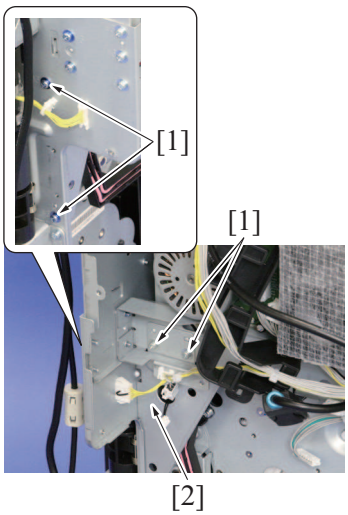


10. Remove the screw [1].
11. Remove the harness guide [2] as clearing the harness.

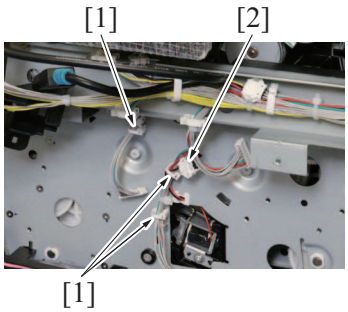
12. Disconnect the connector [1].



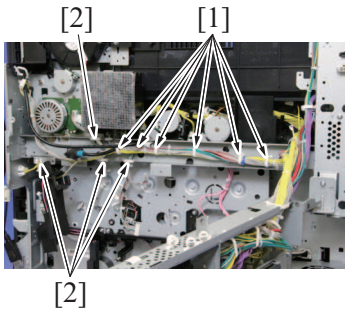
13. Remove four screws [1], and remove the metal plate [2].



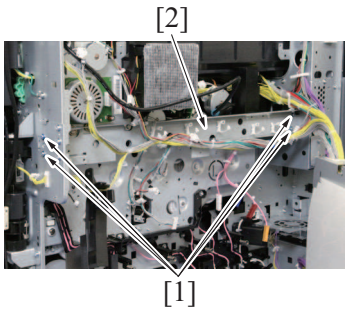
14. Remove the harness from the three wire saddles [1].
15. Disconnect the connector [2].

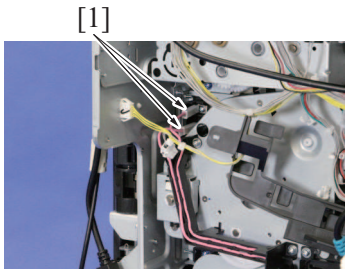


16. Remove the harness from six wire saddles [1] and four edge covers [2].

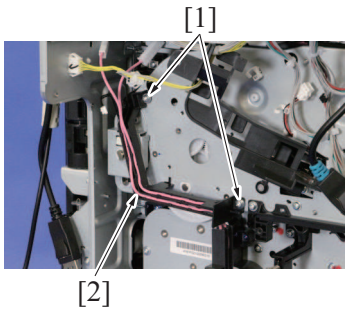


17. Remove four screws [1].
18. Remove the reinforcing plate [2] as clearing the harness.

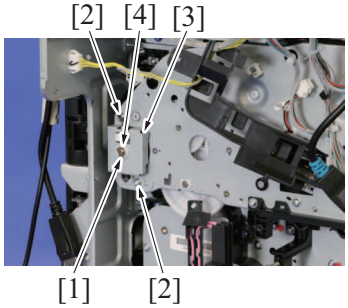




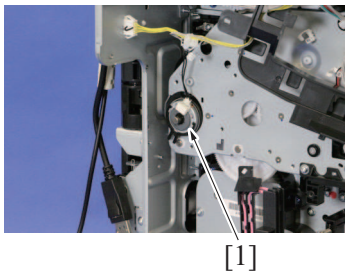
19. Remove two solderless terminals [1].



20. Remove two screws [1], and remove the harness guide [2].



21. Remove the E-ring [1].
22. Remove two screws [2], and remove the metal plate [3] and bushing [4].

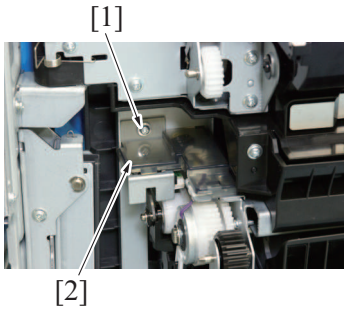


23. Remove the ADU transport clutch [1].

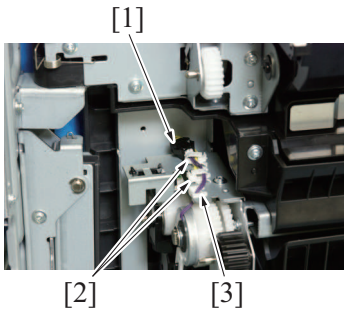
24. To reinstall, reverse the order of removal.

5.6.7 Bypass paper feed clutch (CL7)

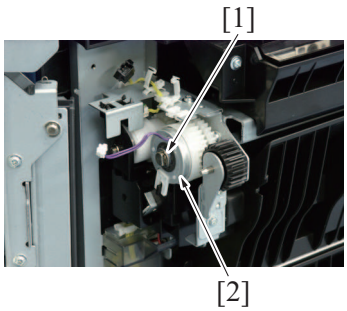
1. Open the right door.



2. Remove the screw [1], and remove the connector cover [2].



3. Disconnect the connector [1], and remove the harness from two wire saddles [2] and the edge cover [3].

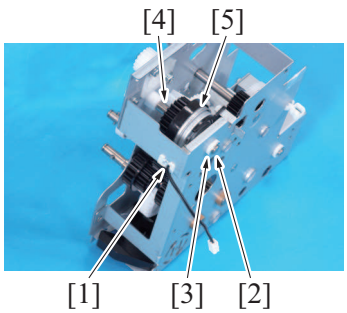


4. Remove the E-ring [1], and remove the bypass paper feed clutch [2].
NOTE
- **When mounting the bypass paper feed clutch, set the convex part of the stopper into the concave part of the bypass paper feed clutch [2].**

5. To reinstall, reverse the order of removal.

5.6.8 Paper exit clutch (CL8)

1. Remove the fusing unit.
F.7.9.1 Replacing the fusing unit
2. Remove the rear right cover.
G.5.2.18 Rear right cover
3. Remove the lower rear cover.
G.5.2.20 Lower rear cover
4. Remove the scanner rear cover.
G.5.2.1 Scanner rear cover
5. Remove the upper rear cover.
G.5.2.22 Upper rear cover
6. Open the PWB box.
G.5.3.10 How to open the PWB box
7. Remove the toner cartridge cooling fan.
G.5.7.4 Toner cartridge cooling fan (FM4)
8. Remove the fusing motor.
G.5.5.3 Fusing motor (M3)
9. Remove the fusing pressure motor.
G.5.5.11 Fusing pressure motor (M11)
10. Remove the transport motor.
G.5.5.1 Transport motor (M1)
11. Remove the PC motor.
G.5.5.2 PC motor (M2)
12. Remove the developing motor.
G.5.5.14 Developing motor (M21)
13. Remove the fusing drive unit.
G.5.3.13 Fusing drive unit



14. Remove the harness from the edge cover [1].
15. Remove the E-ring [2] and the bushing [3], and remove the paper exit clutch [5] while pulling out the shaft [4].
NOTE
- **When mounting the paper exit clutch, set the convex part of the stopper into the concave part of the paper exit clutch [5].**

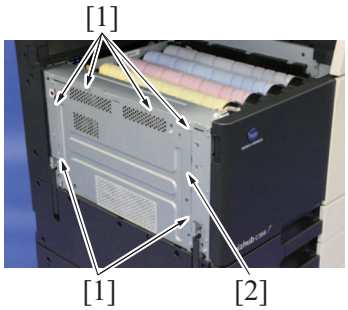
16. To reinstall, reverse the order of removal.

5.7 Disassembly/reassembly procedure (Fans)

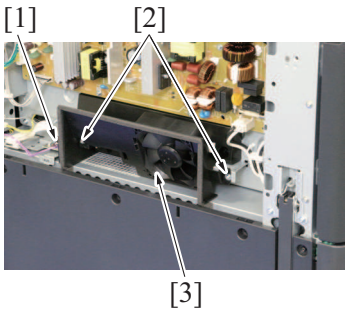
5.7.1 Power supply cooling fan (FM1)

1. Remove the left cover.
G.5.2.16 Left cover
2. Remove the exit tray.

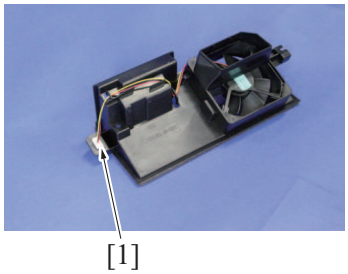
G.5.2.17 Exit tray



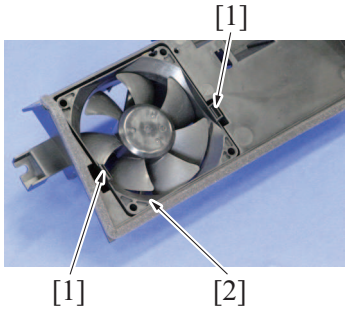
3. Remove six screws [1], and remove the DC power supply protective shield [2].



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the power supply cooling fan assy [3].



6. Disconnect the connector [1], and remove the harness from the harness guide.



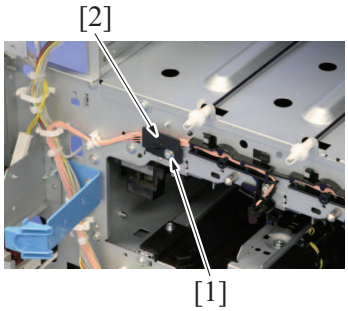
7. Remove two tabs [1], and remove the power supply cooling fan [2].

8. To reinstall, reverse the order of removal.

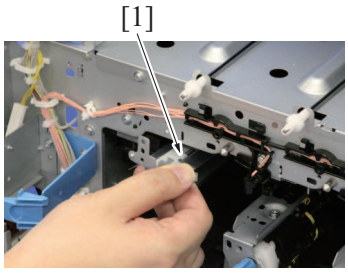
5.7.2 Transfer belt cleaner cooling fan (FM2)

1. Remove the front door.
   G.5.2.13 Front door
2. Remove the front lower cover.
   G.5.2.14 Front lower cover
3. Remove the front cover.
   G.5.2.15 Front cover
4. Remove the left cover.
   G.5.2.16 Left cover
5. Remove the exit tray.
   G.5.2.17 Exit tray
6. Remove the DC power supply.
   G.5.4.3 DC power supply (DCPU)
7. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit
8. Remove the toner cartridge/Y,M,C,K.
   F.7.3.1 Replacing the toner cartridge
9. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
10. Remove the drum unit/Y,M,C,K.
    F.7.1.1 Replacing the drum unit

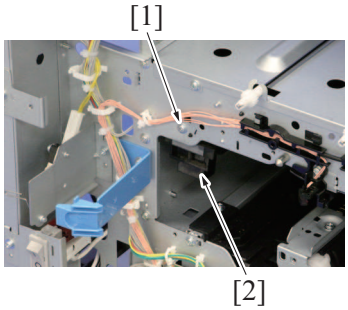
11. Remove the developing unit.
F.7.2.1 Replacing the developing unit
12. Remove the sub hopper unit.
G.5.3.4 Sub hopper unit



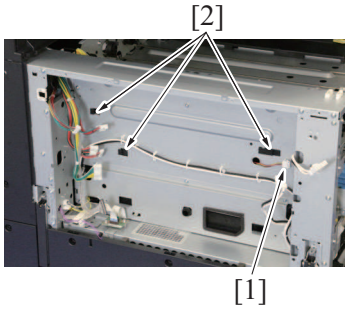
13. Remove the screw [1], and remove the harness guide [2].



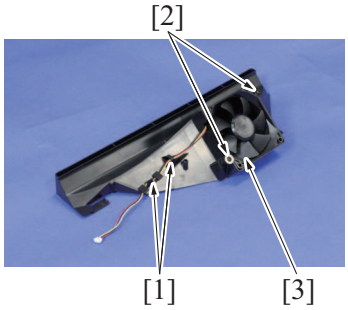
14. Remove the rail [1].



15. Remove the screw [1], and remove the waste toner pipe [2].



16. Unclip the connector [1] and three connector tabs [2], and remove the transfer belt cleaner cooling fan assy.

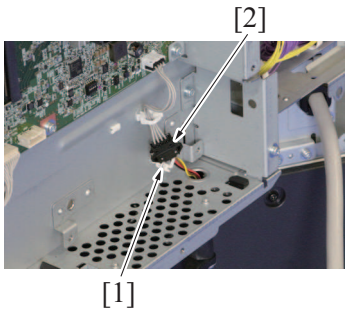


17. Remove the harness from harness guide [1].
18. Remove two screws [2], and remove the transfer belt cleaner cooling fan [3].

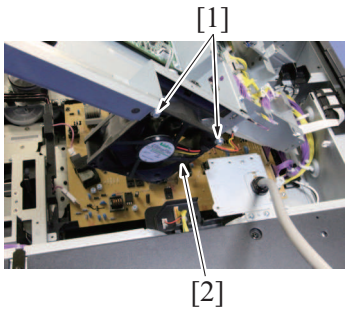
19. To reinstall, reverse the order of removal.

5.7.3 Machine rear side cooling fan (FM3)

1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Open the PWB box.
G.5.3.10 How to open the PWB box



3. Remove the harness from the wire saddle [1], and disconnect the connector [2].

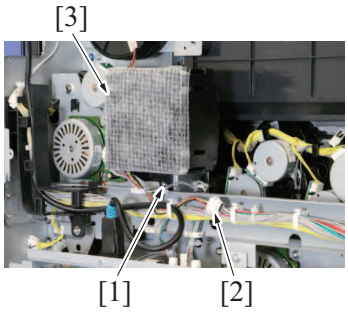


4. Remove two screws [1], and remove the rear side cooling fan [2].

5. To reinstall, reverse the order of removal.

5.7.4 Toner cartridge cooling fan (FM4)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover

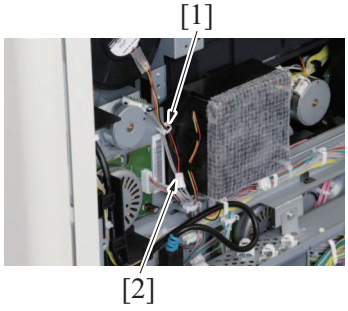


4. Remove the screw [1]. Disconnect the connector [2], and remove the toner cartridge cooling fan [3].

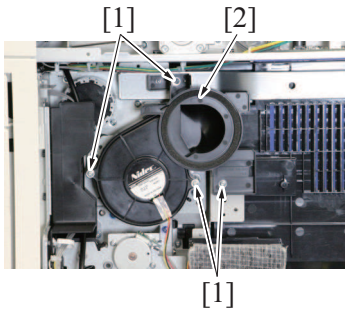
5. To reinstall, reverse the order of removal.

5.7.5 Paper cooling fan (FM8)

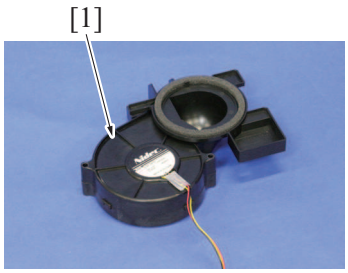
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the scanner rear cover.
   G.5.2.1 Scanner rear cover
3. Remove the upper rear cover.
   G.5.2.22 Upper rear cover



4. Remove the harness from the wire saddle [1], and disconnect the connector [2].



5. Remove four screws [1], and remove the paper cooling fan assy [2].



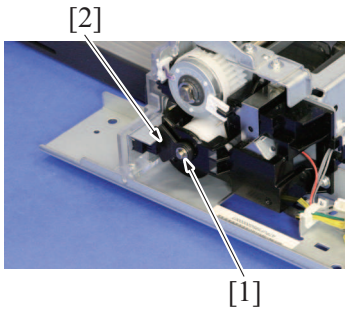
6. Remove the paper cooling fan [1].

7. To reinstall, reverse the order of removal.

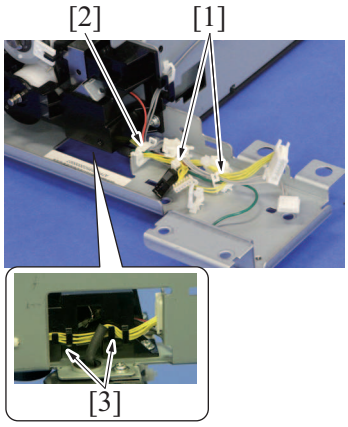
5.8 Disassembly/reassembly procedure (etc.)

5.8.1 Bypass pick-up solenoid (SD1)

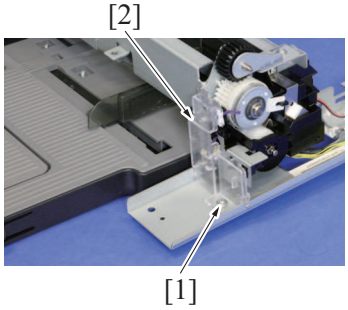
1. Remove the manual bypass tray unit.
   G.5.3.6 Manual bypass tray unit



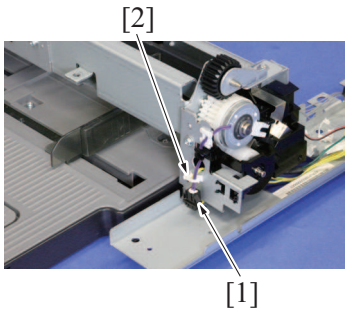
2. Remove the E-ring [1], and remove the actuator [2].



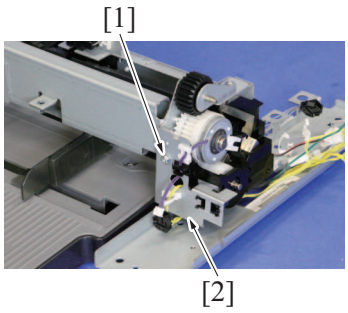
3. Remove the harness from two wire saddles [1] and the edge cover [2].
4. Remove the harness from two harness guides [3].



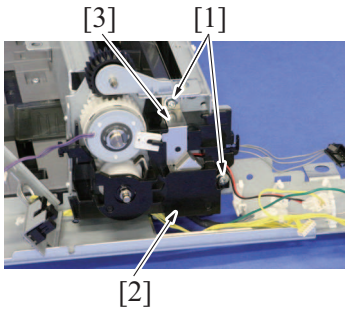
5. Remove the screw [1], and remove the connector cover [2].



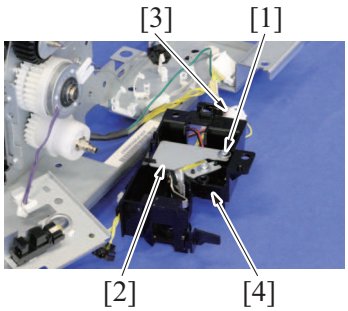
6. Disconnect the connector [1], and remove the harness from the wire saddle [2].



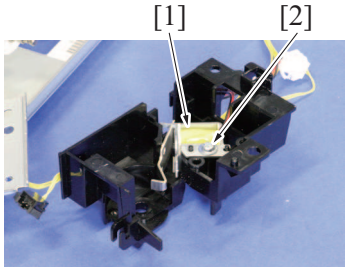
7. Remove the screw [1], and remove the metal plate [2] as clearing the harness.



8. Remove two screws [1], and remove the solenoid cover [2] and the earth plate [3].



9. Remove the screw [1], and remove the cover [2].
10. Disconnect the connector [3], and remove the bypass pick-up solenoid assy [4].



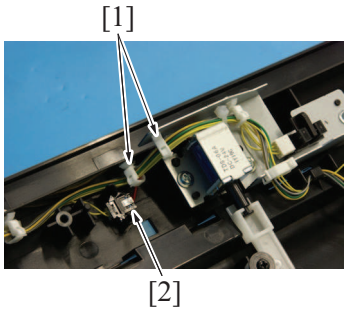
11. Remove the screw [1], and remove the bypass pick-up solenoid [2].

12. To reinstall, reverse the order of removal.

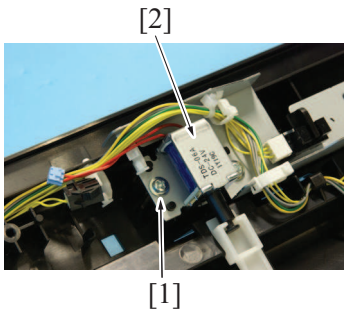
5.8.2 IDC sensor shutter solenoid (SD2)

1. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box
2. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit
3. Remove the front door.
   G.5.2.13 Front door
4. Remove the front lower cover.
   G.5.2.14 Front lower cover

5. Remove the front cover.
   G.5.2.15 Front cover
6. Remove the transport unit.
   G.5.3.12 Transport unit



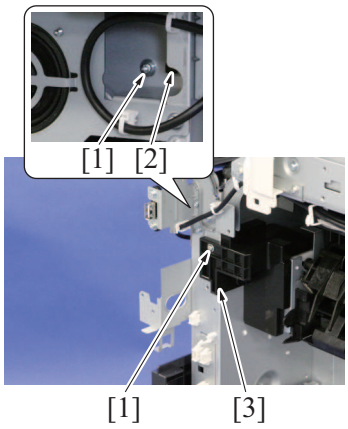
7. Remove the harness from two wire saddles [1], and disconnect the connector [2].



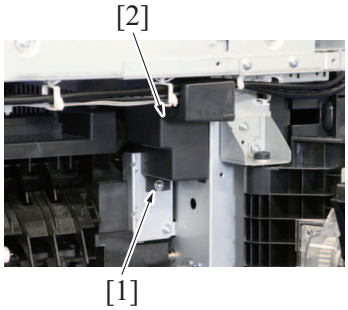
8. Remove the screw [1], and remove the IDC sensor shutter solenoid [2].
9. To reinstall, reverse the order of removal.

5.8.3 Gate switch solenoid (SD3)

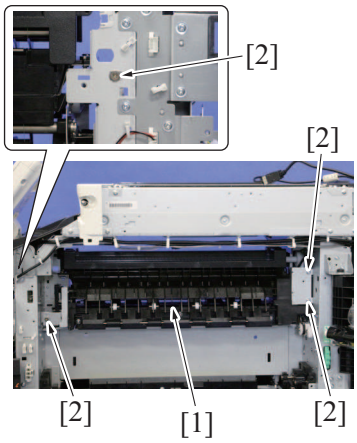
1. Remove the fusing unit.
   F.7.9.1 Replacing the fusing unit
2. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
3. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
4. Remove the control panel front cover.
   G.5.2.10 Control panel front cover
5. Remove the scanner right cover.
   G.5.2.2 Scanner right cover
6. Remove the upper right cover.
   G.5.2.19 Upper right cover
7. Open the right door and the regist unit.



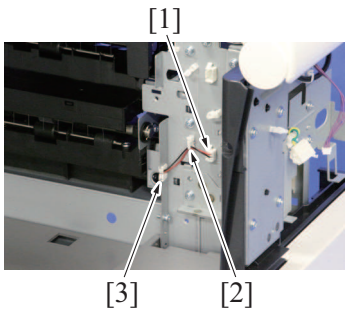
8. Remove two screws [1] and the tab [2], and remove the cover [3].



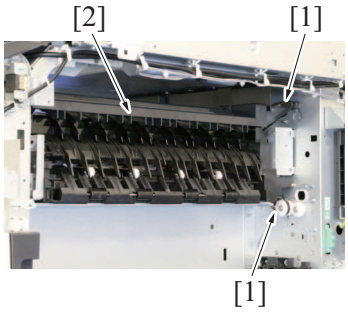
9. Remove the screw [1], and remove the cover [2].



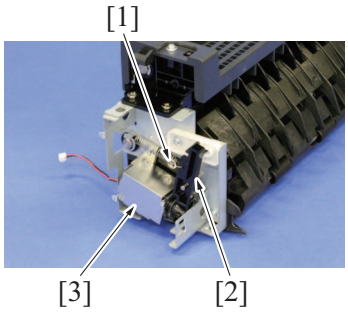
10. Remove four screws [2] of the gate switch unit [1].



11. Disconnect the connector [1].
12. Remove the harness from the wire saddle [2] and the edge cover [3].



13. Remove the gate switch unit [2] as clearing two belts [1].

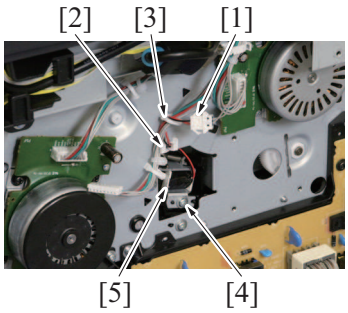


14. Remove the screw [1].
15. Remove the gate switch solenoid [3] as clearing the actuator [2].

16. To reinstall, reverse the order of removal.

5.8.4 Developing solenoid (SD4)

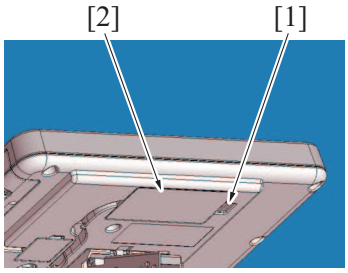
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. How to open the PWB box
   G.5.3.10 How to open the PWB box
3. Remove the developing motor.
   G.5.5.14 Developing motor (M21)



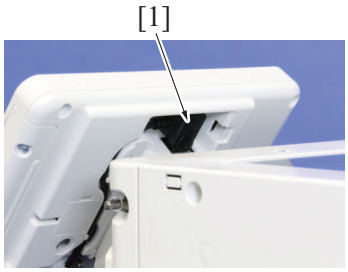
4. Disconnect the connector [1], and remove the harness from the edge cover [2] and the wire saddle [3].
5. Remove the screw [4], and remove the developing solenoid [5].
6. To reinstall, reverse the order of removal.

5.8.5 FAX speaker (SP1)

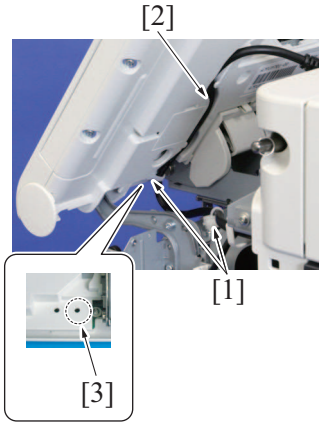
1. Remove the control panel left cover/1.
   G.5.2.6 Control panel left cover/1
2. Remove the control panel right cover.
   G.5.2.8 Control panel right cover
3. Remove the control panel upper cover.
   G.5.2.9 Control panel upper cover
4. Remove the control panel front cover.
   G.5.2.10 Control panel front cover
5. Remove the control panel left cover/2.
   G.5.2.7 Control panel left cover/2



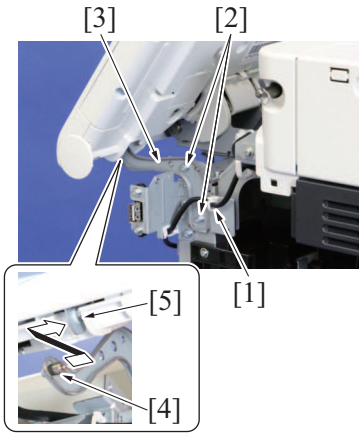
6. Unhook the claw [1], and remove the connector cover [2].



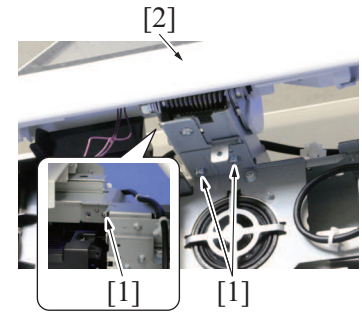
7. Disconnect the connector [1].



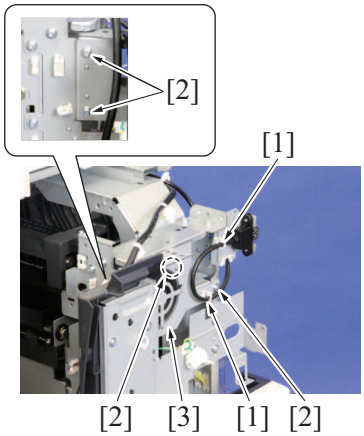
8. Remove two cable ties [1] from the control panel.
9. Remove the cable from the cable guide [2].
   NOTE
   - **At installation of the control panel unit, insert the cable tie [1] to the hole [3] shown in the illustration.**



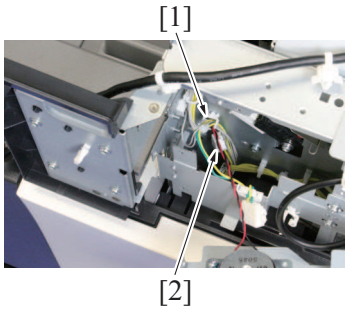
10. Remove the harness from the wire saddle [1].
11. Remove two screws [2], and remove the metal plate [3].
NOTE
- **When installing the control panel, install the metal panel shaft [4] into the hole [5] in the figure.**



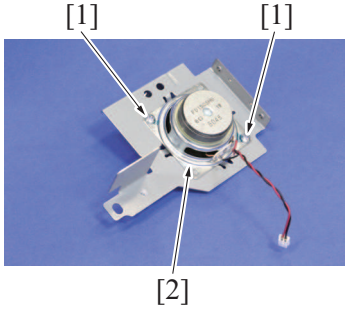
12. Remove three screws [1], and remove the control panel unit [2].



13. Remove the cable from two wire saddles [1].
14. Remove four screws [2], and remove the FAX speaker assy [3].



15. Remove the harness from the wire saddle [1], and disconnect the connector [2].

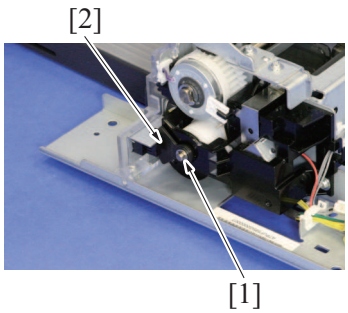


16. Remove two screws [1], and remove the FAX speaker [2].

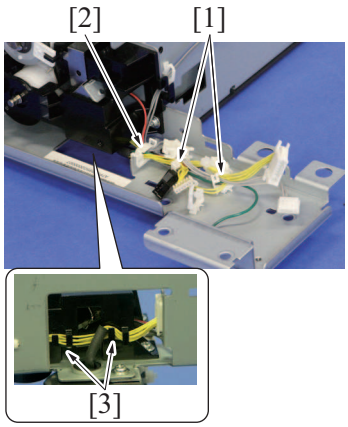
17. To reinstall, reverse the order of removal.

5.8.6 Bypass CD paper size VR (VR1)

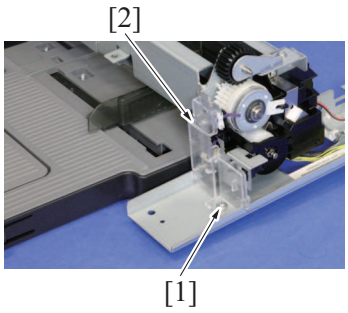
1. Remove the manual bypass tray unit.
G.5.3.6 Manual bypass tray unit



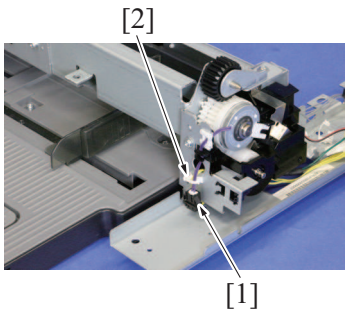
2. Remove the E-ring [1], and remove the actuator [2].



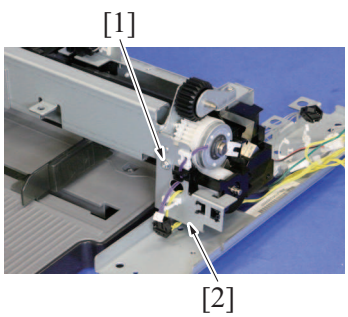
3. Remove the harness from two wire saddles [1] and the edge cover [2].
4. Remove the harness from two harness guides [3].



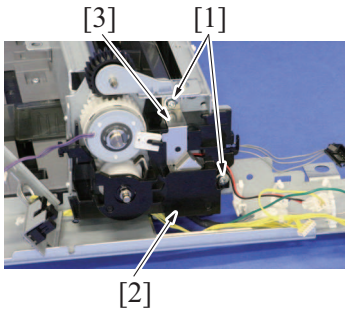
5. Remove the screw [1], and remove the connector cover [2].



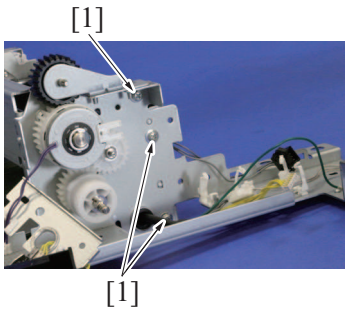
6. Disconnect the connector [1], and remove the harness from the harness guide [2].



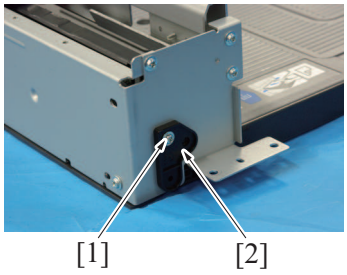
7. Remove the screw [1], and remove the metal plate [2] together with the harness.



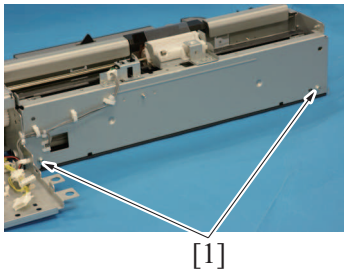
8. Remove two screws [1], and remove the solenoid cover [2] and the earth plate [3].



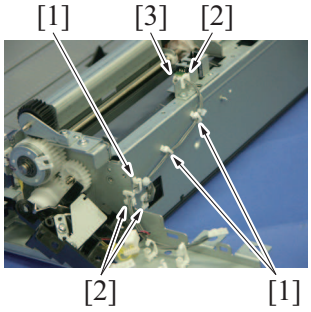
9. Remove three screws [1].



10. Remove the screw [1], and remove the hinge [2].

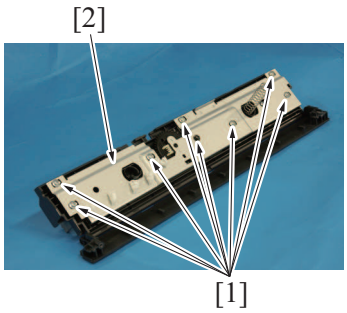


11. Remove two screws [1].

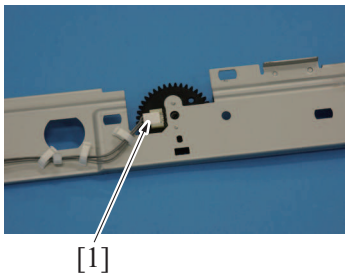


12. Remove the harness from three wire saddles [1] and three edge covers [2], and disconnect the connector [3].

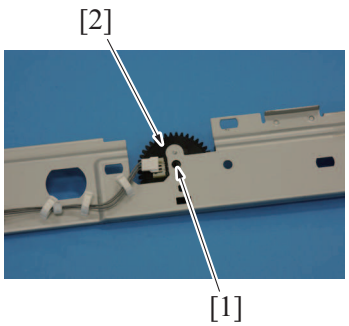
13. Remove eight screws [1], and remove the cover [2].



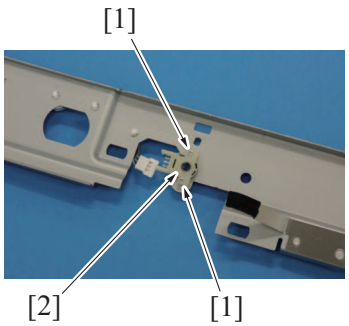
14. Disconnect the connector [1].



15. Remove the tab [1], and remove the gear [2].



16. Remove two screws [1], and remove the bypass CD paper size VR [2].



17. To reinstall, reverse the order of removal.

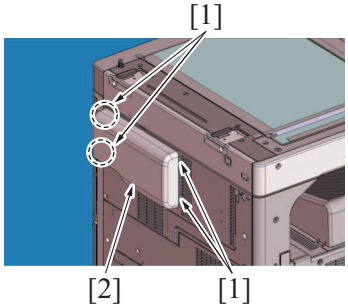
5.8.7 UFP filter/ Deodorant filter

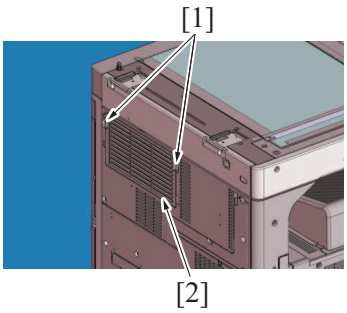
(1) UFP filter

NOTE

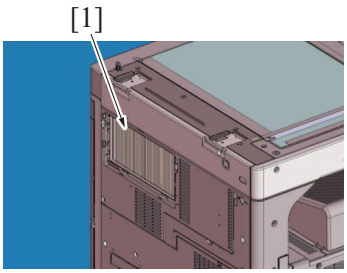
- **The UFP filter is standard equipment only on models destined for Europe.**

1. Remove four tabs [1], and remove the ventilation cover [2].





2. Remove two tabs [1], and remove the filter cover [2].



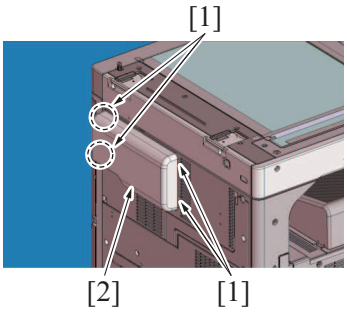
3. Remove the UFP filter [1].

4. To reinstall, reverse the order of removal.

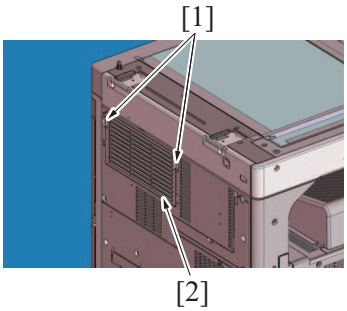
(2) Deodorant filter

NOTE

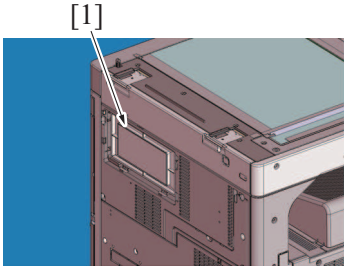
- **The deodorant filter is standard equipment only on models destined for China.**



1. Remove four tabs [1], and remove the ventilation cover [2].



2. Remove two tabs [1], and remove the filter cover [2].



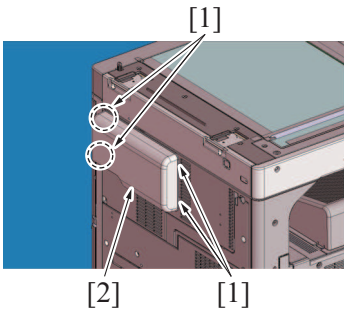
3. Remove the deodorant filter [1].

4. To reinstall, reverse the order of removal.

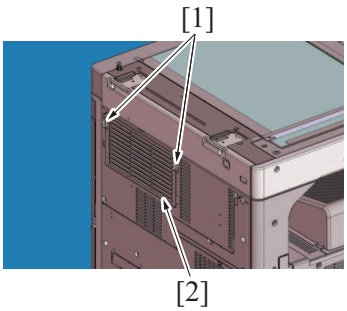
(3) When both the UFP filter and deodorant filter are installed.

NOTE

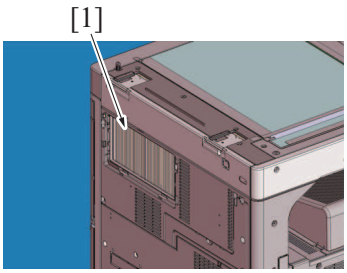
- **The UFP filter and odor filter can be used combined. In this situation, install by the following procedure.**



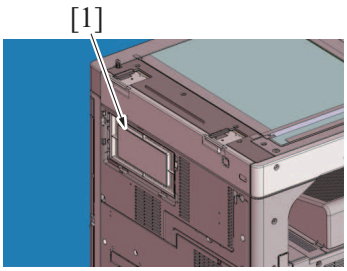
1. Remove four tabs [1], and remove the ventilation cover [2].



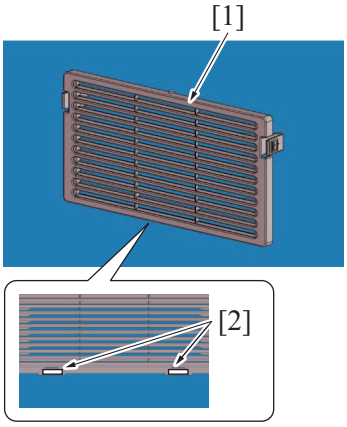
2. Remove two tabs [1], and remove the filter cover [2].



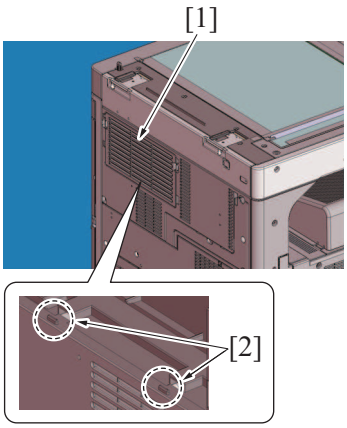
3. Install the UFP filter [1].



4. Install the deodorant filter [1].



5. Peel off two seals [2] from the filter cover [1].



7. Install the exhaust cover.

6. Install the filter cover [1].
NOTE
- **Install the filter cover [1] while hooking the slots where the seals have been peeled off onto the protrusions [2] on the main body.**

6. bizhub C658/C558/C458

6.1 Disassembly/reassembly parts list

6.1.1 Exterior parts

No.	Part name	Ref. page
1	Scanner rear cover	G.6.2.1 Scanner rear cover
2	Scanner right cover	G.6.2.2 Scanner right cover
3	Scanner front cover	G.6.2.3 Scanner front cover
4	Scanner left cover	G.6.2.4 Scanner left cover
5	Scanner upper rear cover	G.6.2.5 Scanner upper rear cover
6	Control panel left cover	G.6.2.6 Control panel left cover
7	Control panel right cover	G.6.2.7 Control panel right cover
8	Control panel upper cover	G.6.2.8 Control panel upper cover
9	Control panel front cover	G.6.2.9 Control panel front cover
10	Control panel unit	G.6.2.10 Control panel unit
11	Original glass	G.6.2.11 Original glass
12	Upper front door	G.6.2.12 Upper front door
13	Lower front door	G.6.2.13 Lower front door
14	Front lower cover	G.6.2.14 Front lower cover
15	Front cover	G.6.2.15 Front cover
16	Left cover	G.6.2.16 Left cover
17	Exit cover	G.6.2.17 Exit cover
18	Output rear cover	G.6.2.18 Output rear cover
19	Rear right cover	G.6.2.19 Rear right cover
20	Upper right cover	G.6.2.20 Upper right cover
21	Lower rear cover	G.6.2.21 Lower rear cover
22	DF cable cover	G.6.2.22 DF cable cover
23	Duct cover/1	G.6.2.23 Duct cover/1
24	Duct cover/2, filter assy	G.6.2.24 Duct cover/2, filter assy
25	Upper rear cover	G.6.2.25 Upper rear cover
26	Protective shield	G.6.2.26 Protective shield
27	Tray 1	G.6.2.27 Tray 1
28	Tray 2	G.6.2.28 Tray 2

6.1.2 Units

No.	Part name	Ref. page
1	LED exposure unit	G.6.3.1 LED exposure unit
2	Paper feed unit	G.6.3.2 Paper feed unit
3	PH unit	G.6.3.3 PH unit
4	Sub hopper unit	G.6.3.4 Sub hopper unit
5	Right door unit	G.6.3.5 Right door unit
6	Manual bypass tray unit	G.6.3.6 Manual bypass tray unit
7	Regist unit	G.6.3.7 Regist unit
8	Hard disk (A)	G.6.3.8 Hard disk (A)
9	How to open the PWB box/1	G.6.3.9 How to open the PWB box/1
10	PWB box/2 (bizhub C658/C558)	G.6.3.10 PWB box/2 (bizhub C658/C558)
11	Main drive unit	G.6.3.11 Main drive unit
12	Transport unit	G.6.3.12 Transport unit
13	IH coil (IHC) (bizhub C658/C558)	G.6.3.13 IH coil (IHC) (bizhub C658/C558)
14	Fusing drive unit (bizhub C658/C558)	G.6.3.14 Fusing drive unit (bizhub C658/C558)
15	Fusing drive unit (bizhub C458)	G.6.3.15 Fusing drive unit (bizhub C458)
16	Hopper drive unit (bizhub C658/C558)	G.6.3.16 Hopper drive unit (bizhub C658/C558)
17	Hopper drive unit (bizhub C458)	G.6.3.17 Hopper drive unit (bizhub C458)
18	ADU transport unit	G.6.3.18 ADU transport unit
19	Paper exit unit	G.6.3.19 Paper exit unit

6.1.3 Boards

No.	Part name	Ref. page
1	CCD board (CCDB)	G.6.4.1 CCD board (CCDB)
2	Scanner drive board (SCDB)	G.6.4.2 Scanner drive board (SCDB)
3	Machine condition monitor board (MCMB)	G.6.4.3 Machine condition monitor board (MCMB)
4	Front side board (FRB)	G.6.4.4 Front side board (FRB)
5	DC power supply (DCPU)	G.6.4.5 DC power supply (DCPU)
6	PH relay board (PHRYB)	G.6.4.6 PH relay board (PHRYB)
7	eMMC board (eMMC)	G.6.4.7 eMMC board (eMMC)
8	MFP board (MFPB)	G.6.4.8 MFP board (MFPB)
9	EEPROM/1, EEPROM/2	G.6.4.10 EEPROM/1, EEPROM/2
10	High voltage unit (HV)	G.6.4.11 High voltage unit (HV)
11	Expansion control board (EXCB)	G.6.4.12 Expansion control board (EXCB)
12	Dual scan image processing board (DSIPB)	G.6.4.13 Dual scan image processing board (DSIPB)
13	IH magnetic erasing board (IHMEB) (bizhub C658/C558)	G.6.4.14 IH magnetic erasing board (IHMEB) (bizhub C658/C558)
14	IH power supply unit (IHPU) (bizhub C658/C558)	G.6.4.15 IH power supply unit (IHPU)
15	NF board (NFB) (bizhub C658/C558)	G.6.4.16 NF board (NFB) (bizhub C658/C558)
16	Fusing power supply (FUPU) (bizhub C458)	G.6.4.17 Fusing power supply (FUPU) (bizhub C458)
17	Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)	G.6.4.18 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)
18	Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)	G.6.4.19 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)
19	Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)	G.6.4.20 Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)

6.1.4 Motors

No.	Part name	Ref. page
1	Transport motor (M1)	G.6.5.1 Transport motor (M1)
2	PC motor (M2)	G.6.5.2 PC motor (M2)
3	Fusing motor (M3)	G.6.5.3 Fusing motor (M3)
4	Switchback motor (M4)	G.6.5.4 Switchback motor (M4)
5	ADU transport motor 1 (M5)	G.6.5.5 ADU transport motor1 (M5)
6	Toner supply motor/K (M6)	G.6.5.6 Toner supply motor/K (M6)
7	Toner supply motor/C (M7) (bizhub C658/C558)	G.6.5.7 Toner supply motor/C (M7) (bizhub C658/C558)
8	Toner supply motor/C (M7) (bizhub C458)	G.6.5.8 Toner supply motor/C (M7) (bizhub C458)
9	Toner supply motor/M (M8) (bizhub C658/C558)	G.6.5.9 Toner supply motor/M (M8) (bizhub C658/C558)
10	Toner supply motor/M (M8) (bizhub C458)	G.6.5.10 Toner supply motor/M (M8) (bizhub C458)
11	Toner supply motor/Y (M9) (bizhub C658/C558)	G.6.5.11 Toner supply motor/Y (M9) (bizhub C658/C558)
12	Toner supply motor/Y (M9) (bizhub C458)	G.6.5.12 Toner supply motor/Y (M9) (bizhub C458)
13	Toner cartridge motor/Y,M (M10) (bizhub C658/C558)	G.6.5.13 Toner cartridge motor/Y,M (M10) (bizhub C658/C558)
14	Toner cartridge motor/Y,M (M10) (bizhub C458)	G.6.5.14 Toner cartridge motor/Y,M (M10) (bizhub C458)
15	Fusing pressure motor (M11)	G.6.5.15 Fusing pressure motor (M11)
16	Tray 1 lift-up motor (M12)	G.6.5.16 Tray 1 lift-up motor (M12)
17	Tray 2 lift-up motor (M13)	G.6.5.17 Tray 2 lift-up motor (M13)
18	Developing motor (M21)	G.6.5.18 Developing motor (M21)
19	Paper feed motor (M22)	G.6.5.19 Paper feed motor (M22)
20	Tray 2 vertical transport motor (M23)	G.6.5.20 Tray 2 vertical transport motor (M23)
21	Registration motor (M24) (bizhub C658)	G.6.5.21 Registration motor (M24) (bizhub C658)
22	Toner cartridge motor/C,K (M25) (bizhub C658/C558)	G.6.5.22 Toner cartridge motor/C,K (M25) (bizhub C658/C558)
23	Toner cartridge motor/C,K (M25) (bizhub C458)	G.6.5.23 Toner cartridge motor/C,K (M25) (bizhub C458)
24	ADU transport motor 2 (M26)	G.6.5.24 ADU transport motor2 (M26)
25	Scanner motor (M201)	G.6.5.25 Scanner motor (M201)

6.1.5 Clutches

No.	Part name	Ref. page
1	Tray 2 paper feed clutch (CL1)	G.6.6.1 Tray 2 paper feed clutch (CL1)
2	Registration clutch (CL4)	G.6.6.2 Registration clutch (CL4)
3	1st transfer pressure clutch (CL5)	G.6.6.3 1st transfer pressure clutch (CL5)
4	Bypass paper feed clutch (CL7)	G.6.6.4 Bypass paper feed clutch (CL7)
5	Paper exit clutch (CL8)	G.6.6.5 Paper exit clutch (CL8)
6	Paper exit deceleration clutch (CL9)	G.6.6.6 Paper exit deceleration clutch (CL9)

6.1.6 Fan

No.	Part name	Ref. page
1	Power supply cooling fan (FM1)	G.6.7.1 Power supply cooling fan (FM1)
2	Transfer belt cleaner cooling fan (FM2)	G.6.7.2 Transfer belt cleaner cooling fan (FM2)
3	Rear side cooling fan (FM3)	G.6.7.3 Rear side cooling fan (FM3)
4	Toner cartridge cooling fan (FM4) (bizhub C658/C558)	G.6.7.4 Toner cartridge cooling fan (FM4) (bizhub C658/C558)
5	Toner cartridge cooling fan (FM4) (bizhub C458)	G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)
6	IH coil cooling fan (FM7)	G.6.7.6 IH coil cooling fan (FM7)
7	Paper cooling fan (FM8)	G.6.7.7 Paper cooling fan (FM8)
8	Toner suction fan (FM11)	G.6.7.8 Toner suction fan (FM11)
9	Fusing power supply cooling fan (FM12)	G.6.7.9 Fusing power supply cooling fan (FM12)
10	UFP exhaust fan1 (FM17)	G.6.7.10 UFP exhaust fan1 (FM17)
11	UFP exhaust fan2 (FM18)	G.6.7.11 UFP exhaust fan2 (FM18)

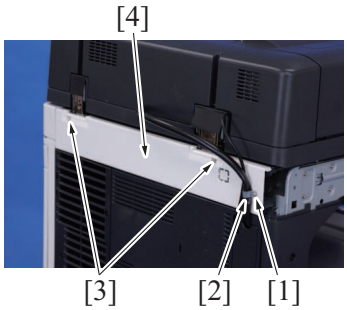
6.1.7 etc.

No.	Part name	Ref. page
1	Bypass pick-up solenoid (SD1)	G.6.8.1 Bypass pick-up solenoid (SD1)
2	IDC sensor shutter solenoid (SD2)	G.6.8.2 IDC sensor shutter solenoid (SD2)
3	Gate switch solenoid (SD3)	G.6.8.3 Gate switch solenoid (SD3)
4	Developing solenoid (SD4)	G.6.8.4 Developing solenoid (SD4)
5	Soaking roller pressure solenoid (SD5) (bizhub C658/C558)	G.6.8.5 Soaking roller pressure solenoid (SD5) (bizhub C658/C558)
6	FAX speaker (SP1)	G.6.8.6 FAX speaker (SP1)
7	Bypass CD paper size VR (VR1)	G.6.8.7 Bypass CD paper size VR (VR1)

6.2 Disassembly/reassembly procedure (Exterior parts)

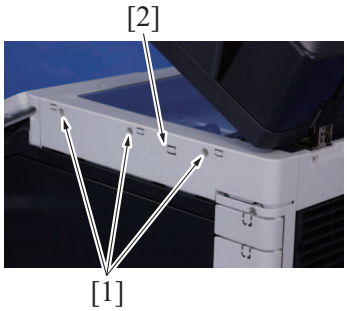
6.2.1 Scanner rear cover

1. Remove the scanner left cover.
   G.6.2.4 Scanner left cover



2. Remove the screw [1], and remove the clamp [2].
3. Remove two screws [3], and remove the scanner rear cover [4].
4. To reinstall, reverse the order of removal.

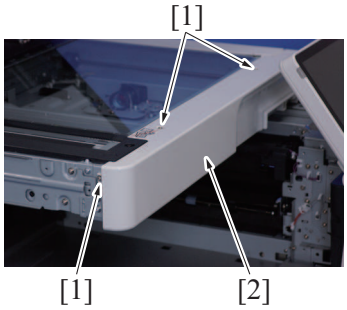
6.2.2 Scanner right cover



1. Remove three screws [1], and remove the scanner right cover [2].
2. To reinstall, reverse the order of removal.

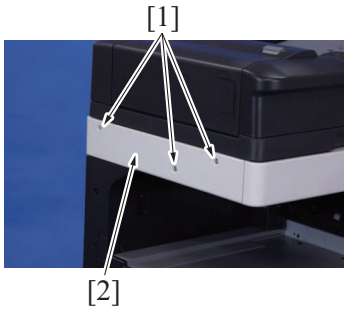
6.2.3 Scanner front cover

1. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
2. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
3. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
4. Remove the control panel upper cover.
   G.6.2.8 Control panel upper cover



5. Remove three screws [1], and remove the scanner front cover [2].
6. To reinstall, reverse the order of removal.

6.2.4 Scanner left cover

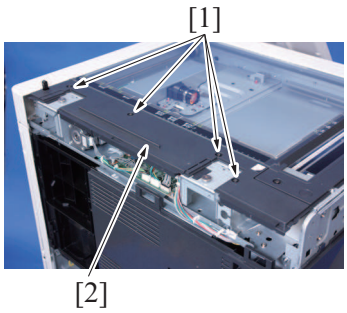


1. Remove three screws [1], and remove the scanner left cover [2].
2. To reinstall, reverse the order of removal.

6.2.5 Scanner upper rear cover

1. Remove the dual scan document feeder.
   G.7.2.6 Dual scan document feeder
2. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
3. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover

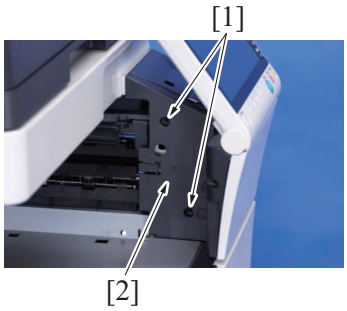
4. Remove four screws [1], and remove the scanner upper rear cover [2].



5. To reinstall, reverse the order of removal.

6.2.6 Control panel left cover

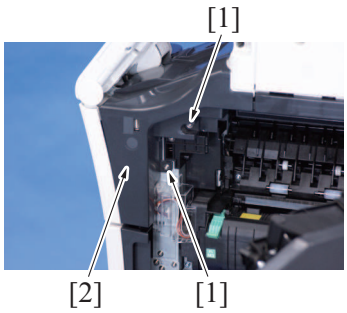
1. Remove two screws [1], and remove the control panel left cover [2].



2. To reinstall, reverse the order of removal.

6.2.7 Control panel right cover

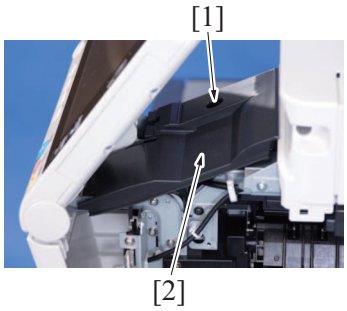
1. Open the right door.
2. Remove two screws [1], and remove the control panel right cover [2].



3. To reinstall, reverse the order of removal.

6.2.8 Control panel upper cover

1. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
2. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
3. Remove the screw [1], and remove the control panel upper cover [2].

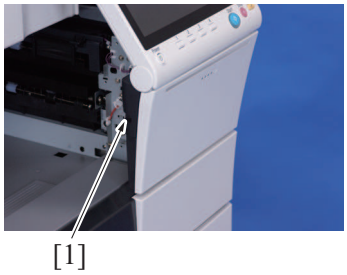


4. To reinstall, reverse the order of removal.

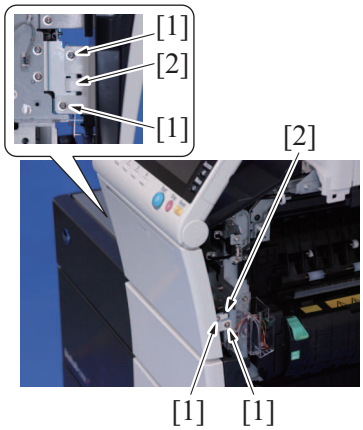
6.2.9 Control panel front cover

1. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
2. Remove the control panel right cover.
   G.6.2.7 Control panel right cover

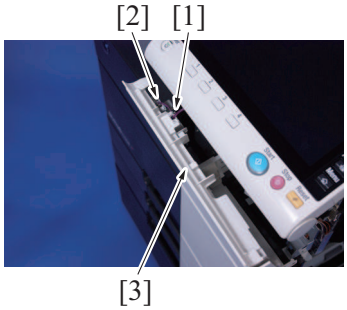
3. Remove the screw [1].



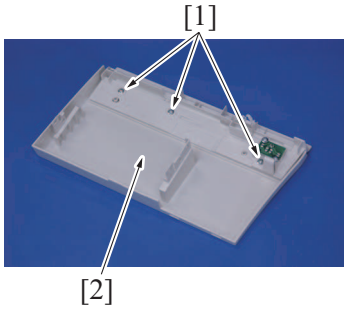
4. Remove four screws [1], and release two tabs [2].



5. Remove the harness from the edge cover [1].
6. Disconnect the connector [2], and remove the control panel front cover assy [3].



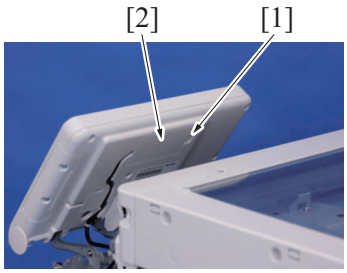
7. Remove three screws [1], and remove the control panel front cover [2].



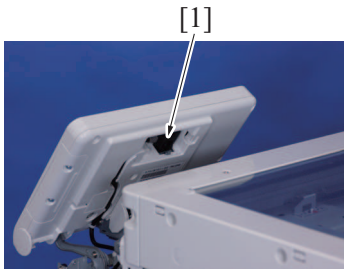
8. To reinstall, reverse the order of removal.

6.2.10 Control panel unit

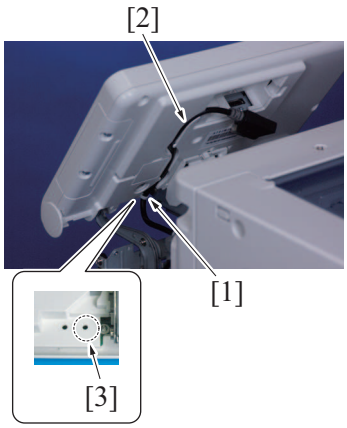
1. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
2. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
3. Remove the control panel upper cover.
   G.6.2.8 Control panel upper cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover



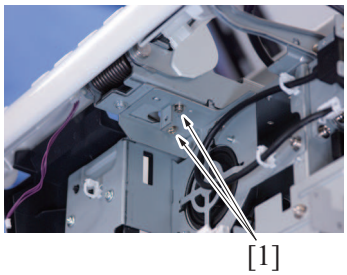
5. Release the tab [1], and remove the control panel connector cover [2].



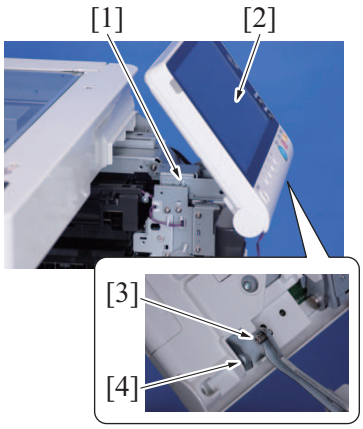
6. Disconnect the connector [1].



7. Remove the tie band [1] from the control panel.
8. Remove the cable from the cable guide [2].
NOTE
- **At installation of the control panel unit, insert the cable tie [1] to the hole [3] shown in the illustration.**

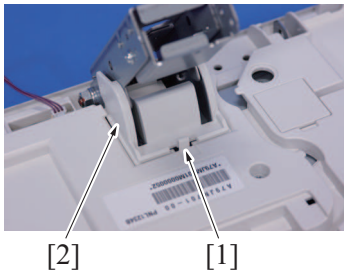


9. Remove two screws [1].

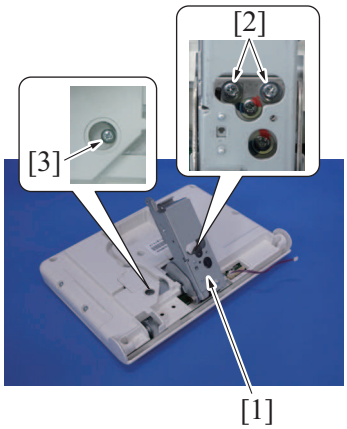


10. Remove the screw [1], and remove the operation panel unit [2].
NOTE
- **When installing the control panel, install the metal panel shaft [3] into the hole [4] in the figure.**

11. Unhook the claw [1], and remove the hinge cover [2].



12. Tilt down the hinge [1], and remove two screws [2].
13. Remove the screw [3], and remove the hinge [1].



14. To reinstall, reverse the order of removal.
15. Carry out the touch panel calibration.
G.6.2.10 (1) Touch panel calibration

(1) Touch panel calibration

- After replacing the control panel unit, you must perform the touch panel calibration. Perform one of the calibration procedures described below.

(a) Panel Calibration by using USB memory

1. Connect the USB memory containing the MFP firmware data to the service port.
   For information on how to store the firmware data into a USB memory, refer to “USB memory”.
2. While pressing the ‘Reset’ key, turn the main power switch ON.
3. Once the calibration screen appears, press the Start key and perform the calibration. Wait for approximately 10 seconds.
4. Confirm that the completion message. Touch [Close].
5. Turn OFF the main power switch, and remove the USB memory.

NOTE

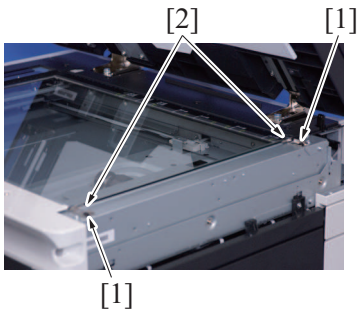
- **Once the panel calibration has been completed, panel screen transit to the firmware writing mode and start to update automatically after 30 seconds.**

(b) Panel Calibration by manual operation

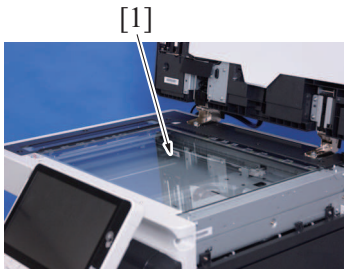
1. Press [Menu] -> [Counter] -> [Display Keypad].
2. Press Stop -> Clear -> 1 -> 1 -> 6 -> 6 -> Start key, then calibration starts.
3. After 30 seconds, turn OFF the main power switch.

6.2.11 Original glass

1. Remove the scanner right cover.
G.6.2.2 Scanner right cover



2. Remove two screws [1], and remove two original glass fixing brackets [2].

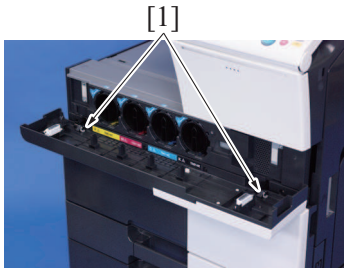


3. Remove the original glass [1].

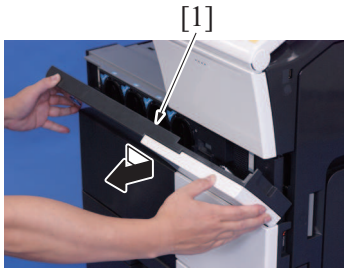
4. To reinstall, reverse the order of removal.
5. Perform the adjustment from [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge].
6. Perform the adjustment from [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge].

6.2.12 Upper front door

1. Open the upper front door.



2. Remove two C-clips [1].

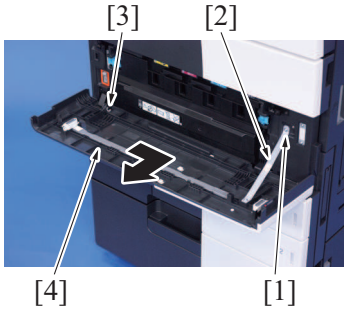


3. Partially close the upper front door [1] and the slide it to the right to remove.

4. To reinstall, reverse the order of removal.

6.2.13 Lower front door

1. Open the lower front door.

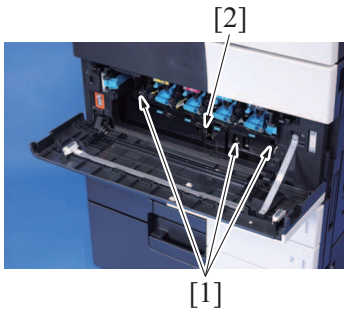


2. Remove the screw [1], and remove the stopper [2].
3. Remove the C-clip [3].
4. Slide the lower front door [4] to the right to remove.

5. To reinstall, reverse the order of removal.

6.2.14 Front lower cover

1. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box

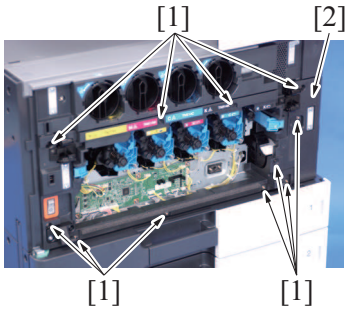


2. Remove three screws [1], and remove the front lower cover [2].

3. To reinstall, reverse the order of removal.

6.2.15 Front cover

1. Remove the upper front door.
   G.6.2.12 Upper front door
2. Remove the lower front door.
   G.6.2.13 Lower front door
3. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
4. Remove the front lower cover.
   G.6.2.14 Front lower cover

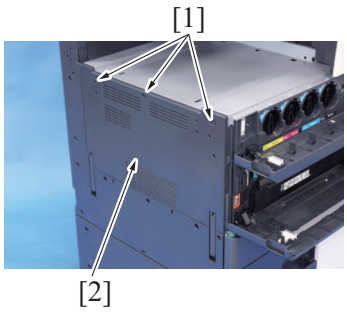


5. Remove 11 screws [1], and remove the front cover [2].

6. To reinstall, reverse the order of removal.

6.2.16 Left cover

1. Open the upper front door.
2. Open the lower front door.

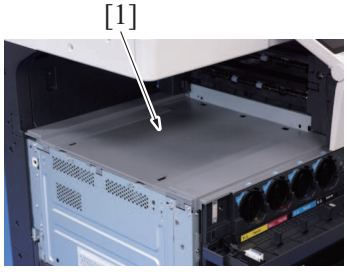


3. Remove three screws [1], and remove the left cover [2].

4. To reinstall, reverse the order of removal.

6.2.17 Exit cover

1. Open the upper front door.
2. Open the lower front door.
3. Remove the left cover.
   G.6.2.16 Left cover

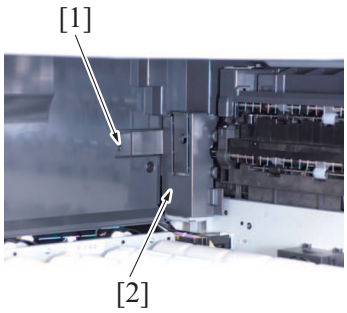


4. Remove the exit cover [1].

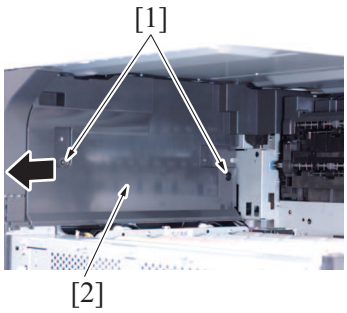
5. To reinstall, reverse the order of removal.

6.2.18 Output rear cover

1. Remove the left cover.
   G.6.2.16 Left cover
2. Remove the exit cover.
   G.6.2.17 Exit cover



3. Remove the screw [1], and remove the cover [2].

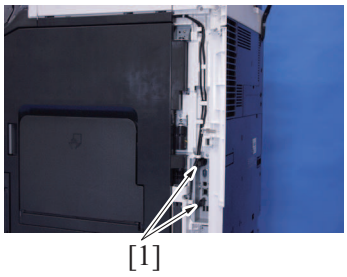


4. Remove two screws [1], and slide the output rear cover [2] to the left to remove.

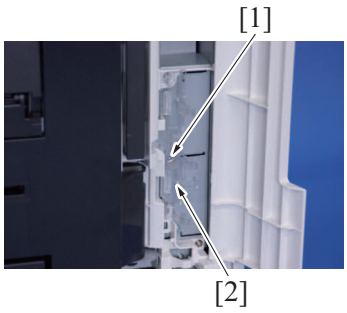
5. To reinstall, reverse the order of removal.

6.2.19 Rear right cover

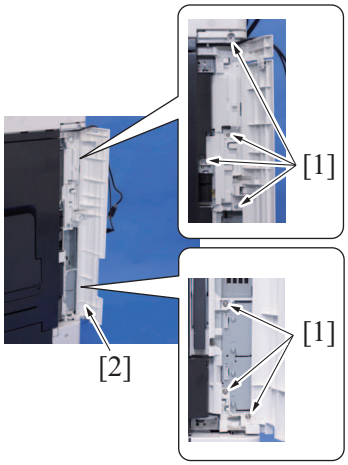
1. Open the right rear cover.



2. Disconnect two connectors [1], and remove the harness from the harness guide.



3. Remove the screw [1], and remove the connector cover [2].

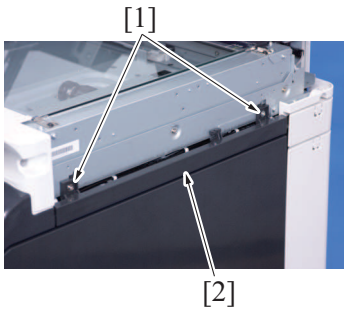


4. Remove seven screws [1], and remove the right rear cover [2] as clearing the harness.

5. To reinstall, reverse the order of removal.

6.2.20 Upper right cover

1. Remove the scanner right cover.
   G.6.2.2 Scanner right cover

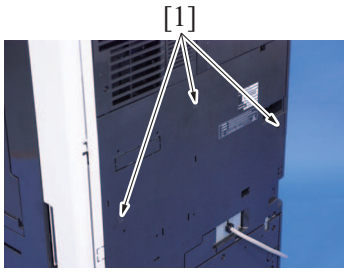


2. Remove two screws [1], and remove the upper right cover [2].

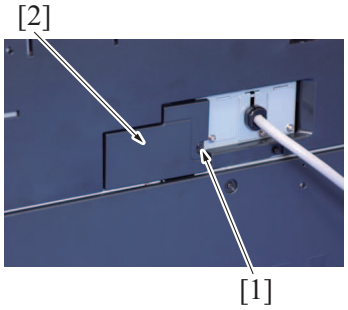
3. To reinstall, reverse the order of removal.

6.2.21 Lower rear cover

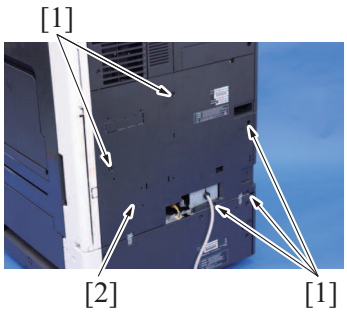
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter



3. Remove three caps [1].



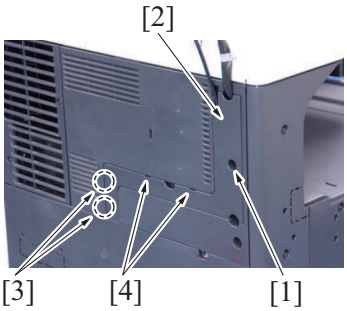
4. Remove the screw [1], and remove the cover [2].



5. Remove five screws [1], and remove the lower rear cover [2].

6. To reinstall, reverse the order of removal.

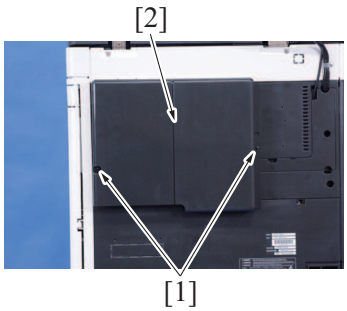
6.2.22 DF cable cover



1. Remove the screw [1], and remove the DF cable cover [2].
NOTE
- **When mounting the cover, insert two claws [3] into the holes on the main unit cover first. Then fit two claws [4] into the holes.**
- **Be careful not to pinch the harness.**

2. To reinstall, reverse the order of removal.

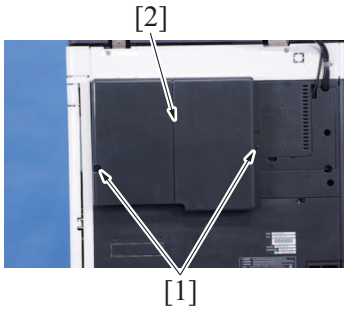
6.2.23 Duct cover/1



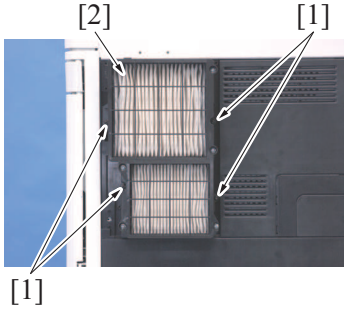
1. Remove two screws [1], and remove the duct cover [2].

2. To reinstall, reverse the order of removal.

6.2.24 Duct cover/2, filter assy



1. Remove two screws [1], and remove the duct cover [2].

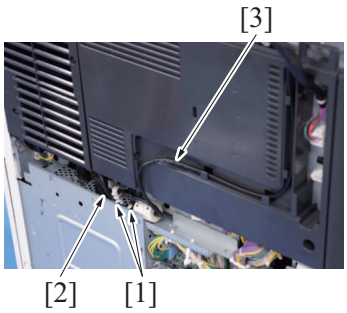


2. Remove four screws [1], and remove the filter assy [2].

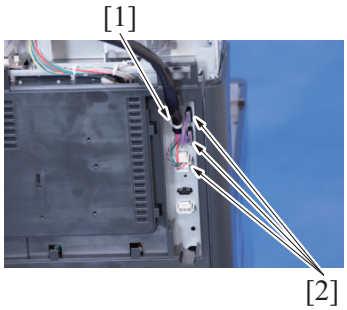
3. To reinstall, reverse the order of removal.

6.2.25 Upper rear cover

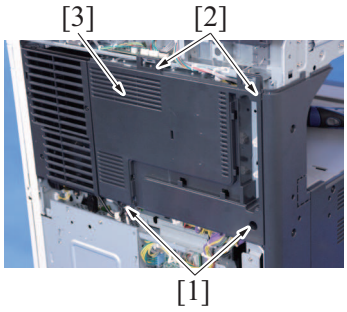
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover



7. Remove the cable from two wire saddles [1], and disconnect the connector [2].
8. Disconnect the cable [3], then remove the cable from the cable guide.



9. Remove the cable tie [1], and disconnect three connectors [2].

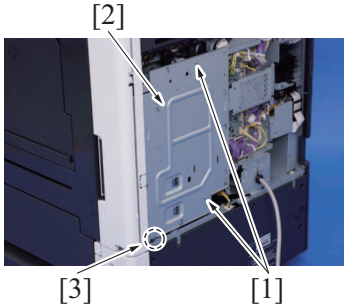


10. Remove two screws [1] and two tabs [2], and remove the upper rear cover [3].

11. To reinstall, reverse the order of removal.

6.2.26 Protective shield

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover

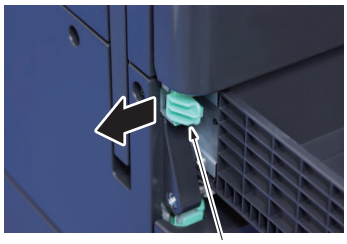


4. Remove two screws [1], and remove the protective shield [2].
   NOTE
   - **When installing the protective shield, first engage the lower left tab [3].**

5. To reinstall, reverse the order of removal.

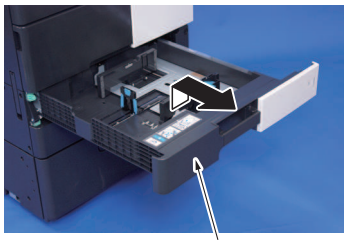
6.2.27 Tray 1

1. Slide out the tray 1 and unload paper from it.
2. Unlock the stopper [1].



[1]

3. Hold up the tray 1 [1] to remove it.

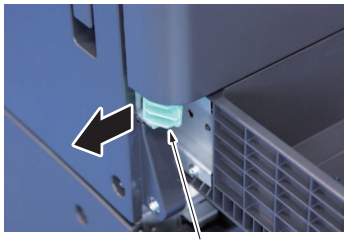


[1]

4. To reinstall, reverse the order of removal.

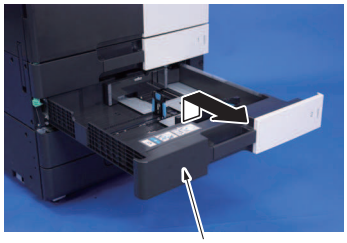
6.2.28 Tray 2

1. Slide out the tray 2 and unload paper from it.
2. Unlock the stopper [1].



[1]

3. Hold up the tray 2 [1] to remove it.



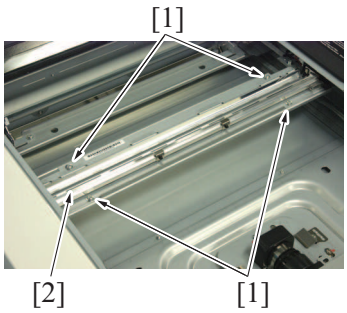
[1]

4. To reinstall, reverse the order of removal.

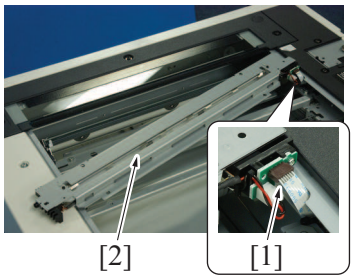
6.3 Disassembly/reassembly procedure (Units)

6.3.1 LED exposure unit

1. Remove the scanner right cover.
   G.6.2.2 Scanner right cover
2. Remove the original glass.
   G.6.2.11 Original glass



3. Remove four screws [1] from the LED exposure unit [2].



4. Disconnect the flat cable [1], and remove the LED exposure unit [2].

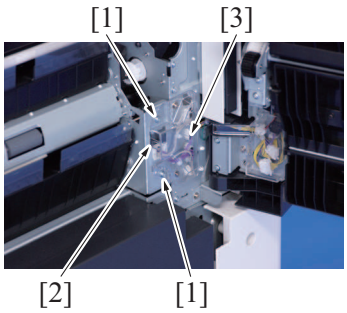
5. To reinstall, reverse the order of removal.

NOTE

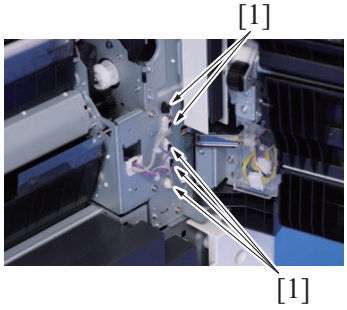
- **When replacing the LED exposure unit with a brand-new one, peel the protective film from the unit after attaching it.**

6.3.2 Paper feed unit

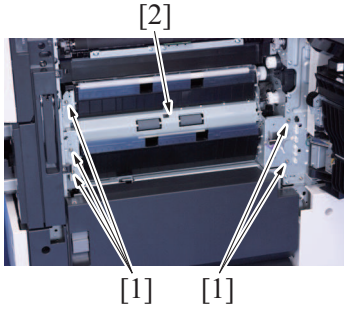
1. Slide out the tray 1 and tray 2.
2. Open the right door.



3. Remove two screws [1] and the tab [2], and remove the connector cover [3].



4. Disconnect five connectors [1].



5. Remove five screws [1], and remove the paper feed unit [2].

6. To reinstall, reverse the order of removal.

6.3.3 PH unit

⚠CAUTION

- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.

  The laser light can enter your eye, leading to a risk of loss of eyesight.

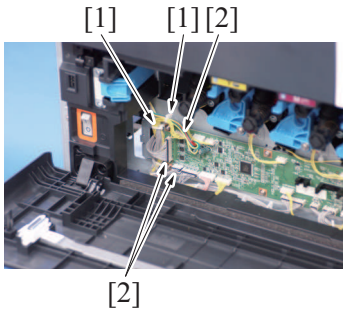
⚠CAUTION

- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.

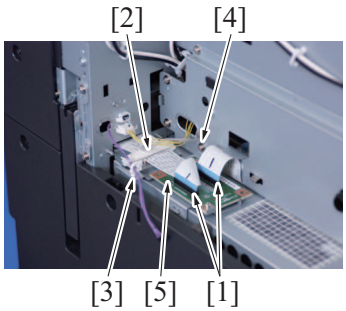
  The laser light can enter your eye, leading to a risk of loss of eyesight.

(1) Removal procedure

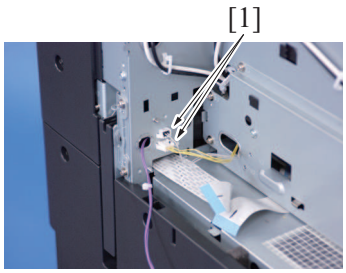
1. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
2. Remove the front lower cover.
   G.6.2.14 Front lower cover
3. Remove the left cover.
   G.6.2.16 Left cover
4. Remove the exit cover.
   G.6.2.17 Exit cover
5. Remove the DC power supply.
   G.6.4.5 DC power supply (DCPU)



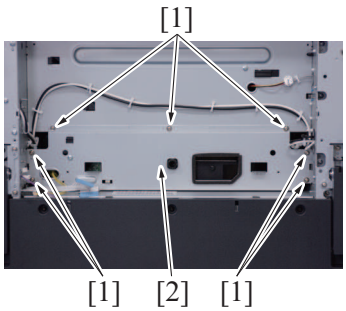
6. Remove the harness from two wire saddles [1].
7. Disconnect three connectors [2] on the front side board.



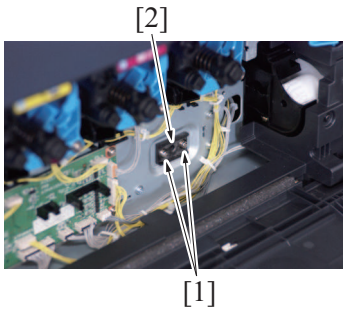
8. Disconnect two flat cables [1].
9. Remove the flat cable from the flat cable clamp [2].
10. Remove the harness from the wire saddle [3].
11. Remove the screw [4], and remove the board assy [5].



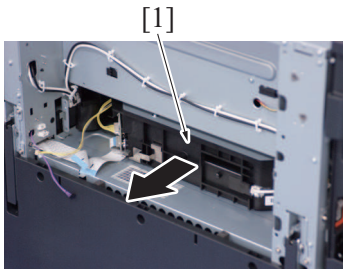
12. Disconnect two connectors [1].



13. Remove seven screws [1], and remove the metal plate [2].



14. Remove two screws [1], and remove the set pin [2] for the PH unit.

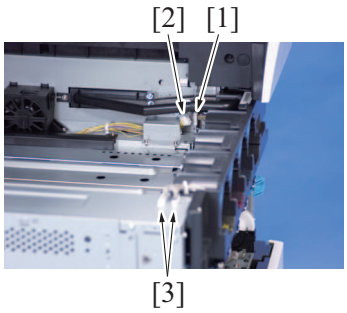


15. Remove the PH unit [1].

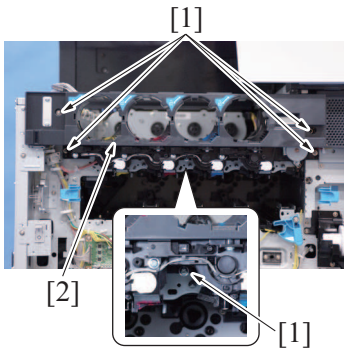
16. To reinstall, reverse the order of removal.
17. Perform the [Print Head Skew Reset] from [Service Mode] -> [Machine] -> [Print Head Skew Adj.].
18. Perform the [Leading Edge Adjustment] from [Service Mode] -> [Machine] -> [Printer Area].
19. Perform the [Printer Image Centering Side 1] from [Service Mode] -> [Machine] -> [Printer Area].

6.3.4 Sub hopper unit

1. Remove the upper front door.
   G.6.2.12 Upper front door
2. Remove the lower front door.
   G.6.2.13 Lower front door
3. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
4. Remove the front lower cover.
   G.6.2.14 Front lower cover
5. Remove the front cover.
   G.6.2.15 Front cover
6. Remove the toner cartridge.
   F.8.4.1 Replacing the toner cartridge
7. Remove the drum unit.
   F.8.2.1 Replacing the drum unit
8. Remove the developing unit.
   F.8.3.1 Replacing the developing unit
9. Remove the exit cover.
   G.6.2.17 Exit cover



10. Remove the harness from the wire saddle [1], and disconnect the connector [2].
11. Disconnect two connectors [3].

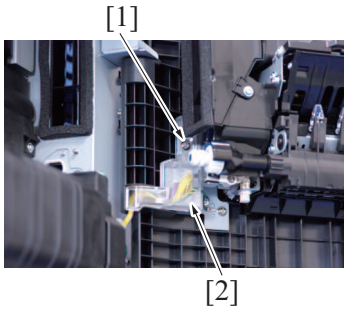


12. Remove five screws [1], and remove the sub hopper unit [2].

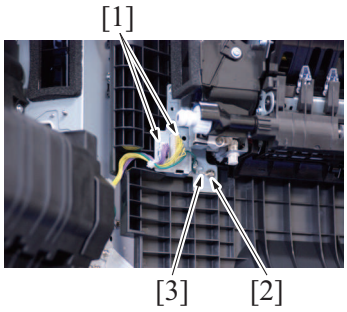
13. To reinstall, reverse the order of removal.

6.3.5 Right door unit

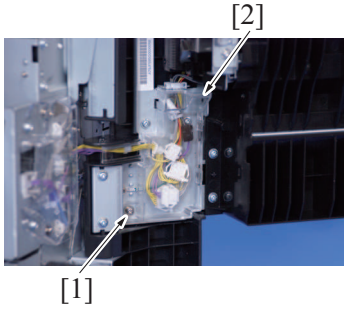
1. Remove the rear right cover.
   G.6.2.19 Rear right cover
2. Open the right door.
3. Open the registration unit.



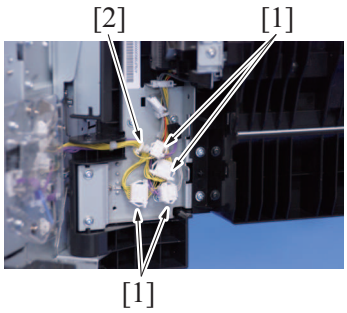
4. Remove the screw [1], and remove the connector cover/1 [2].



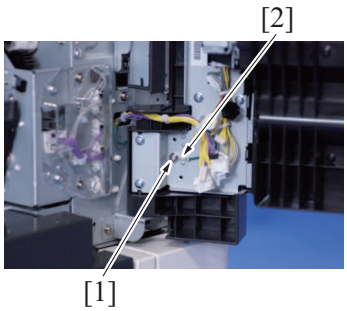
5. Disconnect two connectors [1].
6. Remove the screw [2], and remove the ground terminal [3].



7. Remove the screw [1], and remove the connector cover/2 [2].

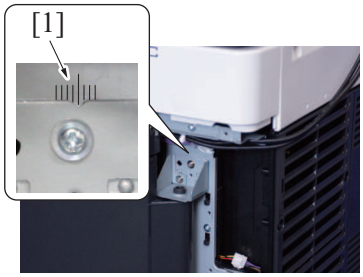


8. Disconnect four connectors [1], and remove the harness from the wire saddle [2].

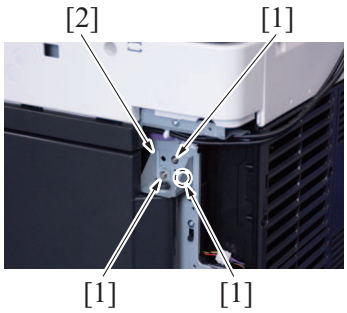


9. Remove the screw [1], and remove the ground terminal [2].

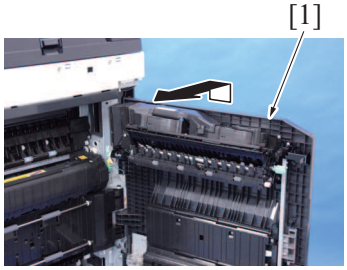
10. Close the right door.



11. Draw the gauge line to the hinge mounting part [1] along the cutout of the hinge on the frame of the main body.



12. Remove three screws [1], and remove the hinge (upper section) [2].
13. Open the right door and then open the registration unit.



14. Hold up the right door unit [1] to remove it.

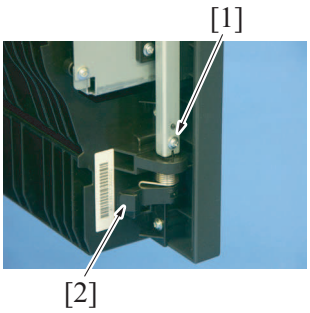
15. To reinstall, reverse the order of removal.

NOTE

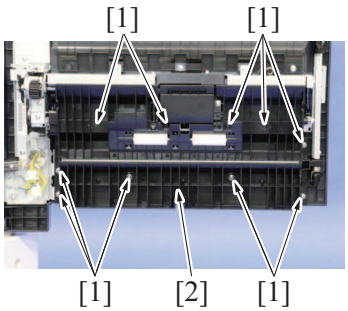
- **When installing the right door unit, align it with the guide lines drawn on the scales indicated on the machine frame. Open and close the right door to check for any interference and correct if necessary.**

6.3.6 Manual bypass tray unit

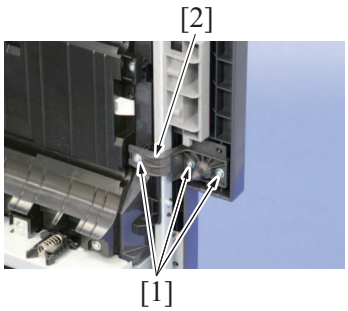
1. Open the right door.
2. Open the registration unit.



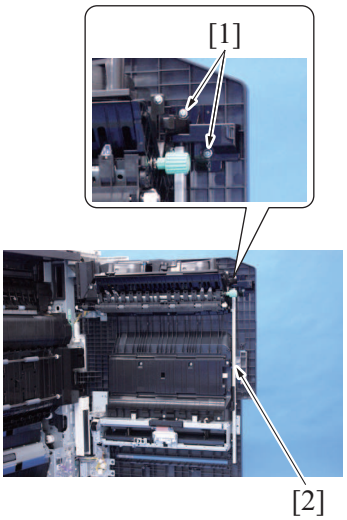
3. Remove the screw [1], and remove the shaft holder/1 [2].



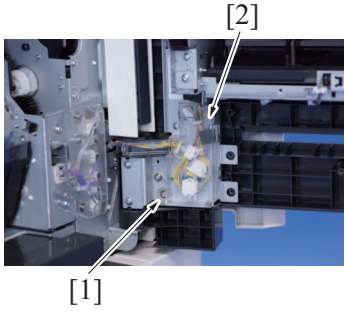
4. Remove 10 screws [1], and remove the vertical transport roll assy [2].



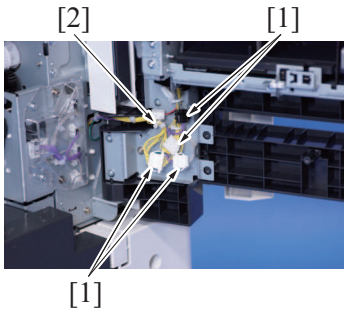
5. Remove three screws [1], and remove the shaft holder/2 [2].



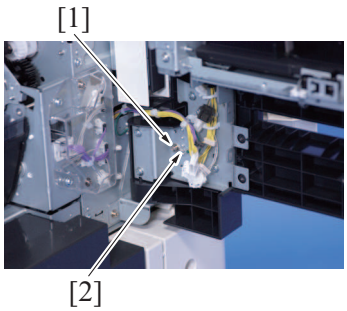
6. Remove two screws [1], and remove the right door lever assy [2].



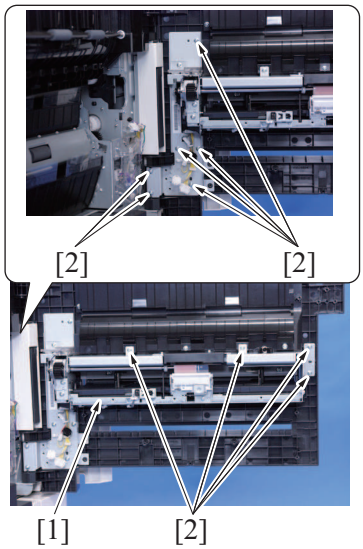
7. Remove the screw [1], and remove the connector cover [2].



8. Disconnect four connectors [1], and remove the harness from the wire saddle [2].

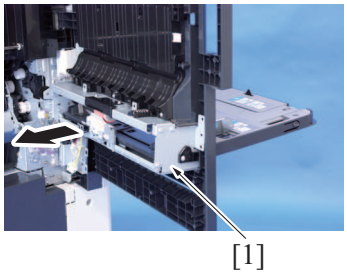


9. Remove the screw [1], and remove the ground terminal [2].



10. Remove 10 screws [2] of the manual bypass tray unit [1].

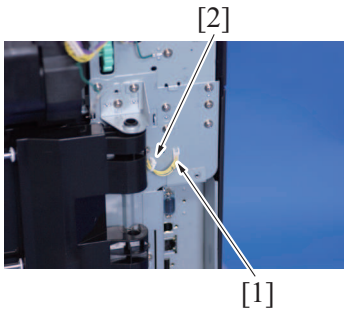
11. Remove the manual bypass tray unit [1].



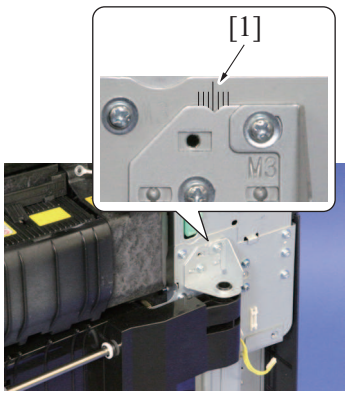
12. To reinstall, reverse the order of removal.

6.3.7 Regist unit

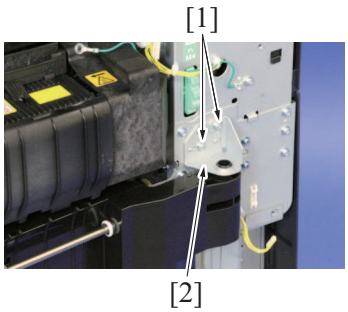
1. Remove the right door unit.
G.6.3.5 Right door unit



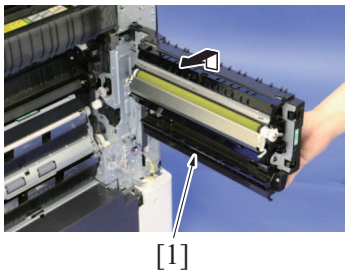
2. Disconnect the connector [1], and remove the harness from the wire saddle [2].



3. Draw the gauge line to the hinge mounting part [1] along the cutout of the hinge on the frame of the main body.



4. Remove two screws [1], and remove the hinge [2].

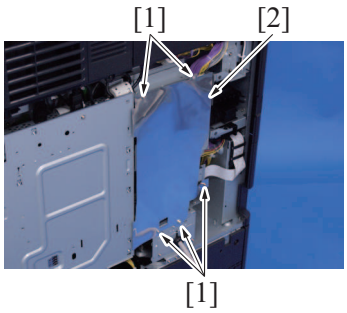


5. Hold up the regist unit [1] to remove it.

6. To reinstall, reverse the order of removal.

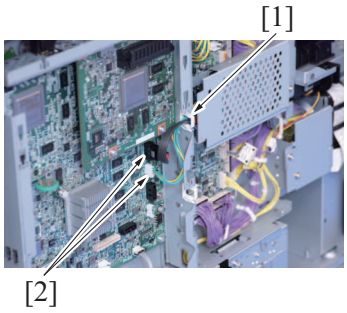
6.3.8 Hard disk (A)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover

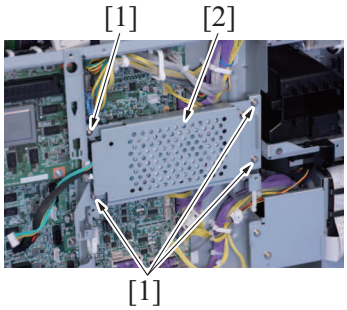


4. Remove five screws [1], and remove the aluminum sheet [2].

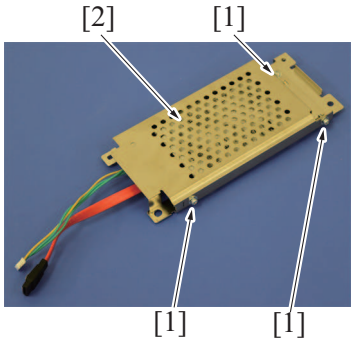
5. Remove the protective shield.
G.6.2.26 Protective shield



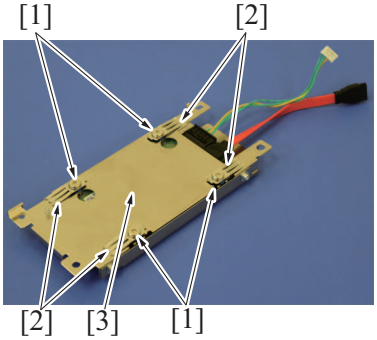
6. Remove the harness from the edge cover [1].
7. Disconnect two connectors [2].
NOTE
- **If the security kit SC-508 is installed, make sure the cable does not make contact with the DSC board when installing the connector [2].**



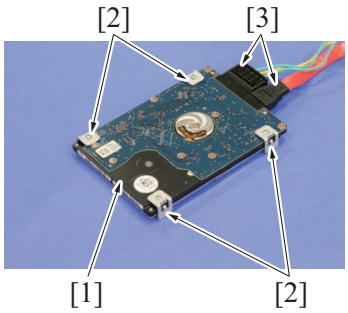
8. Remove four screws [1], and remove the hard disk assy [2].



9. Remove three screws [1], and remove the cover [2].



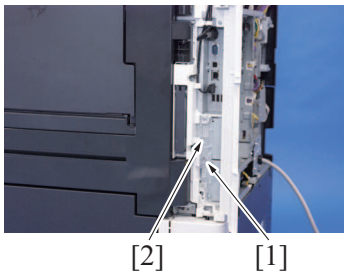
10. Remove four screws [1].
11. Remove four plate springs [2] and then remove the plate [3].



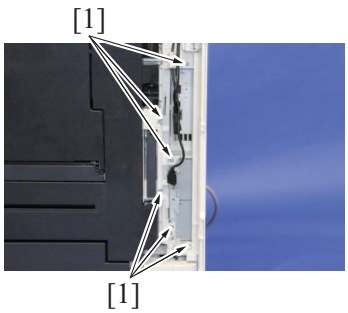
12. Remove four metal plates [2] and two connectors [3] from the hard disk [1].
13. To reinstall, reverse the order of removal.
14. Logically format the system from [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
15. Check the HDD operation from [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check].

6.3.9 How to open the PWB box/1

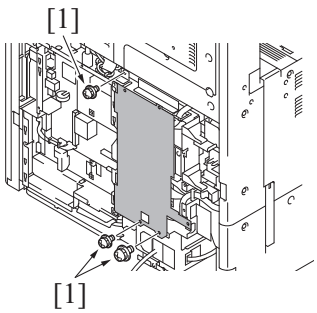
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield



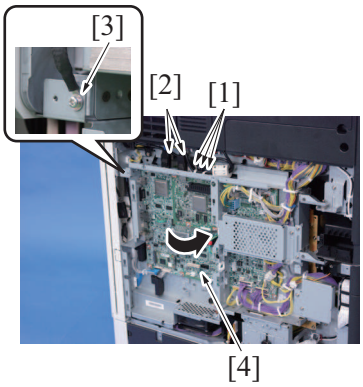
5. Disconnect all connectors from the PWB box/1 side panel.
6. Remove the screw [1], and remove the connector cover [2].



7. Remove six screws [1] from the PWB box/1 side panel.



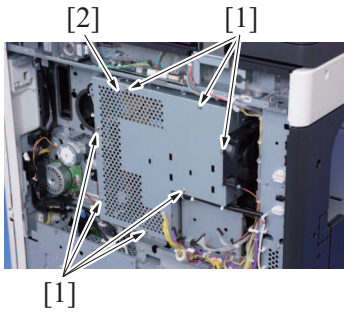
8. Remove three screws [1] from the PWB box/1.



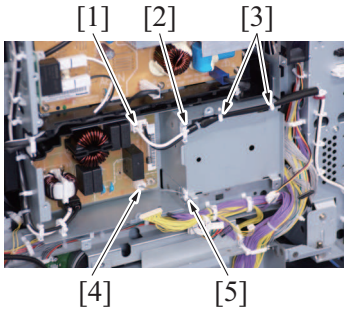
9. Remove the cable from three wire saddles [1].
10. Disconnect two connectors [2].
11. Remove the screw [3], and open the PWB box /1 [4].

6.3.10 PWB box/2 (bizhub C658/C558)

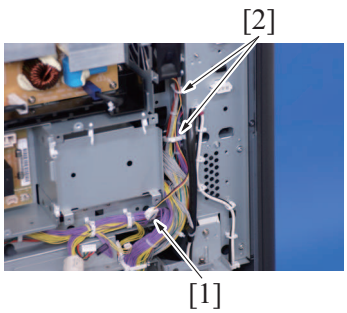
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)



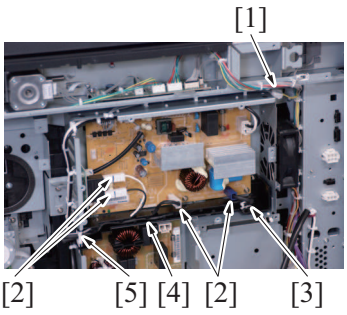
9. Remove seven screws [1], and remove the IH power supply protective shield [2].



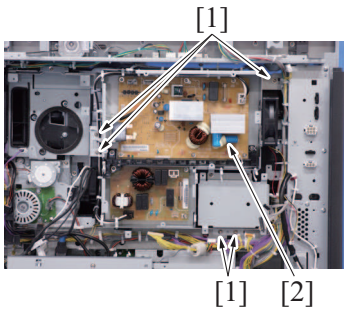
10. Disconnect the connector [1], and remove the harness from the edge cover [2] and two wire saddles [3].
11. Disconnect the connector [4], and remove the harness from the edge cover [5].



12. Disconnect the connector [1], and remove the harness from two wire saddles [2].



13. Disconnect the connector [1].
14. Remove four solderless terminals [2].
15. Remove the harness from the wire saddle [3].
16. Remove the harness from the harness guide [4] and edge cover [5].

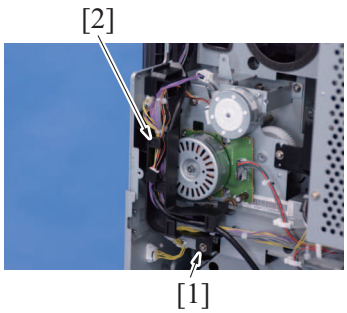


17. Remove five screws [1], and remove two board boxes [2].

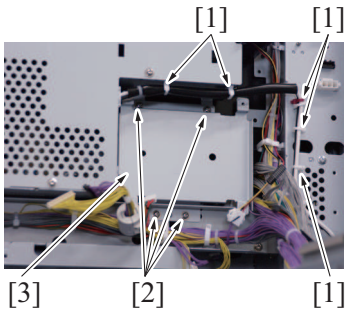
18. To reinstall, reverse the order of removal.

6.3.11 Main drive unit

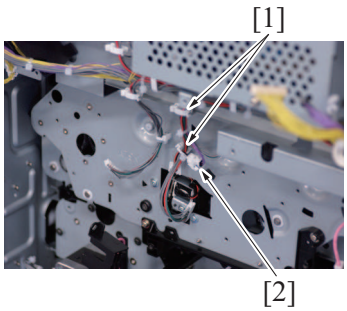
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
9. Remove the protective shield.
   G.6.2.26 Protective shield
10. Open the PWB box.
    G.6.3.9 How to open the PWB box/1
11. Remove the high voltage unit.
    G.6.4.11 High voltage unit (HV)
12. Remove the expansion control board.
    G.6.4.12 Expansion control board (EXCB)
13. Remove the registration motor.
    G.6.5.21 Registration motor (M24) (bizhub C658)
14. Remove the ADU transport motor 2.
    G.6.5.24 ADU transport motor2 (M26)
15. Remove the transport motor.
    G.6.5.1 Transport motor (M1)
16. Remove the PC motor.
    G.6.5.2 PC motor (M2)
17. Remove the developing motor.
    G.6.5.18 Developing motor (M21)



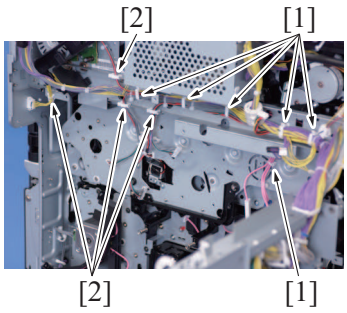
18. Remove the screw [1].
19. Remove the harness guide [2] as clearing the harness.



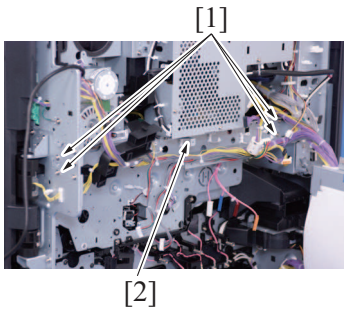
20. Remove the cable from five wire saddles [1].
21. Remove four screws [2], and remove the plate [3].



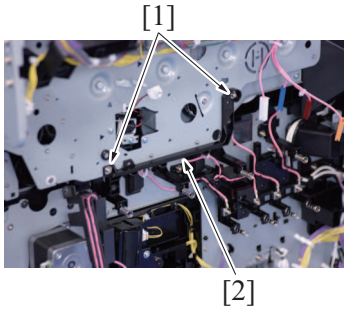
22. Remove the harness from two wire saddles [1].
23. Disconnect the connector [2].



24. Remove the harness from six wire saddles [1] and four edge covers [2].



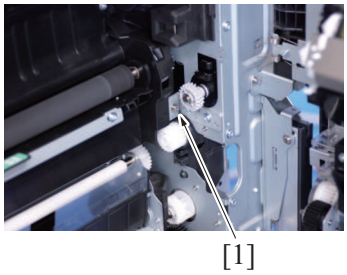
25. Remove four screws [1].
26. Remove the reinforcing plate [2] as clearing the harness.



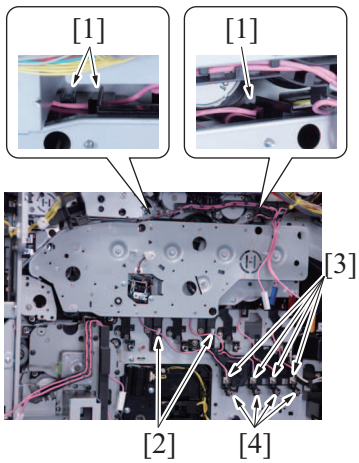
27. Remove two screws [1], and remove the bracket [2].

28. Open the right door.

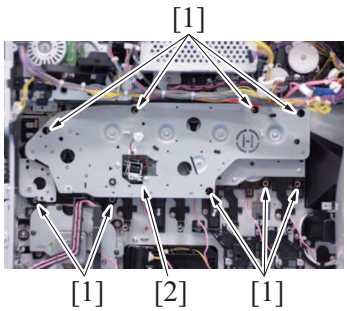
29. Remove the screw [1].



30. Remove the harness from three harness guides [1].
31. Remove the harness from two wire saddles [2].
32. Remove four screws [3], and remove the harness from the harness guide.
    NOTE
    - **Make sure not to lose the spring [4].**



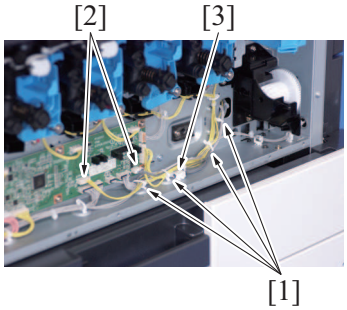
33. Remove nine screws [1], and remove the main drive unit [2].



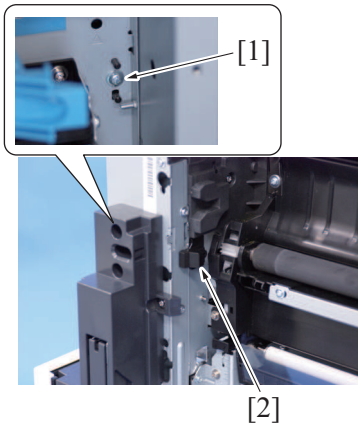
34. To reinstall, reverse the order of removal.

6.3.12 Transport unit

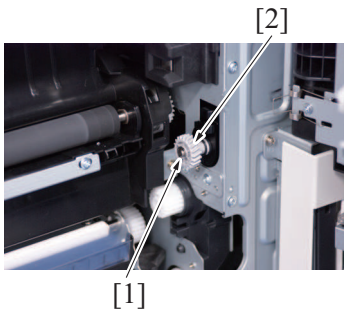
1. Remove the transfer belt unit.
   F.8.5.3 Replacing the transfer belt unit
2. Remove the upper front door.
   G.6.2.12 Upper front door
3. Remove the lower front door.
   G.6.2.13 Lower front door
4. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
5. Remove the front lower cover.
   G.6.2.14 Front lower cover
6. Remove the front cover.
   G.6.2.15 Front cover



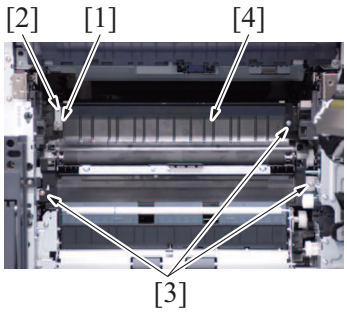
7. Remove the harness from four wire saddles [1].
8. Disconnect two connectors (CN8, CN11) [2] on the front side board.
9. Disconnect the connector [3].
10. Open the right door.



11. Remove the screw [1], and remove the stopper [2].



12. Remove the E-ring [1], and remove the gear [2].

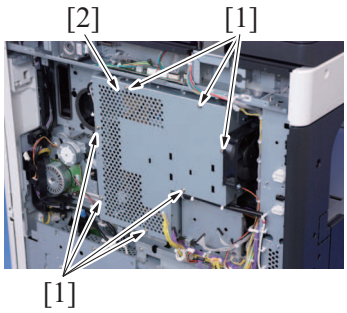


13. Remove the screw [1], and remove the plate spring [2].
14. Remove three screws [3], and remove the transport unit [4].
NOTE
- **When removing the transport unit [4], be careful not to damage or deform the guide sheet of the tray 1 paper feed unit.**

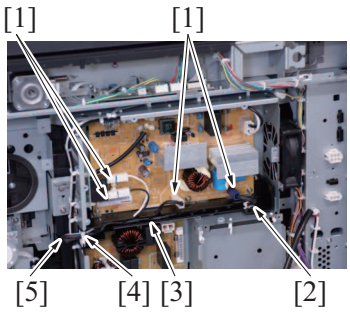
15. To reinstall, reverse the order of removal.

6.3.13 IH coil (IHC) (bizhub C658/C558)

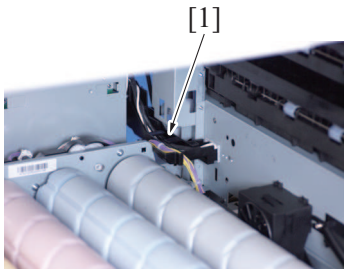
1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
2. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
3. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
4. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
5. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
6. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
7. Remove the DF cable cover.
   G.6.2.22 DF cable cover
8. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
9. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
10. Remove the left cover.
    G.6.2.16 Left cover
11. Remove the exit cover.
    G.6.2.17 Exit cover
12. Remove the output rear cover.
    G.6.2.18 Output rear cover



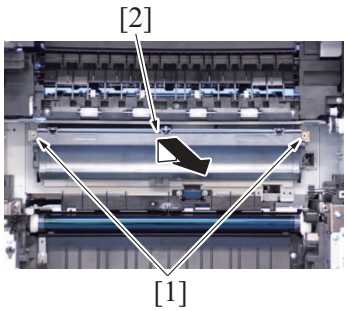
13. Remove seven screws [1], and remove the IH power supply protective shield [2].



14. Remove four solderless terminals [1].
15. Remove the harness from the wire saddle [2].
16. Remove the harness from the harness guide [3] and edge cover [4].
17. Remove the harness from the harness guide [5].



18. Remove the harness from the harness guide [1].



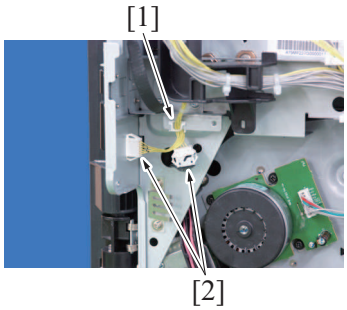
19. Remove two screws [1].
20. Remove the bracket in accordance with the procedure in the figure of the IH coil [2].
21. Remove the IH coil [2] while pulling the harness loose.

22. To reinstall, reverse the order of removal.

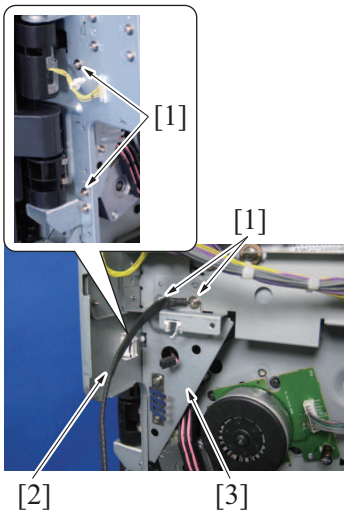
6.3.14 Fusing drive unit (bizhub C658/C558)

1. Remove the rear right cover.
   G.6.2.19 Rear right cover
2. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
3. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
4. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
5. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
6. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
7. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
8. Remove the DF cable cover.
   G.6.2.22 DF cable cover
9. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
10. Remove the paper cooling fan assy.
    G.5.7.5 Paper cooling fan (FM8)

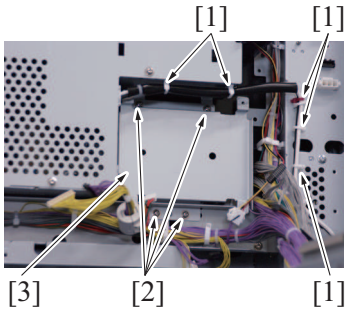
11. Remove the protective shield.
    G.6.2.26 Protective shield
12. Open the PWB box/1.
    G.6.3.9 How to open the PWB box/1
13. Remove the left cover.
    G.6.2.16 Left cover
14. Remove the exit cover.
    G.6.2.17 Exit cover
15. Remove the output rear cover.
    G.6.2.18 Output rear cover
16. Remove the expansion control board.
    G.6.4.12 Expansion control board (EXCB)
17. Remove the fusing motor.
    G.6.5.3 Fusing motor (M3)
18. Remove the fusing pressure motor.
    G.6.5.15 Fusing pressure motor (M11)



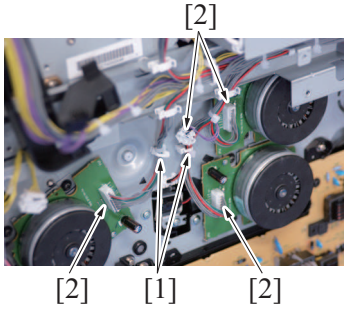
19. Remove the harness from the edge cover [1], and disconnect two connectors [2].



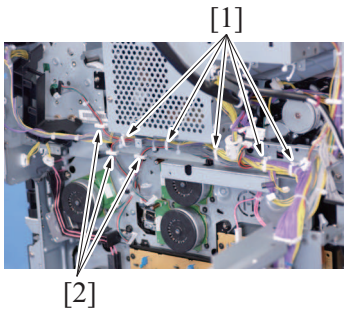
20. Remove four screws [1], the ground terminal [2], and remove the plate [3].



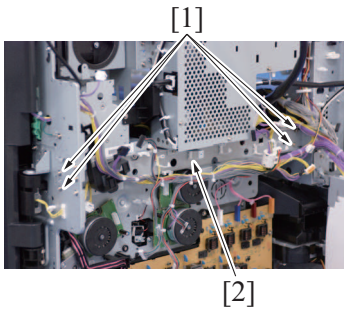
21. Remove the cable from five saddles [1].
22. Remove four screws [2], and remove the plate [3].



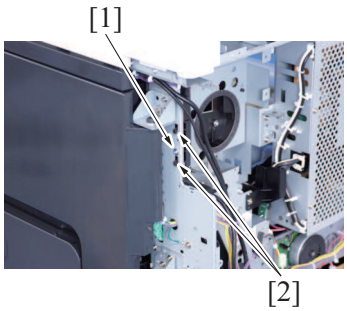
23. Remove the harness from two wire saddles [1].
24. Disconnect four connectors [2].



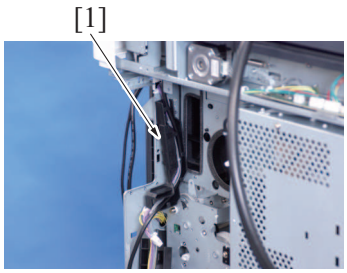
25. Remove the harness from five wire saddles [1] and three edge covers [2].



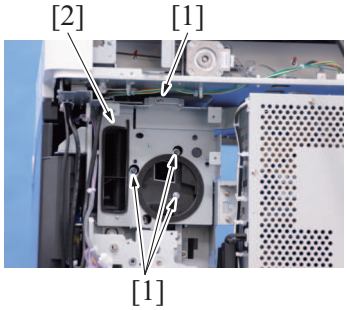
26. Remove four screws [1].
27. Remove the reinforcing plate [2] as clearing the harness.



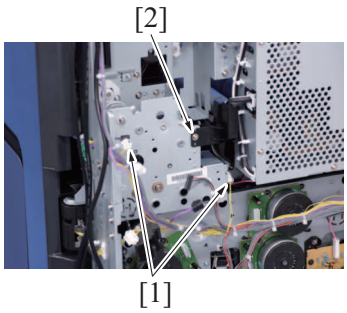
28. Remove the screw [1], and remove two tabs [2].



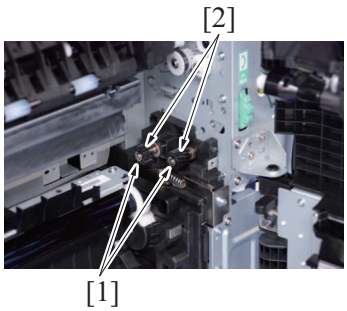
29. Remove the harness guide [1] while avoiding the harness.



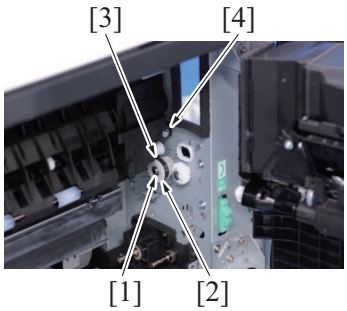
30. Remove four screws [1], and remove the duct assy [2].



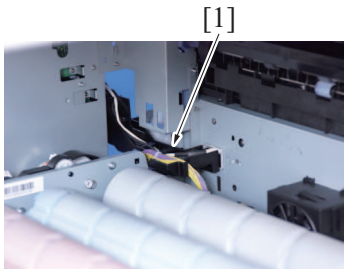
31. Disconnect two connectors [1].
32. Remove the screw [2].



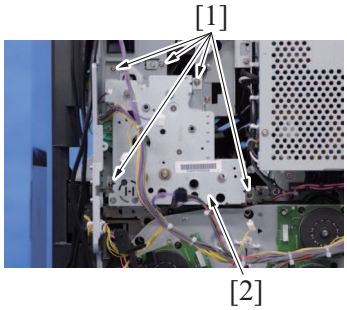
33. Remove two E-rings [1], and remove two gears [2].



34. Remove the E-ring [1], and remove the flange [2].
35. Remove the belt [3] from the gear.
36. Remove the screw [4].



37. Remove the harness from the harness guide [1].



38. Remove five screws [1], and remove the fusing drive unit [2].

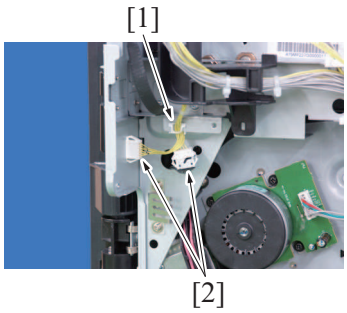
39. To reinstall, reverse the order of removal.

6.3.15 Fusing drive unit (bizhub C458)

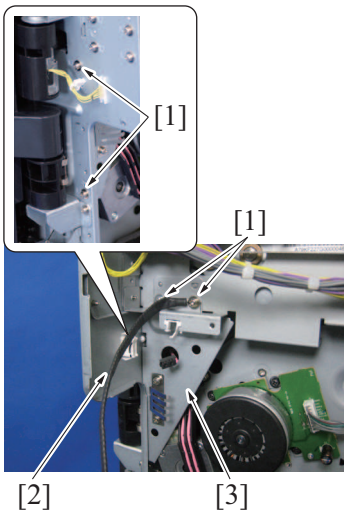
1. Remove the rear right cover.
   G.6.2.19 Rear right cover
2. Remove the fusing unit.
   F.8.10.2 Replacing the fusing unit (bizhub C458)
3. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
4. Remove the toner filter.

F.8.1.1 Replacing the toner filter

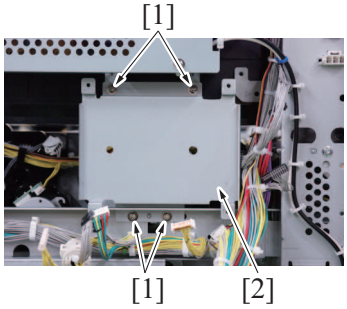
5. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
6. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
7. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
8. Remove the DF cable cover.
   G.6.2.22 DF cable cover
9. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
10. Remove the paper cooling fan assy.
    G.6.7.7 Paper cooling fan (FM8)
11. Remove the toner cartridge cooling fan assy.
    G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)
12. Remove the protective shield.
    G.6.2.26 Protective shield
13. Open the PWB box/1.
    G.6.3.9 How to open the PWB box/1
14. Remove the expansion control board.
    G.6.4.12 Expansion control board (EXCB)
15. Remove the fusing motor.
    G.6.5.3 Fusing motor (M3)
16. Remove the fusing pressure motor.
    G.6.5.15 Fusing pressure motor (M11)



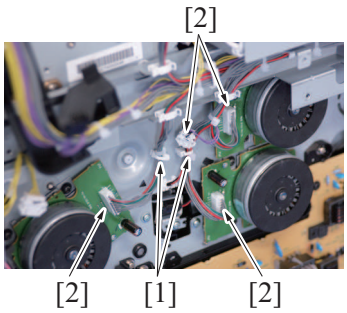
17. Remove the harness from the edge cover [1], and disconnect two connectors [2].



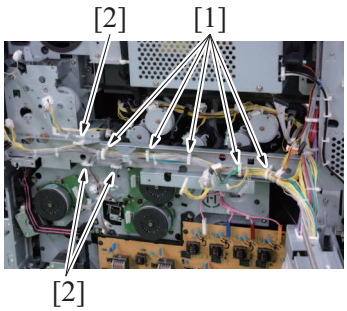
18. Remove four screws [1], the ground terminal [2], and remove the plate [3].



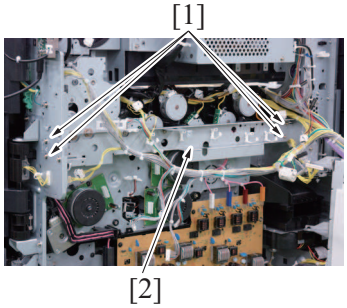
19. Remove four screws [1], and remove the plate [2].



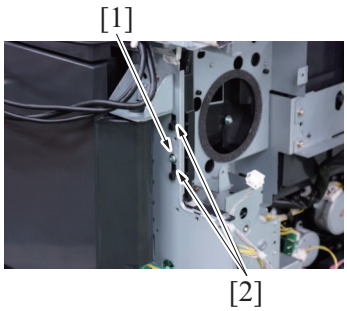
20. Remove the harness from two wire saddles [1].
21. Disconnect four connectors [2].



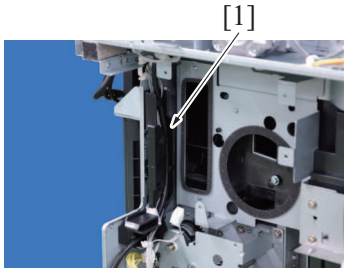
22. Remove the harness from five wire saddles [1] and three edge covers [2].



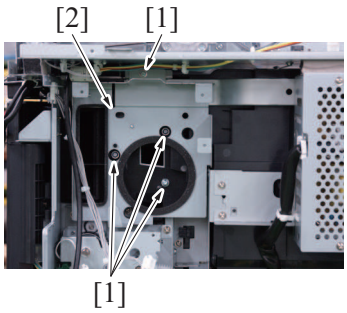
23. Remove four screws [1].
24. Remove the reinforcing plate [2] as clearing the harness.



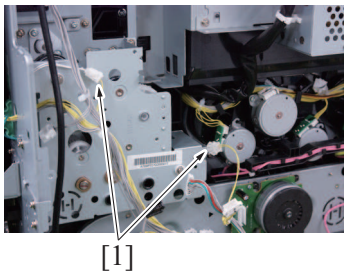
25. Remove the screw [1], and remove two tabs [2].



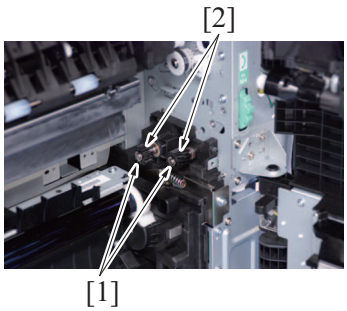
26. Remove the harness guide [1] while avoiding the harness.



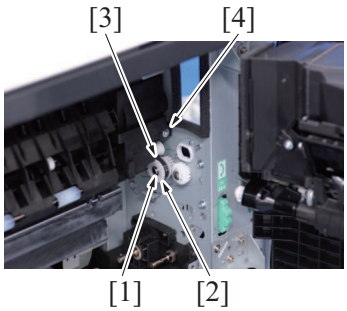
27. Remove four screws [1], and remove the duct assy [2].



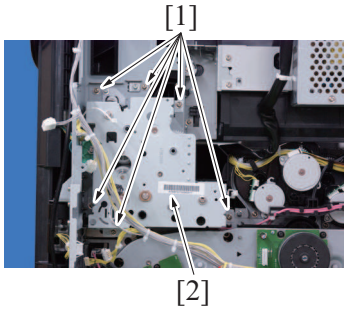
28. Disconnect two connectors [1].



29. Remove two E-rings [1], and remove two gears [2].



30. Remove the E-ring [1], and remove the flange [2].
31. Remove the belt [3] from the gear.
32. Remove the screw [4].



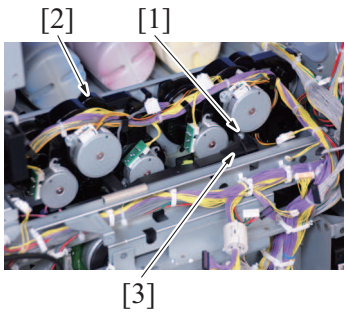
33. Remove six screws [1], and remove the fusing drive unit [2].

34. To reinstall, reverse the order of removal.

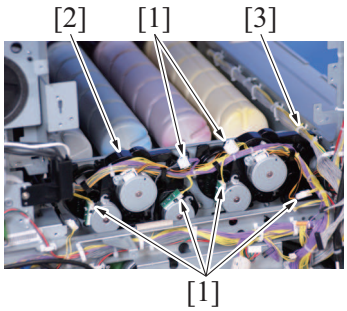
6.3.16 Hopper drive unit (bizhub C658/C558)

1. Slide out the toner bottle.
2. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
3. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
4. Remove the lower rear cover.
   G.6.2.21 Lower rear cover

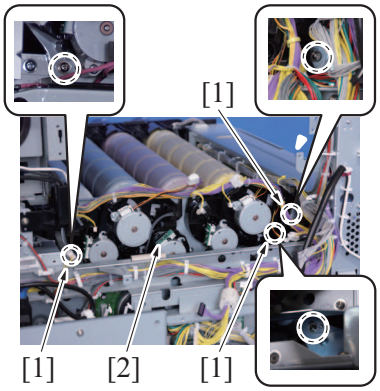
5. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
6. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
7. Remove the DF cable cover.
   G.6.2.22 DF cable cover
8. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
9. Remove the paper cooling fan assy.
   G.5.7.5 Paper cooling fan (FM8)
10. Remove the board box/2.
    G.6.3.10 PWB box/2 (bizhub C658/C558)
11. Remove the left cover.
    G.6.2.16 Left cover
12. Remove the exit cover.
    G.6.2.17 Exit cover
13. Remove the output rear cover.
    G.6.2.18 Output rear cover



14. Remove the screw [1], and remove the harness guide [3] from the hopper drive unit [2].



15. Disconnect six connectors [1], and remove the harness from all harness guides in the hopper drive unit [2].
16. Remove the harness from the wire saddle [3].

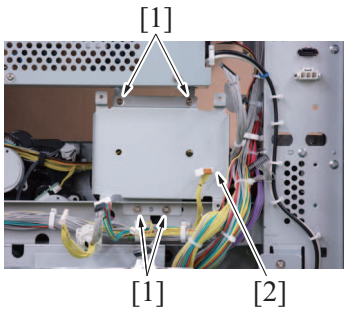


17. Remove three screws [1], and remove the hopper drive unit [2].
18. To reinstall, reverse the order of removal.

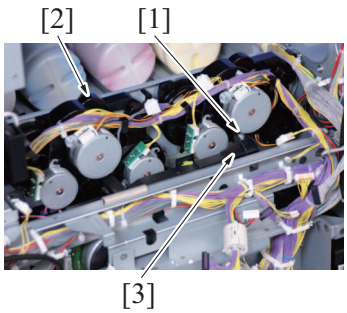
6.3.17 Hopper drive unit (bizhub C458)

1. Slide out the toner bottle.
2. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
3. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
4. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
5. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
6. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
7. Remove the DF cable cover.
   G.6.2.22 DF cable cover

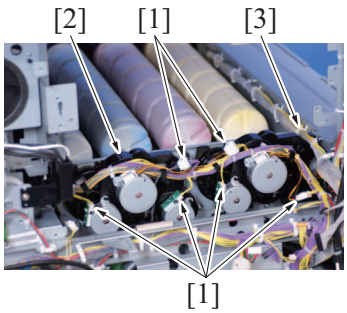
8. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
9. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
10. Remove the toner cartridge cooling fan.
    G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)
11. Remove the left cover.
    G.6.2.16 Left cover
12. Remove the exit cover.
    G.6.2.17 Exit cover
13. Remove the output rear cover.
    G.6.2.18 Output rear cover
14. Remove the expansion control board.
    G.6.4.12 Expansion control board (EXCB)



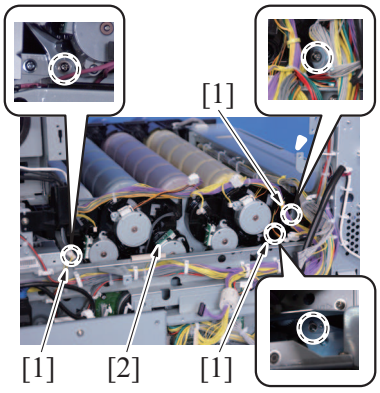
15. Remove four screws [1], and remove the plate [2].



16. Remove the screw [1], and remove the harness guide [3] from the hopper drive unit [2].



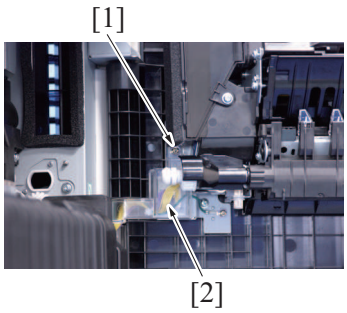
17. Disconnect six connectors [1], and remove the harness from all harness guides of hopper drive unit [2].
18. Remove the harness from the wire saddle [3].



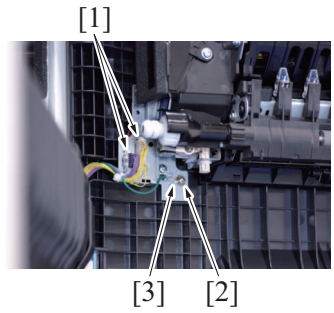
19. Remove three screws [3], and remove the hopper drive unit [2].
20. To reinstall, reverse the order of removal.

6.3.18 ADU transport unit

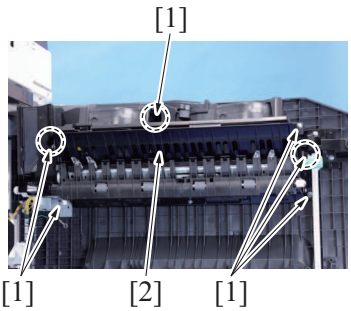
1. Open the right door.



2. Remove the screw [1], and remove the connector cover [2].



3. Disconnect two connectors [1].
4. Remove the screw [2], and remove the ground terminal [3].

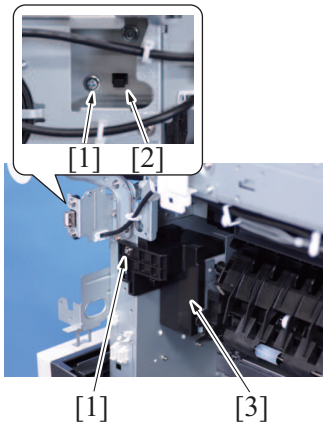


5. Remove six screws [1], and remove the ADU transport unit [2].

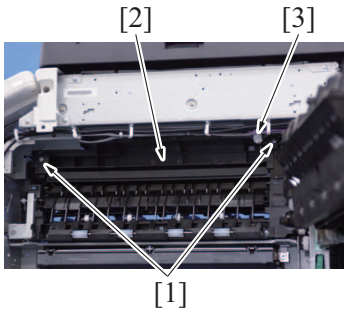
6. To reinstall, reverse the order of removal.

6.3.19 Paper exit unit

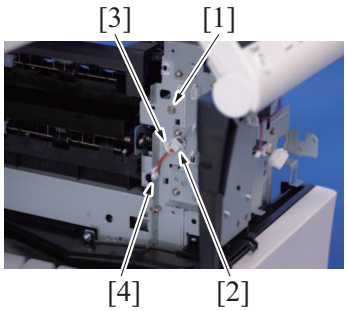
1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
   F.8.10.2 Replacing the fusing unit (bizhub C458)
2. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
3. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover
5. Remove the upper right cover.
   G.6.2.20 Upper right cover



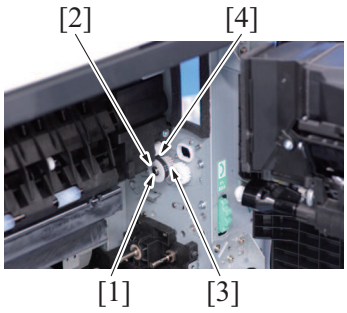
6. Remove two screws [1] and the tab [2], and remove the cover [3].



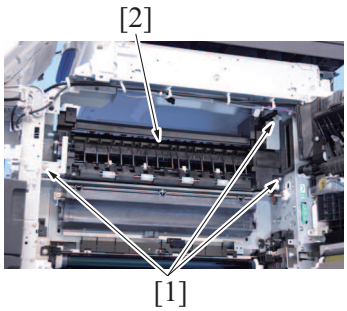
7. Remove two screws [1], and remove the cover [2].
8. Disconnect the connector [3].



9. Remove the screw [1].
10. Disconnect the connector [2], and remove the harness from the wire saddle [3] and the edge cover [4].



11. Remove the E-ring [1], and remove the flange [2].
12. Remove the belt [4] from the gear [3], and remove the gear [3].



13. Remove three screws [1], and remove the exit unit [2].

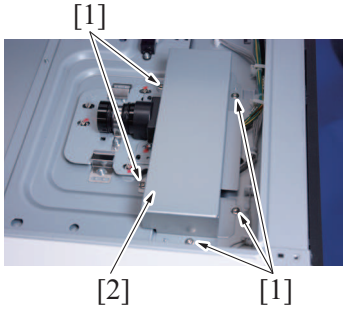
14. To reinstall, reverse the order of removal.

6.4 Disassembly/reassembly procedure (Boards)

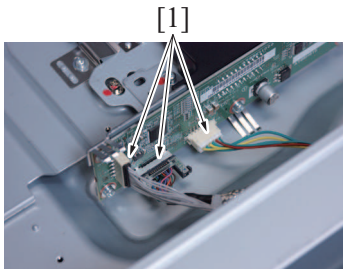
6.4.1 CCD board (CCDB)

(1) Removal procedure

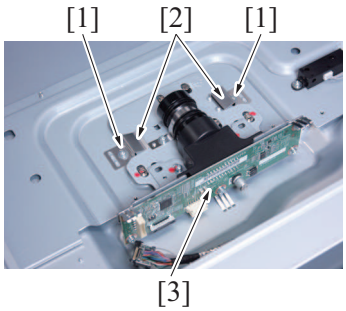
1. Remove the scanner right cover.
   G.6.2.2 Scanner right cover
2. Remove the original glass.
   G.6.2.11 Original glass



3. Remove five screws [1], and remove the CCD board protective shield [2].

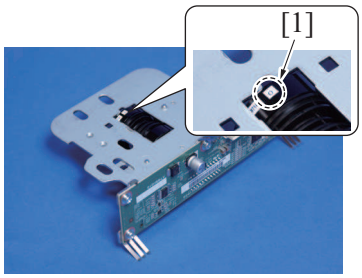


4. Disconnect three connectors [1].

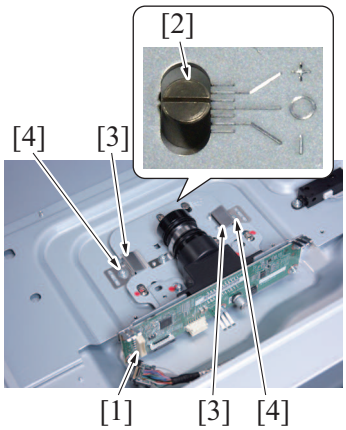


5. Remove two screws [1], and remove two retainer plates [2].
6. Remove the CCD board [3].

(2) Reinstall procedure



1. Check the mark [1] on lens of the CCD board.
   NOTE
   - **The mark is be "-", "0", or "+".**



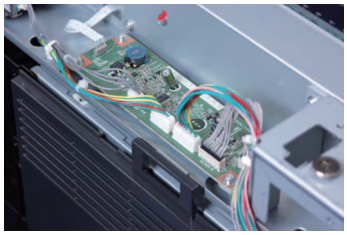
2. Install the CCD board [1] to the main body.
3. Set the scale [2] of the CCD board to the same position as the mark checked on step 1, and secure it with two retainer plates [3] and two screws [4].
4. For the rest of the mounting procedure, reverse the order of removal.
5. Reinstall the original glass.
6. Turn ON the main power switch.
7. Make adjustments from [Service Mode] -> [System 2] -> [CCD Calibration].
8. Make adjustments from [Service Mode] -> [System 2] -> [Line Mag Setting].
9. Make adjustments from [Service Mode] -> [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].
10. Make adjustments from [Service Mode] -> [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.]. If the specifications do not match, loosen the CCD board mounting screws and move the CCD board in the sub scan direction as necessary.
    NOTE
    - **Hold the CCD board by hand when moving it. NEVER use a screwdriver or similar tool to tap to move it, as a varied distance between the CCD sensor and lens results.**
11. Make adjustments from [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge].

6.4.2 Scanner drive board (SCDB)

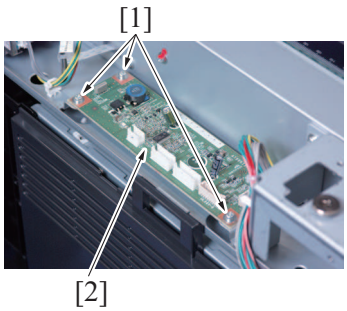
1. Remove the dual scan document feeder.
   G.7.2.6 Dual scan document feeder
2. Remove the scanner left cover.

G.6.2.4 Scanner left cover

3. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
4. Remove the scanner upper rear cover.
   G.6.2.5 Scanner upper rear cover



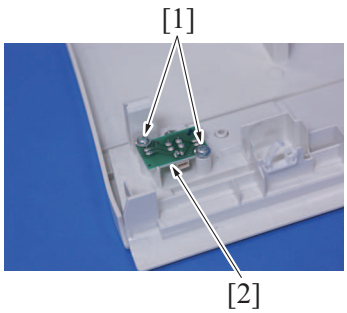
5. Disconnect all connectors on the scanner drive board.



6. Remove three screws [1], and remove the scanner drive board [2].
7. To reinstall, reverse the order of removal.

6.4.3 Machine condition monitor board (MCMB)

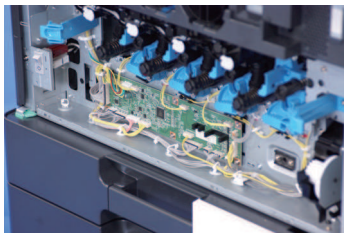
1. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
2. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
3. Remove the control panel front cover.
   G.6.2.9 Control panel front cover



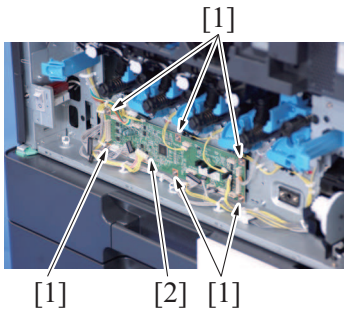
4. Remove two screws [1], and remove the machine condition monitor board [2].
5. To reinstall, reverse the order of removal.

6.4.4 Front side board (FRB)

1. Remove the front lower cover.
   G.6.2.14 Front lower cover



2. Disconnect all connectors on the front side board.

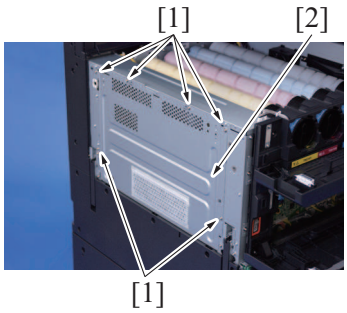


3. Remove six screws [1], and remove the front side board [2].

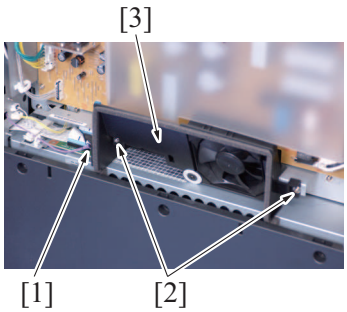
4. To reinstall, reverse the order of removal.

6.4.5 DC power supply (DCPU)

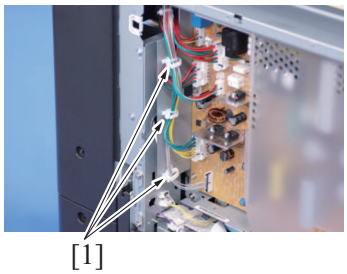
1. Remove the left cover.
   G.6.2.16 Left cover
2. Remove the exit cover.
   G.6.2.17 Exit cover



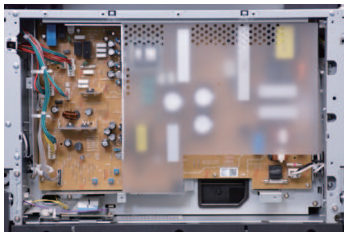
3. Remove six screws [1], and remove the DC power supply protective shield [2].



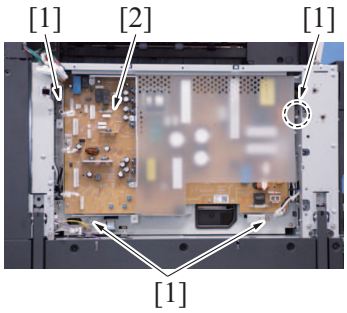
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the power supply cooling fan assy [3].



6. Remove the harness from three wire saddles [1].



7. Disconnect all connectors on the DC power supply.

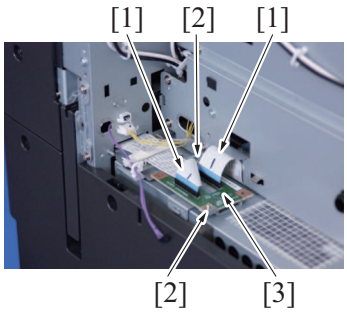


8. Remove four screws [1], and remove the DC power supply [2].

9. To reinstall, reverse the order of removal.

6.4.6 PH relay board (PHRYB)

1. Remove the left cover.
   G.6.2.16 Left cover



2. Disconnect two flat cables [1].
3. Remove two screws [2], and remove the PH relay board [3].

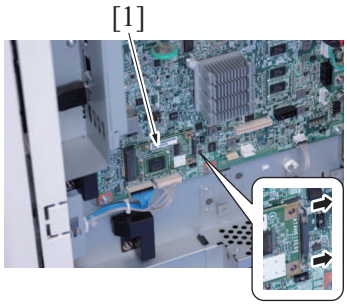
4. To reinstall, reverse the order of removal.

6.4.7 eMMC board (eMMC)

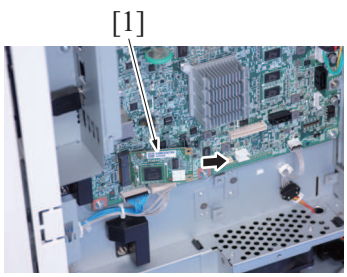
NOTE

- **Never use the combination of the used eMMC board removed from another machine and the original MFP board. This combination causes corruption of stored data.**
  Note that the combination of the original eMMC board and the used MFP board removed from another machine also causes the same problem.

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield



5. Release the lock of the eMMC board [1].
   NOTE
   - **Be careful not to drop the eMMC board.**



6. Remove the eMMC board [1].

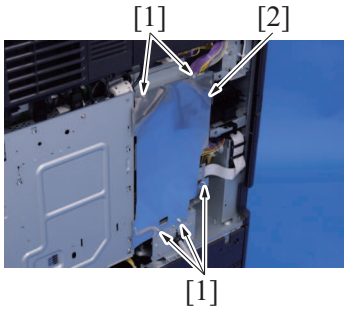
7. To reinstall, reverse the order of removal.

6.4.8 MFP board (MFPB)

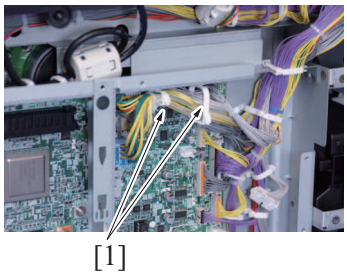
NOTE

- **Never use the combination of the used MFP board removed from another machine and the original eMMC board or EEPROM. This combination causes corruption of stored data. Note that the combination of the original MFP board and the used eMMC board or EEPROM removed from another machine also causes the same problem.**
- **Do not replace the MFP board and the eMMC board or EEPROM with new ones at the same time.**

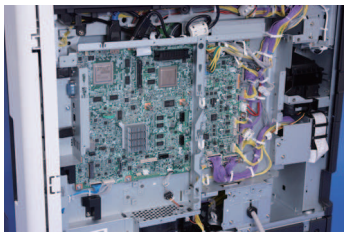
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove five screws [1], and remove the aluminum sheet [2].



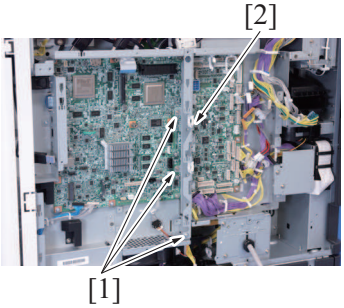
5. Remove the protective shield.
   G.6.2.26 Protective shield
6. Remove the hard disk.
   G.6.3.8 Hard disk (A)
7. Remove the eMMC board.
   G.6.4.7 eMMC board (eMMC)
8. Remove the image processing board.
   G.6.4.13 Dual scan image processing board (DSIPB)
9. Remove the harness from two wire saddles [1].

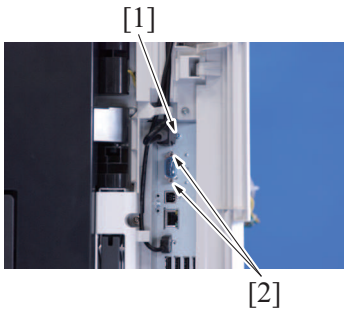


10. Remove all connectors and flat cables on the MFP board.

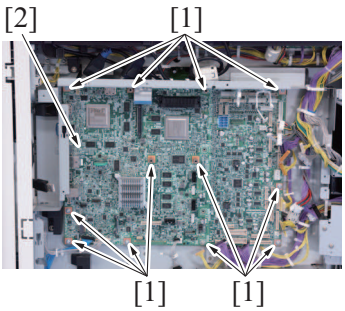


11. Remove three screws [1], and remove the plate [2].

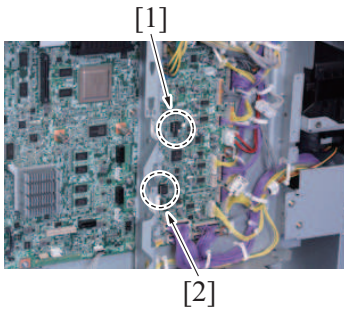




12. Remove the screw [1] and two bolts [2] of the MFP board side panel.

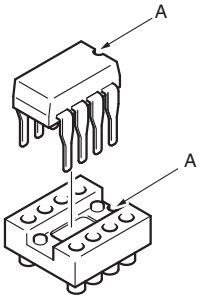


13. Remove 12 screws [1], and remove the MFP board [2].
14. To reinstall, reverse the order of removal.



15. **NOTE**

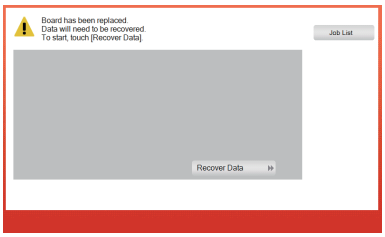
- **After replacing the MFP board (MFPB), transfer EEPROM/1 and EEPROM/2.**
- **Mark the EEPROMs to before replacing. Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other.**
- **Marks should be helpful to making easy distinction regardless of the style of them.**
- **When replacing EEPROM/1 [1], EEPROM/2 [2], replace them one at a time to prevent a mix-up in the device positions.**
- **When mounting EEPROM , align the notches (indicated by "A" in the illustration).**



16. Enter the model information after replacing the MFP board.
G.6.4.9 Entering the machine type information
17. Turn OFF the main power switch.
18. Wait ten seconds and then turn on the main power switch.
19. Install the firmware.
J.3.2 Procedure
20. Turn OFF the main power switch, and remove the USB memory.
21. Wait 10 seconds, turn ON the main power switch and wait 2 minutes until boot up the machine completely.



22. Wait until [Recover Data] [1] appears. (MFP will reboot maximum 2 times by itself, it may take 5 minutes.)



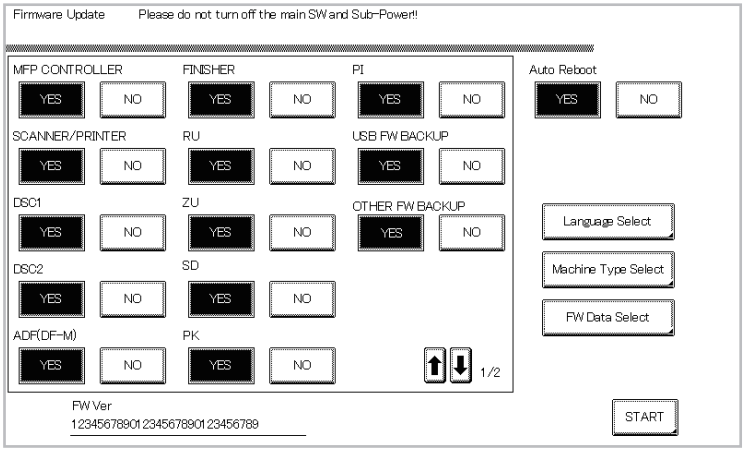
23. Touch [Recover Data] and [Yes].
24. Turn OFF the main power switch, wait 10 seconds, then turn ON the main power switch, after “Turn the main switch OFF and ON.” message is appeared.

6.4.9 Entering the machine type information

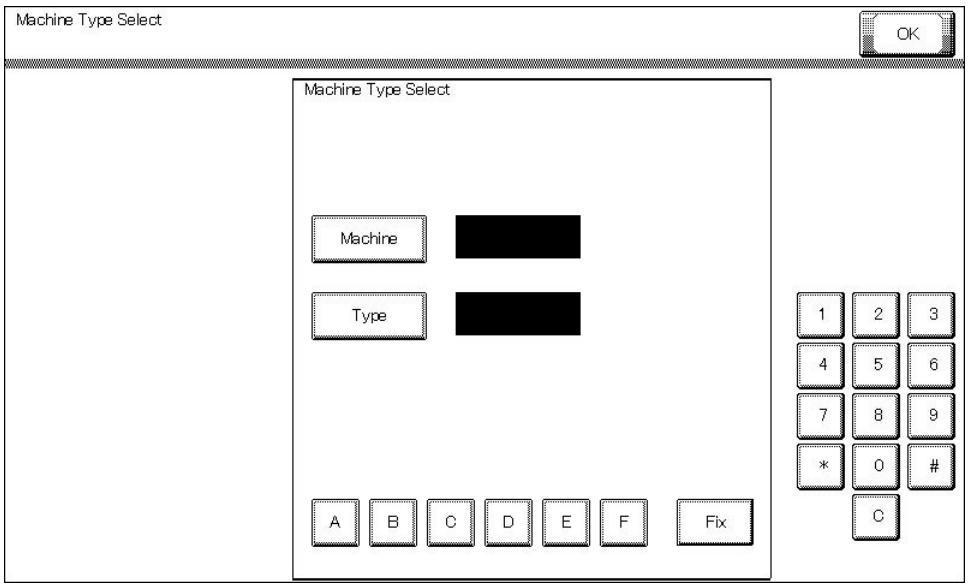
- When MFP board is replaced, it is necessary to enter the machine type information.
- Refer to the following procedures to enter the machine type information.

(1) Procedure

1. Insert the USB memory to the USB port.
2. Turn the main power switch ON while pressing the Stop key.
3. Touch [Machine Type Select].



4. Enter [Machine] and [Type] information according to the Table : Machine type information. Then touch [Fix].



5. Touch [OK], and turn OFF the main power switch.

Table : Machine type information

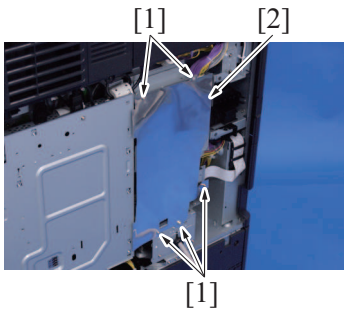
First four digits of the serial number	A79J	A79K	A79M
[Machine]	9	9	9
[Type]	7	9	0

6.4.10 EEPROM/1, EEPROM/2

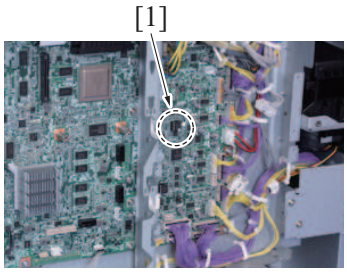
NOTE

- **Never use the combination of the used EEPROM removed from another machine and the original MFP board. This combination causes corruption of stored data.**
  Note that the combination of the original EEPROM and the used MFP board removed from another machine also causes the same problem.
- **Always replace the EEPROM/1 and EEPROM/2 as a set.**
  Replace them one at a time to prevent a mix-up between new and old and the device positions.

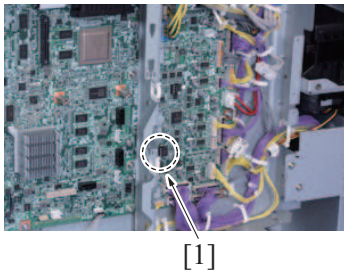
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove five screws [1], and remove the aluminum sheet [2].

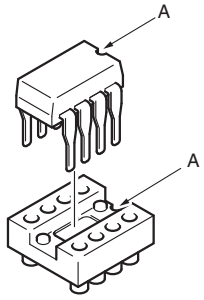


5. Mark the EEPROM/1.
   NOTE
   - **Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other.**
   - **Marks should be helpful to making easy distinction regardless of the style of them.**
6. Remove the EEPROM/1 [1].



7. Mark the EEPROM/2.
   NOTE
   - **Mark the EEPROMs to distinguish old from new, and mark EEPROM/1 and EEPROM/2 to distinguish from each other.**
   - **Marks should be helpful to making easy distinction regardless of the style of them.**
8. Remove the EEPROM/2 [1].





9. To reinstall, reverse the order of removal.
   NOTE
   - **When mounting EEPROM , align the notches (indicated by "A" in the illustration).**

   NOTE
   Since the counter will be cleared when the EEPROM is replaced with a new one, replace the following parts with new ones.
   When the transfer belt unit and the fusing unit have been replaced with new ones, perform [New Release] in the service mode. When the transfer roller has been replaced with a new one, perform [Counter clear].
   - **Developing unit/Y,M,C,K**
   - **Drum unit/Y,M,C,K**
   - **Toner cartridge/Y,M,C,K**
   - **Transfer belt unit**
   - **Fusing unit**

- **Transfer roller**
- **Feed roller, pick-up roller, separation roller (including options)**

NOTE

- **When the new EEPROM is installed, the error message: "License management error occurred." is displayed. Conduct the i-Option recovery operation.**

10. Open the lower front door and turn on the main power supply switch.
11. Enter the Service Mode. Make individual adjustments shown in Table 1: Readjustment item in the order listed, using the machine maintenance list and the adjustment lists that were output at the time of main body installation and maintenance.

NOTE

- **Ensure the front lower door is opened.**

NOTE

- **Conduct the readjustment of the above adjustment items before the starting the initial warm-up operation after replacing the EEPROMs.**

12. Turn off the main power switch.
13. Turn on the main power switch and close the front door. Check to see that warm-up and image stabilization operations are completed normally.
14. Enter the Service Mode again. Make individual adjustments shown in Table 2: Readjustment item in the order listed, using the machine management list and the adjustment lists that were output at the time of main body installation and maintenance.

Table 1: Readjustment item

Adjustment items	Service mode readjustment items			Ref. Page
1	Machine	Color Registration Adjustment	Cyan	I.5.4.8 Color Registration Adjustment
2			Magenta	
3			Yellow	
4	Imaging Process Adjustment	Image Background Adj		I.5.6.5 Image Background Adj
5		Max Image Density Adj		I.5.6.4 Max Image Density Adj
6		Grad/Dev AC Bias V Selection		I.5.6.13 Grad/Dev AC Bias V Selection
7	System 1	Change Warm Up Time		Warm-up
8	Imaging Process Adjustment	Charge AC Output fine adjustment		I.5.6.11 Charge AC Output fine adjustment
9	System 2	Unit Change	Warning Display	I.5.16.5 Unit Change

Table 2: Readjustment item

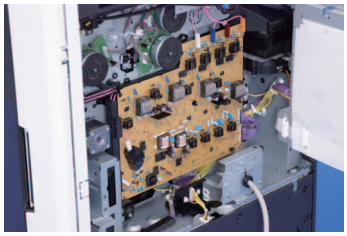
Adjustment items	Service mode readjustment items			Ref. Page
1	Machine	Manual Bypass Tray Width Adj		I.5.4.11 Manual Bypass Tray Width Adj
2		Printer Reg. Loop Adj.		I.5.4.7 Printer Reg. Loop Adj.
3		Fusing Temperature		I.5.4.2 Fusing Temperature
4	Finisher	FS-FN Adjustment		I.5.29 Finisher
5	Machine	Printer Area	Paper Feed Direction Adj.	I.5.4.5 (5) Paper Feed Direction Adj.
6		Fusing Transport Speed		I.5.4.3 Fusing Transport Speed
7		Printer Area	Printer Image Centering Side 1	I.5.4.5 (2) Printer Image Centering Side 1
8			Prt. Image Center. Side 2 (Dup)	I.5.4.5 (4) Prt. Image Center. Side 2 (Dup)
9			Leading Edge Adjustment	I.5.4.5 (1) Leading Edge Adjustment
10			Leading Edge Adj. Side 2 (Duplex)	I.5.4.5 (3) Leading Edge Adj. Side 2 (Duplex)
11			Tray Printing Position: Tip	I.5.4.5 (6) Tray Printing Position: Tip
12	Imaging Process Adjustment	Transfer Voltage Fine Adj	2nd Transfer Adj.	I.5.6.10 (2) 2nd Transfer Adj.
13			Primary transfer adj.	I.5.6.10 (1) Primary transfer adj.

6.4.11 High voltage unit (HV)

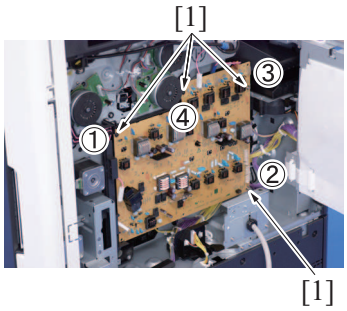
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Open the PWB box/1.

G.6.3.9 How to open the PWB box/1

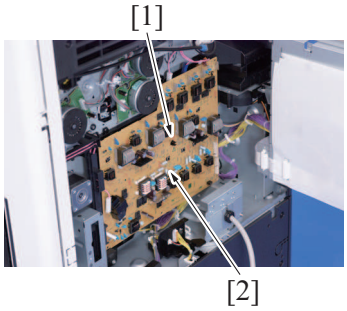
5. Disconnect all connectors and solderless terminals on the high voltage unit.



6. Remove four screws [1] of the high voltage unit.
NOTE
- **When installing the high voltage unit, tighten the screws in the order shown in the illustration.**



7. Unhook the tab [1], and remove the high voltage unit [2].
NOTE
- **When mounting the high voltage unit, the terminal contact point must be contacted without fail. The claw also must be firmly hooked.**

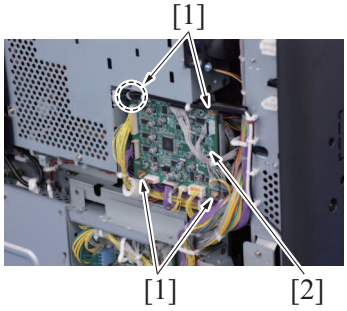


8. To reinstall, reverse the order of removal.

6.4.12 Expansion control board (EXCB)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover

8. Remove all connectors from the board.
9. Remove four screws [1], and remove the expansion control board [2].

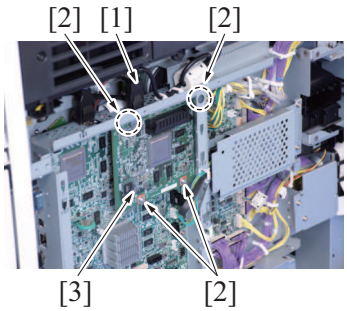


10. To reinstall, reverse the order of removal.

6.4.13 Dual scan image processing board (DSIPB)

1. Remove the duct cover.
G.6.2.23 Duct cover/1

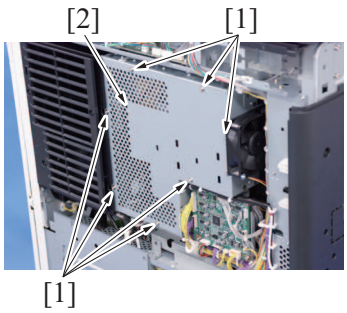
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the protective shield.
G.6.2.26 Protective shield
5. Remove the DSC board/2 (for back side).
G.8.27.4 DSC board/2 (for back side) (SC-508) (bizhub C658/C558/C458)



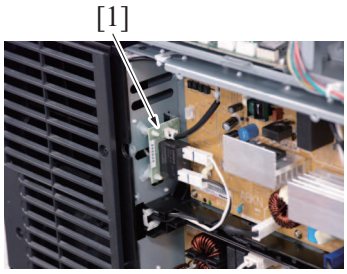
6. Disconnect the connector [1].
7. Remove four screws [2], and remove the dual scan image processing board [3].
8. To reinstall, reverse the order of removal.

6.4.14 IH magnetic erasing board (IHMEB) (bizhub C658/C558)

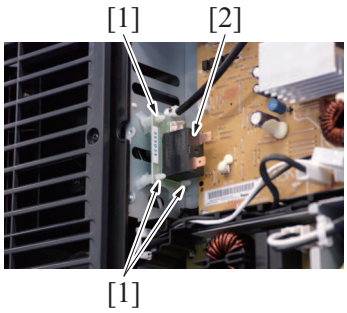
1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover



8. Remove seven screws [1], and remove the IH power supply protective shield [2].



9. Disconnect all solderless terminals and connector from the IH magnetic erasing board [1].

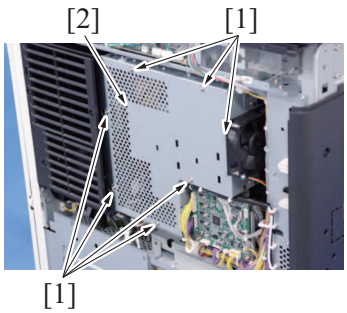


10. Remove three board supports [1], and remove the IH magnetic erasing board [2].

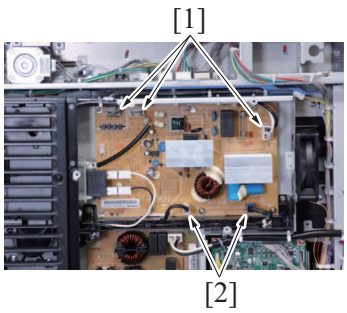
11. To reinstall, reverse the order of removal.

6.4.15 IH power supply unit (IHPU)

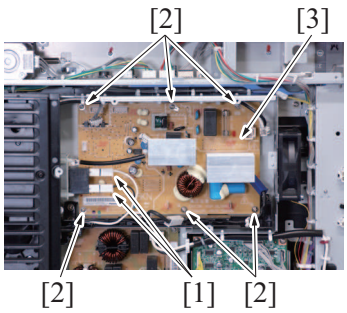
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover



8. Remove seven screws [1], and remove the IH power supply protective shield [2].



9. Disconnect three connectors [1].
10. Remove two solderless terminals [2].



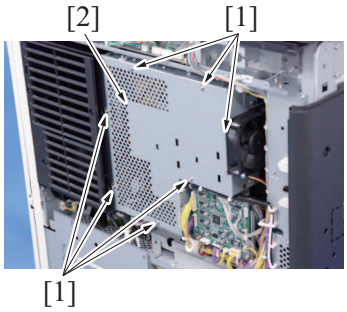
11. Remove two solderless terminals [1].
12. Remove six screws [2], and remove the IH power supply [3].

13. To reinstall, reverse the order of removal.

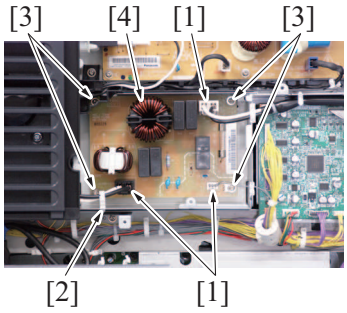
6.4.16 NF board (NFB) (bizhub C658/C558)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy

2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover



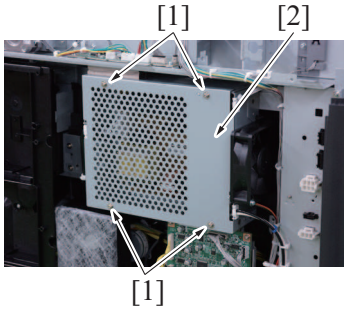
8. Remove seven screws [1], and remove the IH power supply protective shield [2].



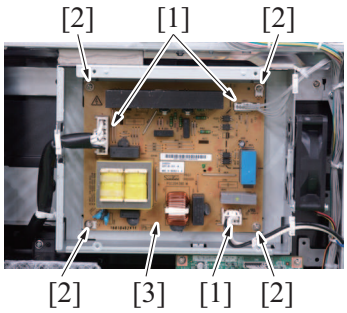
9. Disconnect three connectors [1].
10. Remove the harness from the wire saddle [2].
11. Remove four screws [3], and remove the NF board [4].
12. To reinstall, reverse the order of removal.

6.4.17 Fusing power supply (FUPU) (bizhub C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover



8. Remove four screws [1], and remove the IH power supply protective shield [2].



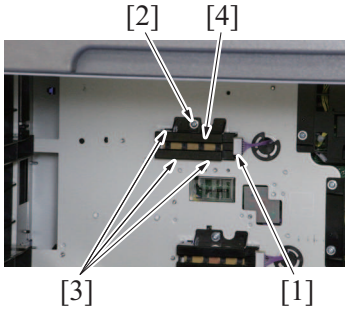
9. Disconnect three connectors [1].
10. Remove four screws [2], and remove the fusing power supply [3].
11. To reinstall, reverse the order of removal.

6.4.18 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)

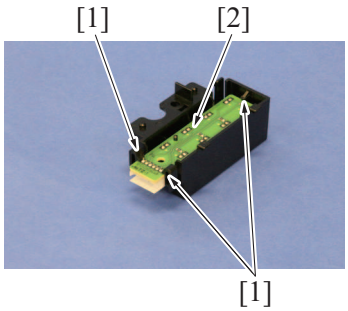
NOTE

- **The tray 1 FD paper size board and the tray 2 FD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 FD paper size board.**

1. Remove the tray 1.
   G.6.2.27 Tray 1
2. Remove the tray 2.
   G.6.2.28 Tray 2



3. Disconnect the connector [1].
4. Remove the screw [2] and three tabs [3], and remove the tray 1 FD paper size board assy [4].



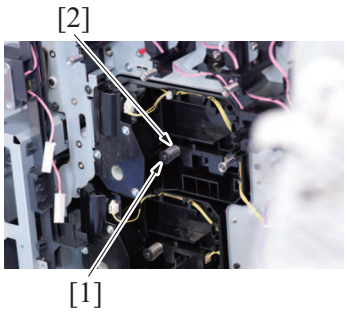
5. Remove three tabs [1], and remove the Tray 1 FD paper size board [2].
6. To reinstall, reverse the order of removal.

6.4.19 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)

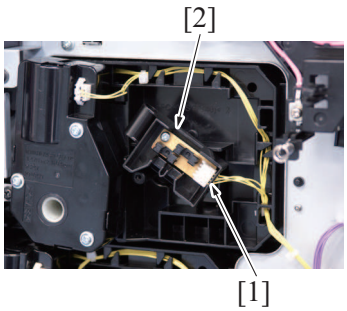
NOTE

- **The tray 1 CD paper size board and the tray 2 CD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 CD paper size board.**

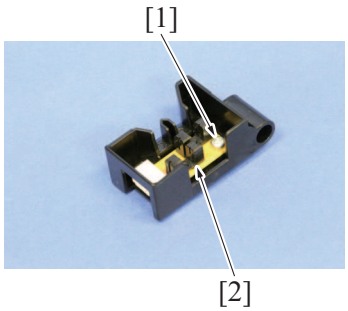
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box.
   G.6.3.9 How to open the PWB box/1
6. Remove the high voltage unit.
   G.6.4.11 High voltage unit (HV)
7. Slide out the tray 1.



8. Remove screw [1] and spring [2].



9. Remove the connector [1], and remove the tray 1 CD paper size board assy [2].

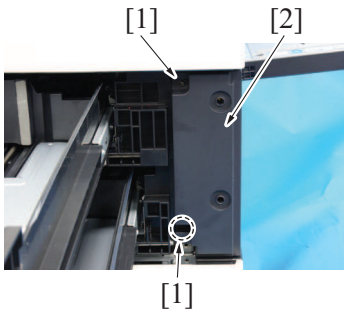


10. Remove the screw [1], and remove the tray 1 CD paper size board [2].

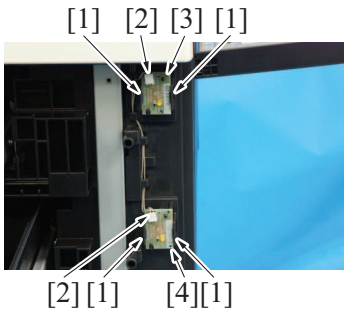
11. To reinstall, reverse the order of removal.

6.4.20 Tray 1 empty indicator board (PEIB/1), tray 2 empty indicator board (PEIB/2)

1. Slide out the tray 1 and the tray 2.



2. Remove two screws [1], and remove the tray right cover [2].



3. Unhook four tabs [1]. Disconnect two connectors [2], and remove the tray 1 empty indicator board [3] and the tray 2 empty indicator board [4].

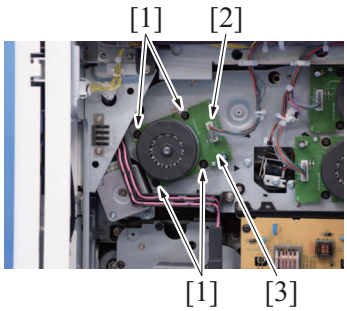
4. To reinstall, reverse the order of removal.

6.5 Disassembly/reassembly procedure (Motors)

6.5.1 Transport motor (M1)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1

G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the protective shield.
G.6.2.26 Protective shield
5. Open the PWB box.
G.6.3.9 How to open the PWB box/1

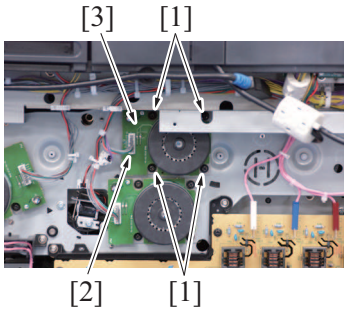


6. Remove four screws [1]. Disconnect the connector [2], and remove the transport motor [3].

7. To reinstall, reverse the order of removal.

6.5.2 PC motor (M2)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the protective shield.
G.6.2.26 Protective shield
5. Open the PWB box.
G.6.3.9 How to open the PWB box/1



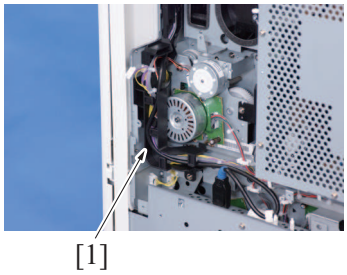
6. Remove four screws [1]. Disconnect the connector [2], and remove the PC motor [3].

7. To reinstall, reverse the order of removal.

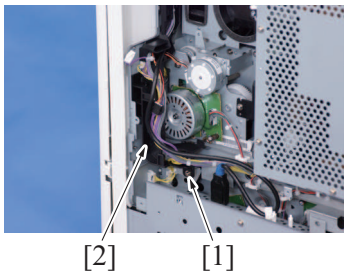
6.5.3 Fusing motor (M3)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the paper cooling fan.
G.6.7.7 Paper cooling fan (FM8)

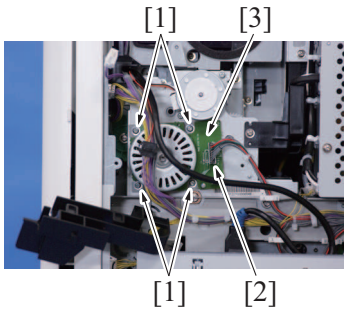
9. Remove the harness from the harness guide [1].



10. Remove the screw [1], and remove the harness guide [2].



11. Remove four screws [1]. Disconnect the connector [2], and remove the fusing motor [3].

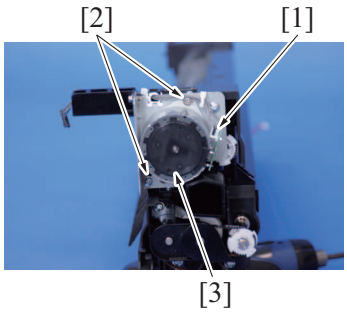


12. To reinstall, reverse the order of removal.

6.5.4 Switchback motor (M4)

1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
   F.8.10.2 Replacing the fusing unit (bizhub C458)
2. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
3. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover
5. Remove the upper right cover.
   G.6.2.20 Upper right cover
6. Remove the paper exit unit.
   G.6.3.19 Paper exit unit

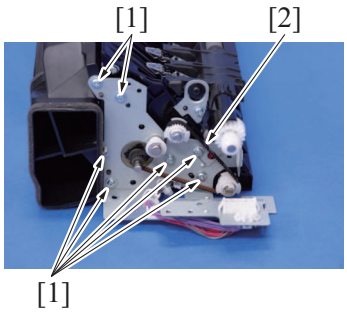
7. Disconnect the connector [1].
8. Remove two screws [2], and remove the switchback motor [3].



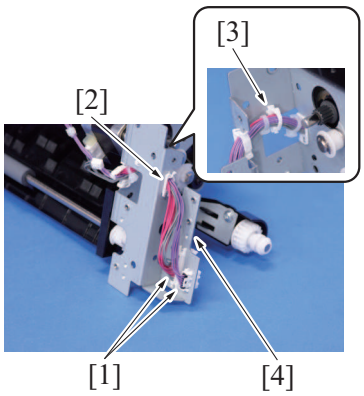
9. To reinstall, reverse the order of removal.

6.5.5 ADU transport motor1 (M5)

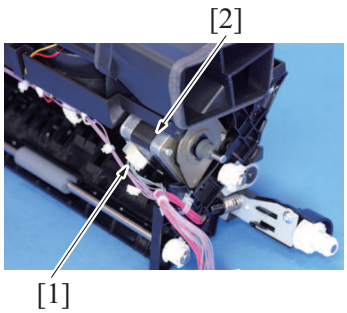
1. Remove the ADU transport unit.
   G.6.3.18 ADU transport unit
2. Remove the soaking roller pressure solenoid.
   G.6.8.5 Soaking roller pressure solenoid (SD5) (bizhub C658/C558)



3. Remove seven screws [1], and remove the belt [2].



4. Disconnect two connectors [1], and remove the harness from the edge cover [2] and the wire saddle [3].
5. Remove the plate [4].

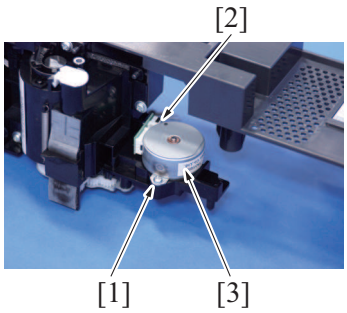


6. Disconnect the connector [1], and remove the ADU transport motor [2].

7. To reinstall, reverse the order of removal.

6.5.6 Toner supply motor/K (M6)

1. Remove the upper front door.
   G.6.2.12 Upper front door
2. Remove the lower front door.
   G.6.2.13 Lower front door
3. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
4. Remove the front lower cover.
   G.6.2.14 Front lower cover
5. Remove the front cover.
   G.6.2.15 Front cover
6. Remove the toner cartridge.
   F.8.4.1 Replacing the toner cartridge
7. Remove the drum unit.
   F.8.2.1 Replacing the drum unit
8. Remove the developing unit.
   F.8.3.1 Replacing the developing unit
9. Remove the exit cover.
   G.6.2.17 Exit cover
10. Remove the sub hopper unit.
    G.6.3.4 Sub hopper unit

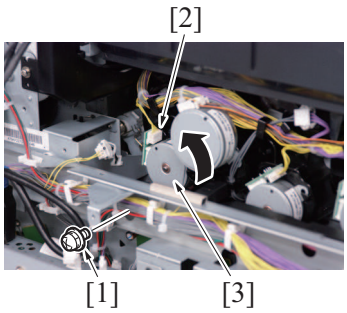


11. Remove the screw [1]. Disconnect the connector [2] and then remove the toner supply motor/K [3].

12. To reinstall, reverse the order of removal.

6.5.7 Toner supply motor/C (M7) (bizhub C658/C558)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
9. Remove the board box/2.
   G.6.3.10 PWB box/2 (bizhub C658/C558)

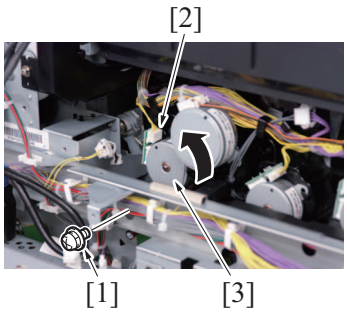


10. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/C [3].
    NOTE
    - **When removing the toner supply motor/C [3], make sure to turn it in the direction shown in the illustration.**

11. To reinstall, reverse the order of removal.

6.5.8 Toner supply motor/C (M7) (bizhub C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
9. Remove the toner cartridge cooling fan assy.
   G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)

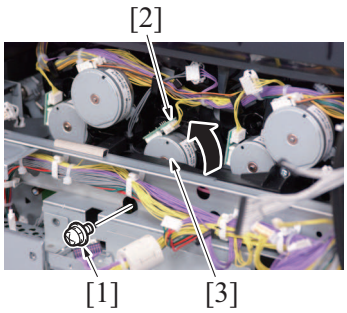


10. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/C [3].
NOTE
- **When removing the toner supply motor/C [3], make sure to turn it in the direction shown in the illustration.**

11. To reinstall, reverse the order of removal.

6.5.9 Toner supply motor/M (M8) (bizhub C658/C558)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
G.6.7.7 Paper cooling fan (FM8)
9. Remove the board box/2.
G.6.3.10 PWB box/2 (bizhub C658/C558)

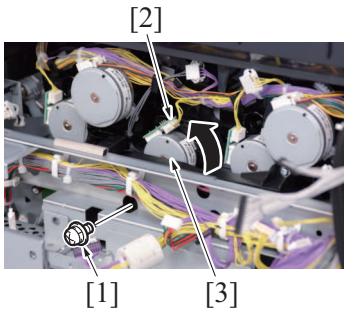


10. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/M [3].
NOTE
- **When removing the toner supply motor/M [3], make sure to turn it in the direction shown in the illustration.**

11. To reinstall, reverse the order of removal.

6.5.10 Toner supply motor/M (M8) (bizhub C458)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
G.6.7.7 Paper cooling fan (FM8)
9. Remove the toner cartridge cooling fan assy.
G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)

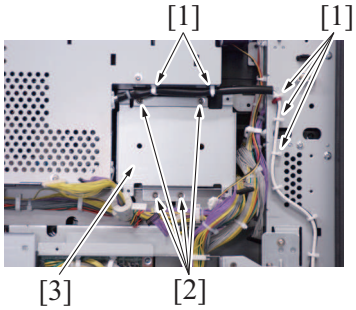


10. Remove the screw [1]. Disconnect the connector [2], and remove the toner supply motor/M [3].
NOTE
- **When removing the toner supply motor/M [3], make sure to turn it in the direction shown in the illustration.**

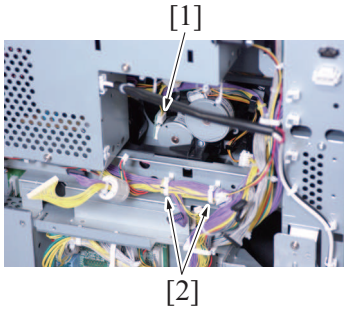
11. To reinstall, reverse the order of removal.

6.5.11 Toner supply motor/Y (M9) (bizhub C658/C558)

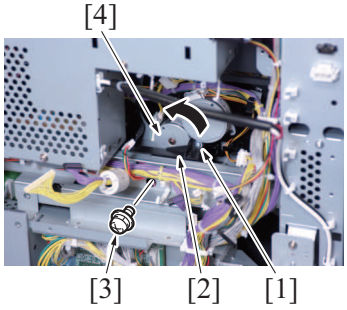
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the expansion control board.
   G.6.4.12 Expansion control board (EXCB)



9. Remove the cable from five wire saddles [1].
10. Remove four screws [2], and remove the plate [3].



11. Disconnect the connector [1].
12. Remove the harness from two wire saddles [2].



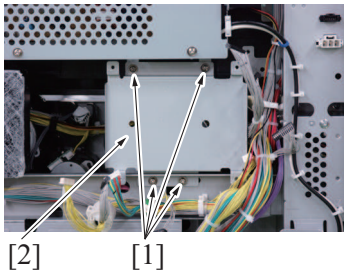
13. Remove the screw [1]. Remove the screw [3] while moving the harness guide [2] up and then remove the toner supply motor/Y [4].
NOTE
- **When removing the toner supply motor/Y [4], make sure to turn it in the direction shown in the illustration.**

14. To reinstall, reverse the order of removal.

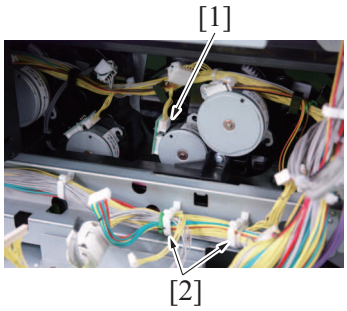
6.5.12 Toner supply motor/Y (M9) (bizhub C458)

1. Remove the duct cover.

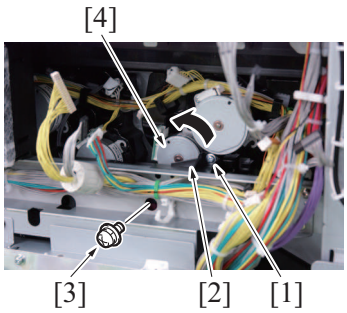
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the expansion control board.
G.6.4.12 Expansion control board (EXCB)
9. Remove four screws [1], and remove the plate [2].



10. Disconnect the connector [1].
11. Remove the harness from two wire saddles [2].



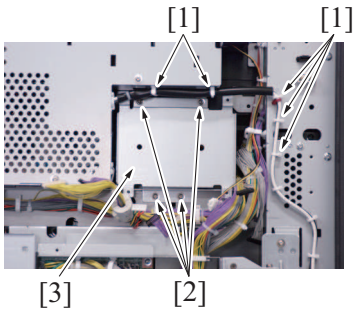
12. Remove the screw [1]. Remove the screw [3] while moving the harness guide [2] up and then remove the toner supply motor/Y [4].
NOTE
- **When removing the toner supply motor/Y [4], make sure to turn it in the direction shown in the illustration.**



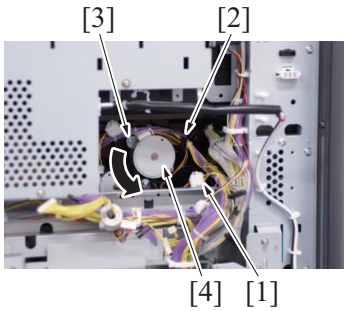
13. To reinstall, reverse the order of removal.

6.5.13 Toner cartridge motor/Y,M (M10) (bizhub C658/C558)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the expansion control board.
G.6.4.12 Expansion control board (EXCB)



9. Remove the cable from five wire saddles [1].
10. Remove four screws [2], and remove the plate [3].



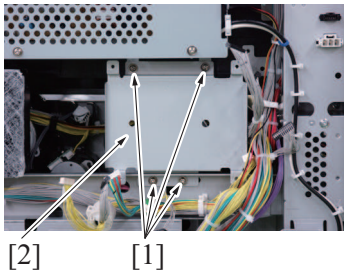
11. Disconnect the connector [1], and remove the harness from the harness guide [2].
12. Remove the screw [3], and remove the toner cartridge motor/YM [4].
NOTE
- **When removing the toner cartridge motor/YM [4], make sure to turn it in the direction as illustrated in the figure.**

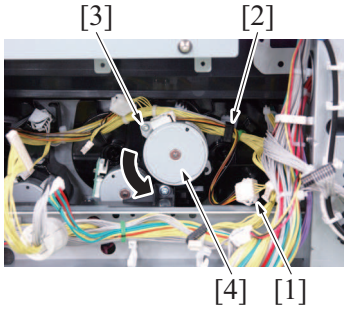
13. To reinstall, reverse the order of removal.

6.5.14 Toner cartridge motor/Y,M (M10) (bizhub C458)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the expansion control board.
G.6.4.12 Expansion control board (EXCB)

9. Remove four screws [1], and remove the plate [2].





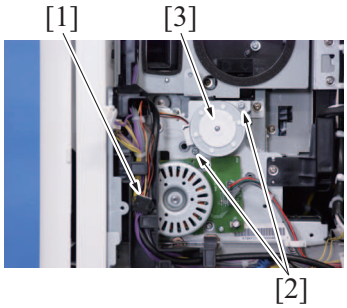
10. Disconnect the connector [1], and remove the harness from the harness guide [2].
11. Remove the screw [3], and remove the toner cartridge motor/YM [4].
NOTE
- **When removing the toner cartridge motor/YM [4], make sure to turn it in the direction as illustrated in the figure.**

12. To reinstall, reverse the order of removal.

6.5.15 Fusing pressure motor (M11)

1. Remove the duct cover.

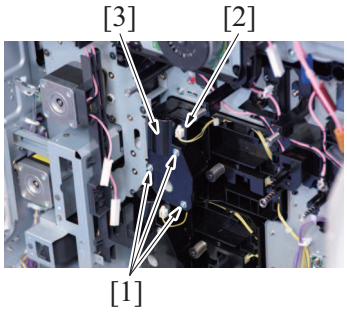
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
G.6.2.22 DF cable cover
7. Remove the upper rear cover.
G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
G.6.7.7 Paper cooling fan (FM8)



9. Disconnect the connector [1], and remove the harness from the harness guide.
10. Remove two screws [2], and remove the fusing pressure motor [3].
11. To reinstall, reverse the order of removal.

6.5.16 Tray 1 lift-up motor (M12)

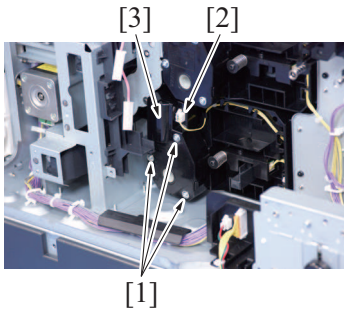
1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the protective shield.
G.6.2.26 Protective shield
5. Open the PWB box.
G.6.3.9 How to open the PWB box/1
6. Remove the high voltage unit.
G.6.4.11 High voltage unit (HV)
7. Slide out the tray 1.



8. Remove three screws [1]. Disconnect the connector [2], and remove the tray 1 lift-up motor [3].
9. To reinstall, reverse the order of removal.

6.5.17 Tray 2 lift-up motor (M13)

1. Remove the duct cover.
G.6.2.23 Duct cover/1
G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
G.6.2.21 Lower rear cover
4. Remove the protective shield.
G.6.2.26 Protective shield
5. Open the PWB box.
G.6.3.9 How to open the PWB box/1
6. Remove the high voltage unit.
G.6.4.11 High voltage unit (HV)
7. Slide out the tray 2.

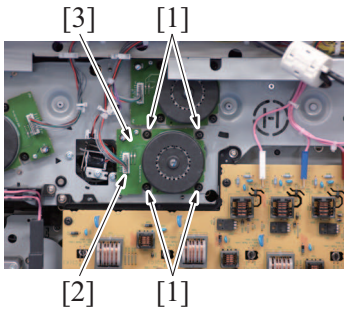


8. Remove three screws [1]. Disconnect the connector [2], and remove the tray 2 lift-up motor [3].

9. To reinstall, reverse the order of removal.

6.5.18 Developing motor (M21)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box/1.
   G.6.3.9 How to open the PWB box/1

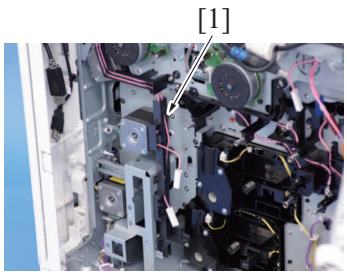


6. Remove four screws [1]. Disconnect the connector [2], and remove the developing motor [3].

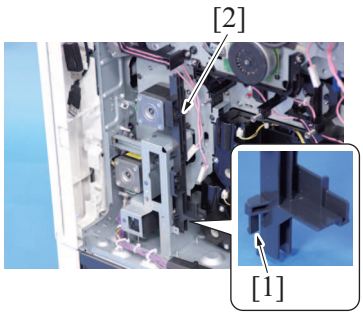
7. To reinstall, reverse the order of removal.

6.5.19 Paper feed motor (M22)

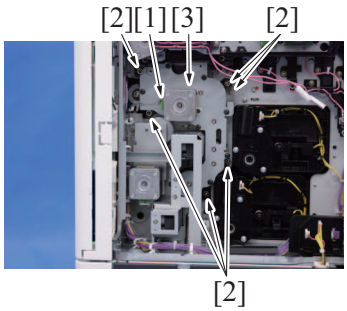
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box.
   G.6.3.9 How to open the PWB box/1
6. Remove the high voltage unit.
   G.6.4.11 High voltage unit (HV)



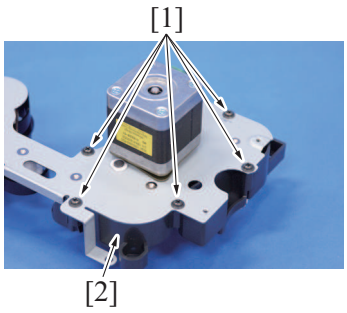
7. Remove the cable from the cable guide [1].



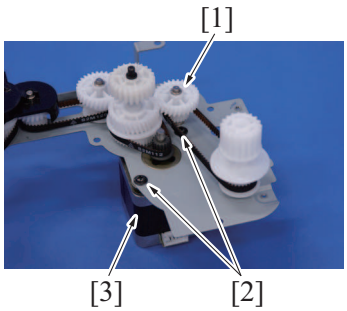
8. Release the tab [1] and remove the cable guide [2].



9. Disconnect the connector [1].
10. Remove six screws [2], and remove the paper feed motor [3].



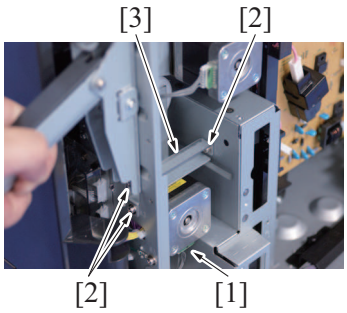
11. Remove five screws [1], and remove the cover [2].



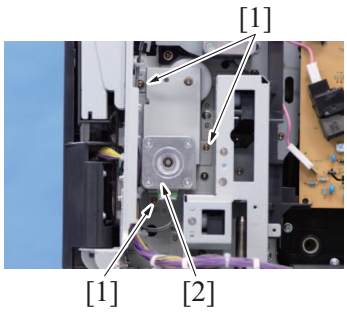
12. Remove the gear [1].
13. Remove two screws [2], and remove the paper feed motor [3].
14. To reinstall, reverse the order of removal.

6.5.20 Tray 2 vertical transport motor (M23)

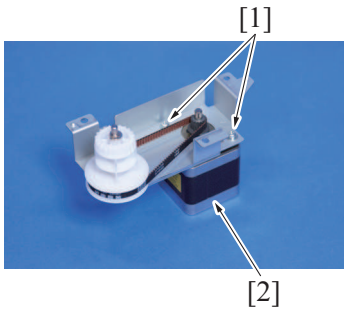
1. Remove the rear right cover.
   G.6.2.19 Rear right cover
2. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
3. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
4. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
5. Remove the protective shield.
   G.6.2.26 Protective shield
6. Open the PWB box.
   G.6.3.9 How to open the PWB box/1



7. Disconnect the connector [1].
8. Remove three screws [2], and remove the plate [3].



9. Remove three screws [1], and remove the tray 2 vertical transport motor assy [2].

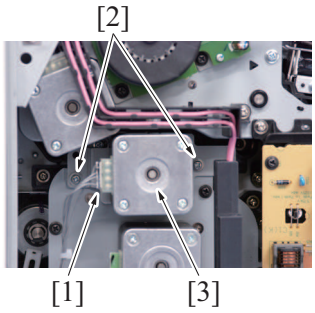


10. Remove two screws [1], and remove the tray 2 vertical transport motor [2].

11. To reinstall, reverse the order of removal.

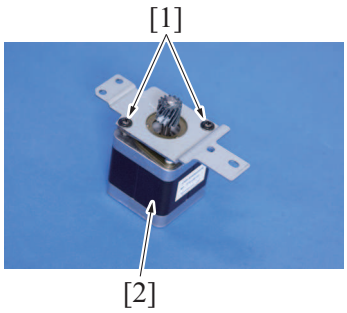
6.5.21 Registration motor (M24) (bizhub C658)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box/1.
   G.6.3.9 How to open the PWB box/1



6. Disconnect the connector [1].
7. Remove two screws [2], and remove the registration motor assy [3].

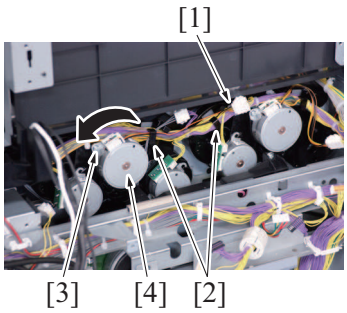
8. Remove two screws [1], and remove the registration motor [2].



9. To reinstall, reverse the order of removal.

6.5.22 Toner cartridge motor/C,K (M25) (bizhub C658/C558)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
9. Remove the board box/2.
   G.6.3.10 PWB box/2 (bizhub C658/C558)

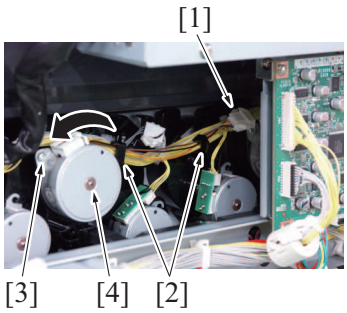


10. Disconnect the connector [1], and remove the harness from two harness guides [2].
11. Remove the screw [3], and remove the toner cartridge motor/CK [4].
    NOTE
    - **When removing the toner cartridge motor/CK [4], make sure to turn it in the direction as illustrated in the figure.**

12. To reinstall, reverse the order of removal.

6.5.23 Toner cartridge motor/C,K (M25) (bizhub C458)

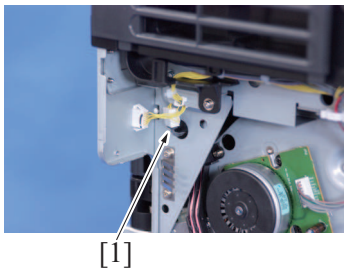
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
9. Remove the toner cartridge cooling fan assy.
   G.6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)



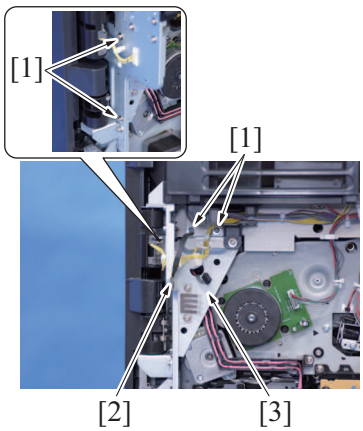
12. To reinstall, reverse the order of removal.

6.5.24 ADU transport motor2 (M26)

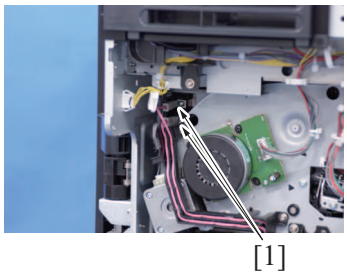
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box/1.
   G.6.3.9 How to open the PWB box/1



6. Disconnect the connector [1].

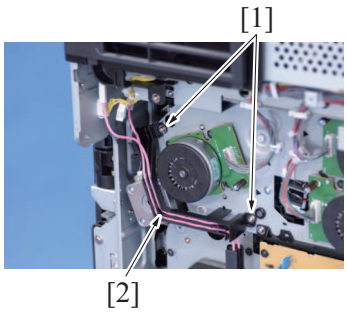


7. Remove four screws [1], ground terminal [2], and remove the plate [3].

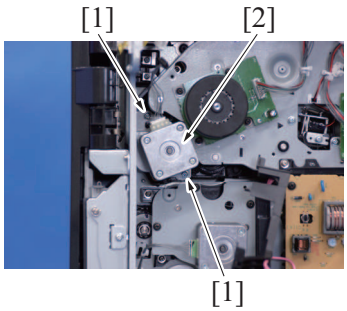


8. Remove two solderless terminals [1].

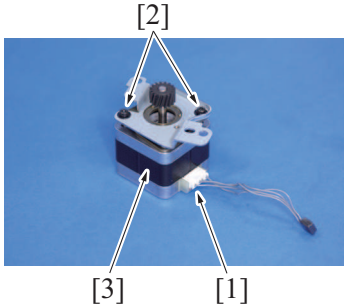
10. Disconnect the connector [1], and remove the harness from two harness guides [2].
11. Remove the screw [3], and remove the toner cartridge motor/CK [4].
    NOTE
    - **When removing the toner cartridge motor/CK [4], make sure to turn it in the direction as illustrated in the figure.**



9. Remove two screws [1], and remove the harness guide [2].



10. Remove two screws [1], and remove the ADU transport motor 2 assy [2].



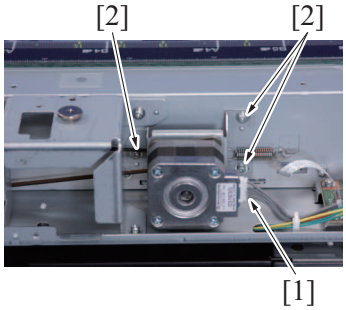
11. Disconnect the connector [1].
12. Remove two screws [2], and remove the ADU transport motor 2 [3].

13. To reinstall, reverse the order of removal.

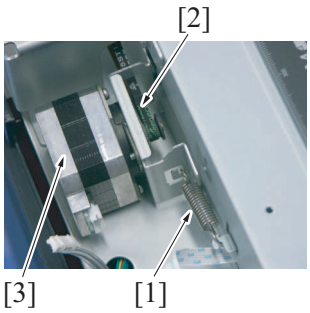
6.5.25 Scanner motor (M201)

(1) Removal procedure

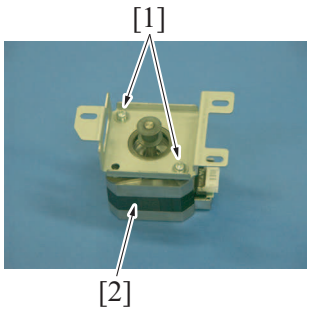
1. Remove the dual scan document feeder.
   G.7.2.6 Dual scan document feeder
2. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
3. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
4. Remove the scanner upper rear cover.
   G.6.2.5 Scanner upper rear cover
5. Remove the scanner right cover.
   G.6.2.2 Scanner right cover



6. Disconnect the connector [1], and remove three screws [2].

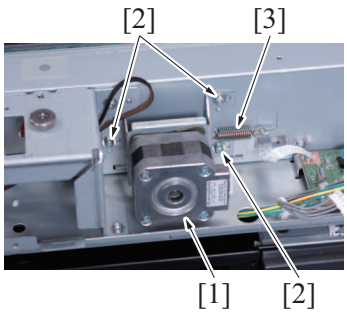


7. Remove the spring [1] and the belt [2], and remove the scanner motor assy [3].

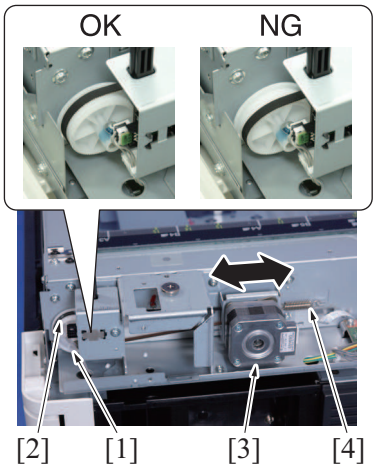


8. Remove two screws [1], and remove the scanner motor [2].

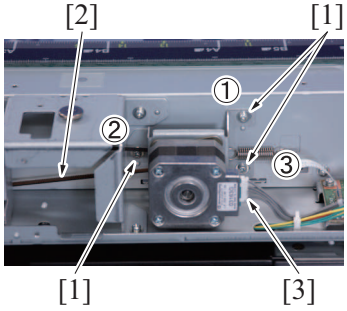
(2) Reinstall procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].
   NOTE
   - **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**
   - **When installing the scanner motor, make sure that the scanner motor is disconnected with the connector.**



3. Attach the drive belt [2] to the pulley [1] and the gear of scanner motor.
4. Move the scanner motor assy [3] in the direction shown in the illustration for two to three times, then make sure that it runs smoothly.
   NOTE
   - **Make sure that the drive belt [2] is properly kept tight by the spring [4] force.**
   - **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**
   - **Make sure that the drive belt [2] is attached to the pulley [1] correctly.**

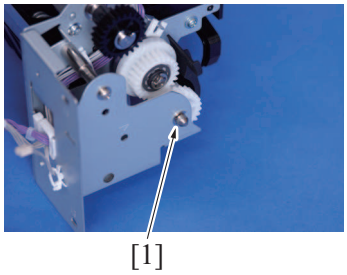


5. Tighten three screws [1] in the order shown in the illustration to fix the scanner motor assy.
   NOTE
   - **When tightening the screw [1], make sure that the scanner motor assy is not touched.**
   - **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [2] are not excessive.**
6. Connect the connector [3] to the scanner motor.
7. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.].

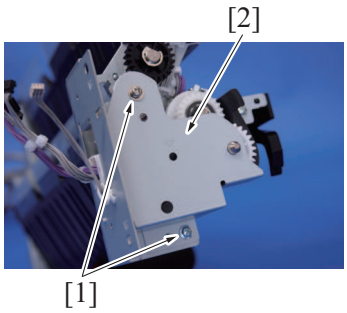
6.6 Disassembly/reassembly procedure (Clutches)

6.6.1 Tray 2 paper feed clutch (CL1)

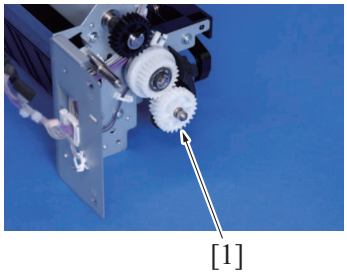
1. Remove the paper feed unit.
   G.6.3.2 Paper feed unit



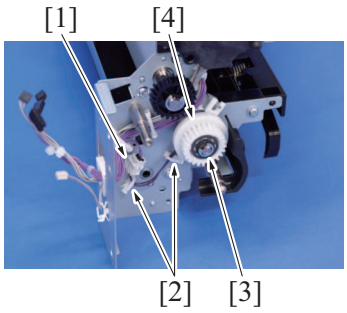
2. Remove the E-ring [1].



3. Remove two screws [1], and remove the gear cover [2].



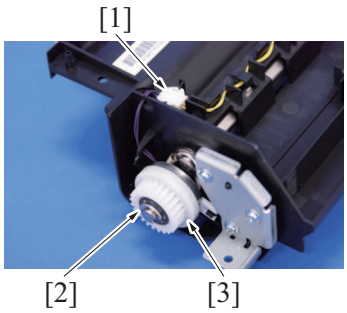
4. Remove the gear [1].



5. Disconnect the connector [1], and remove the harness from two wire saddles [2].
6. Remove the E-ring [3], and remove the tray 2 paper feed clutch [4].
   NOTE
   - **When mounting the tray 2 paper feed clutch [2], set the convex part of the stopper into the concave part of the tray 2 paper feed clutch.**
7. To reinstall, reverse the order of removal.

6.6.2 Registration clutch (CL4)

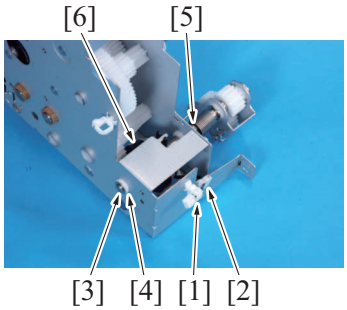
1. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
2. Remove the transfer belt unit.
   F.8.5.3 Replacing the transfer belt unit
3. Remove the upper front door.
   G.6.2.12 Upper front door
4. Remove the lower front door.
   G.6.2.13 Lower front door
5. Remove the front lower cover.
   G.6.2.14 Front lower cover
6. Remove the front cover.
   G.6.2.15 Front cover
7. Remove the transport unit.
   G.6.3.12 Transport unit



9. To reinstall, reverse the order of removal.

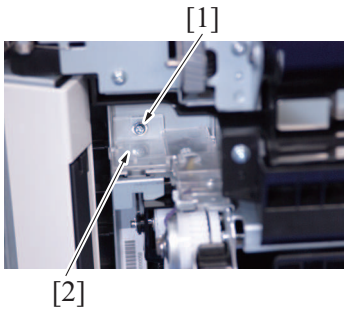
6.6.3 1st transfer pressure clutch (CL5)

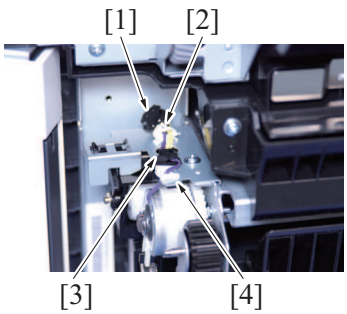
1. Remove the fusing drive unit.
   G.6.3.14 Fusing drive unit (bizhub C658/C558)
   G.6.3.15 Fusing drive unit (bizhub C458)

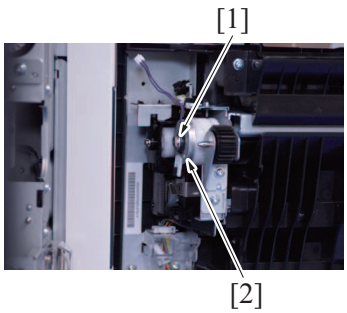


4. To reinstall, reverse the order of removal.

6.6.4 Bypass paper feed clutch (CL7)







4. To reinstall, reverse the order of removal.

8. Remove the E-ring [2]. Disconnect the connector [1], and remove the registration clutch [3].
   NOTE
   - **When mounting the registration clutch, set the convex part of the stopper into the concave part of the registration clutch [3].**

2. Remove the harness from the wire saddle [1] and the edge cover [2].
3. Remove the E-ring [3] and the bushing [4], and remove the 1st transfer pressure clutch [6] while pulling out the shaft [5].
   NOTE
   - **When mounting the 1st transfer pressure clutch [6], set the convex part of the stopper into the concave part of the 1st transfer pressure clutch.**

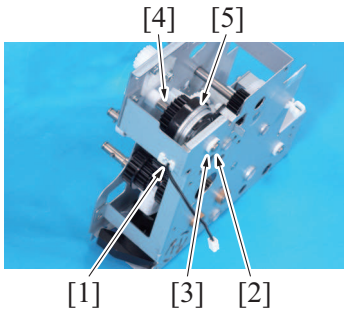
1. Remove the screw [1], and remove the connector cover [2].

2. Disconnect the connector [1], and remove the harness from the wire saddle [2], harness guide [3], and edge cover [4].

3. Remove the E-ring [1], and remove the bypass paper feed clutch [2].
   NOTE
   - **When mounting the bypass paper feed clutch, set the convex part of the stopper into the concave part of the bypass paper feed clutch [2].**

6.6.5 Paper exit clutch (CL8)

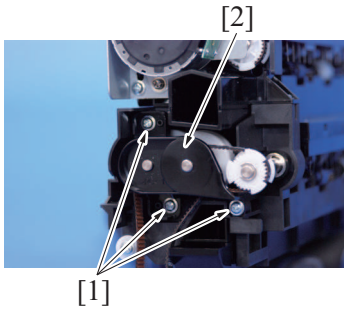
1. Remove the fusing drive unit.
   G.6.3.14 Fusing drive unit (bizhub C658/C558)
   G.6.3.15 Fusing drive unit (bizhub C458)



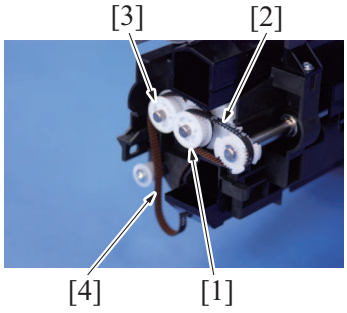
2. Remove the harness from the edge cover [1].
3. Remove the E-ring [2] and the bushing [3], and remove the paper exit clutch [5] while pulling out the shaft [4].
   NOTE
   - **When mounting the paper exit clutch, set the convex part of the stopper into the concave part of the paper exit clutch [5].**
4. To reinstall, reverse the order of removal.

6.6.6 Paper exit deceleration clutch (CL9)

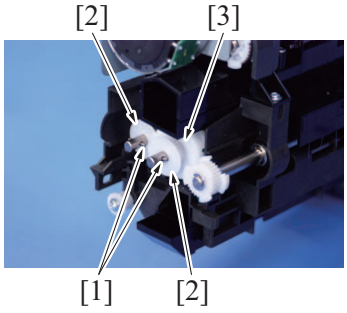
1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
   F.8.10.2 Replacing the fusing unit (bizhub C458)
2. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
3. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover
5. Remove the upper right cover.
   G.6.2.20 Upper right cover
6. Remove the paper exit unit.
   G.6.3.19 Paper exit unit



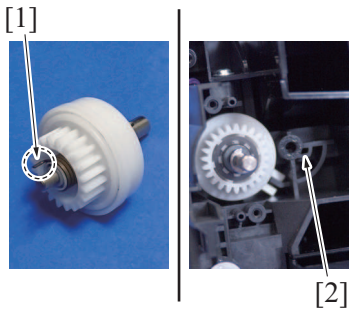
7. Remove three screws [1] and remove the cover [2].



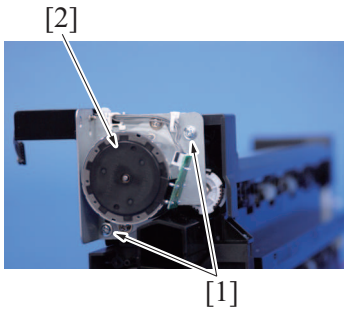
8. Remove the gear [1], and remove the belt [2].
9. Remove the gear [3], and remove the belt [4].



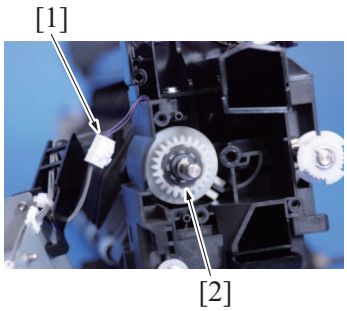
10. Remove two pins [1] and two flanges [2], and then remove the gear [3].



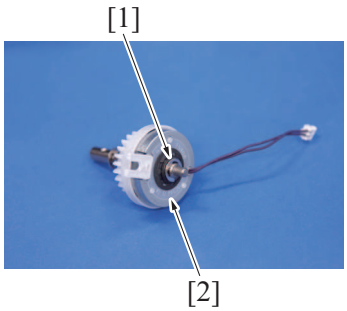
11. **NOTE**
- **When installing the gear, align the raised area of the spring [1] with the hole in the frame [2].**



12. Remove two screws [1], and remove the switchback motor assy [2].



13. Disconnect the connector [1], and remove the paper exit deceleration clutch assy [2].



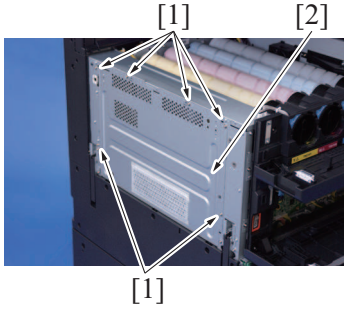
14. Remove the E-ring [1], and remove the clutch [2].

15. To reinstall, reverse the order of removal.

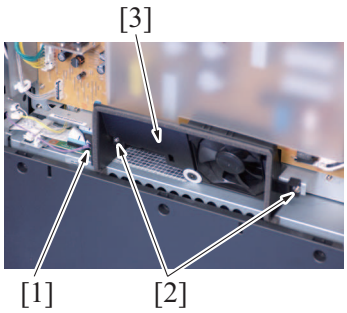
6.7 Disassembly/reassembly procedure (Fans)

6.7.1 Power supply cooling fan (FM1)

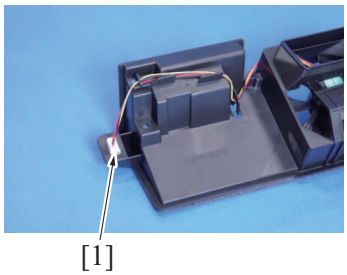
1. Remove the left cover.
G.6.2.16 Left cover
2. Remove the exit cover.
G.6.2.17 Exit cover



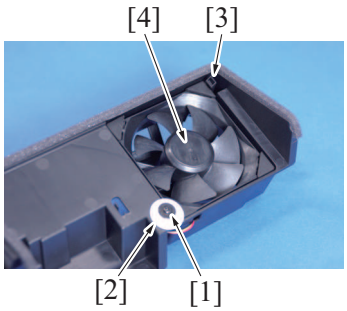
3. Remove six screws [1], and remove the DC power supply protective shield [2].



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the power supply cooling fan assy [3].



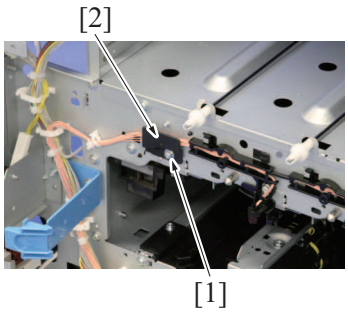
6. Disconnect the connector [1], and remove the harness from the harness guide.



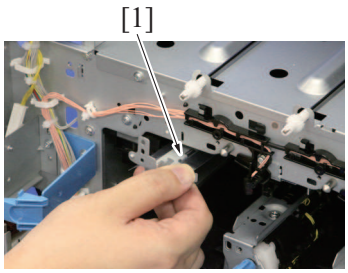
7. Remove the screw [1], and remove the retainer plate [2].
8. Remove the tab [3], and remove the power supply cooling fan [4].
9. To reinstall, reverse the order of removal.

6.7.2 Transfer belt cleaner cooling fan (FM2)

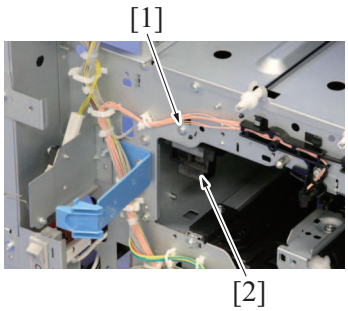
1. Remove the left cover.
   G.6.2.16 Left cover
2. Remove the exit cover.
   G.6.2.17 Exit cover
3. Remove the DC power supply.
   G.6.4.5 DC power supply (DCPU)
4. Remove the upper front door.
   G.6.2.12 Upper front door
5. Remove the lower front door.
   G.6.2.13 Lower front door
6. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
7. Remove the front lower cover.
   G.6.2.14 Front lower cover
8. Remove the front cover.
   G.6.2.15 Front cover
9. Remove the toner cartridge/Y,M,C,K.
   F.8.4.1 Replacing the toner cartridge
10. Remove the drum unit/Y,M,C,K.
    F.8.2.1 Replacing the drum unit
11. Remove the developing unit.
    F.8.3.1 Replacing the developing unit
12. Remove the transfer belt unit.
    F.8.5.3 Replacing the transfer belt unit
13. Remove the sub hopper unit.
    G.6.3.4 Sub hopper unit



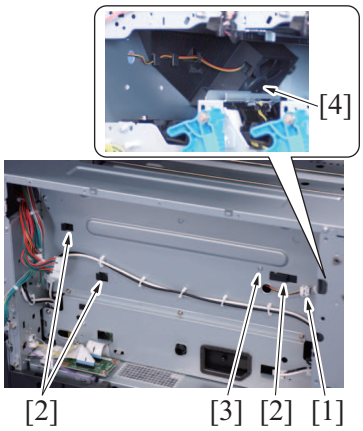
14. Remove the screw [1], and remove the harness guide [2].



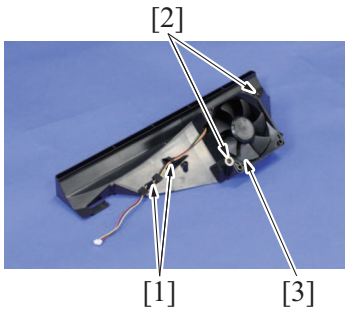
15. Remove the rail [1].



16. Remove the screw [1], and remove the waste toner pipe [2].



17. Remove the connector [1], and release three tabs [2].
18. Remove the screw [3], and remove the transfer belt cleaner cooling fan assy [4].



19. Remove the harness from harness guide [1].
20. Remove two screws [2], and remove the transfer belt cleaner cooling fan [3].

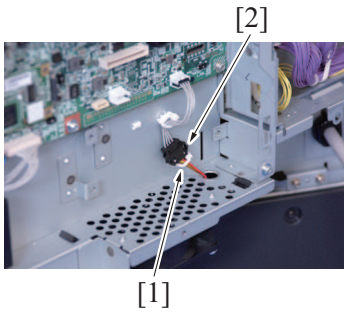
21. To reinstall, reverse the order of removal.

6.7.3 Rear side cooling fan (FM3)

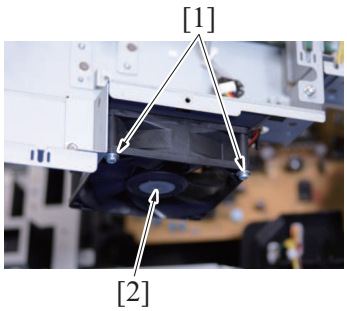
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.

F.8.1.1 Replacing the toner filter

3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Open the PWB box/1.
   G.6.3.9 How to open the PWB box/1



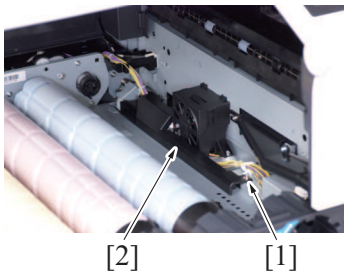
5. Remove the harness from the wire saddle [1], and disconnect the connector [2].



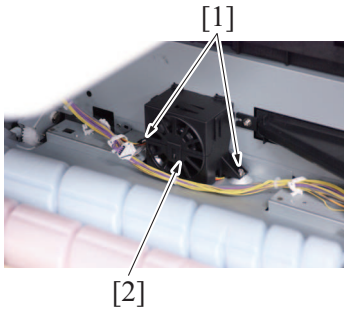
6. Remove two screws [1], and remove the rear side cooling fan [2].
7. To reinstall, reverse the order of removal.

6.7.4 Toner cartridge cooling fan (FM4) (bizhub C658/C558)

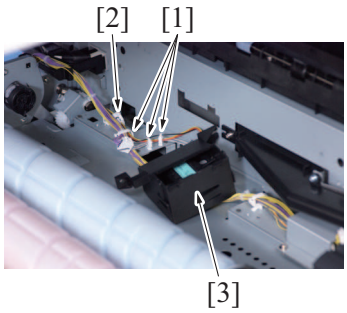
1. Remove the toner cartridge/K.
   F.8.4.1 Replacing the toner cartridge
2. Remove the left cover.
   G.6.2.16 Left cover
3. Remove the exit cover.
   G.6.2.17 Exit cover



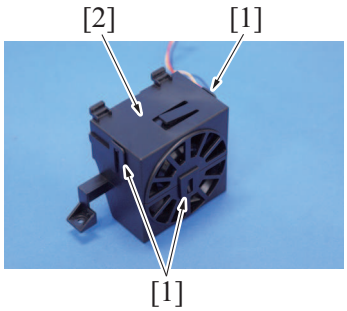
4. Remove the screw [1], and remove the cover [2].



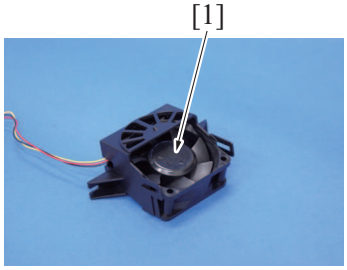
5. Remove two screws [1], and remove the toner cartridge cooling fan assy [2].



6. Remove the harness from three wire saddles [1].
7. Disconnect the connector [2], and remove the toner cartridge cooling fan assy [3].



8. Remove three tabs [1], and remove the cover [2].

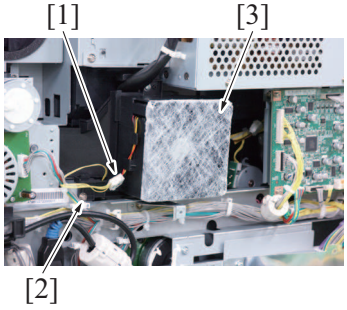


9. Remove the toner cartridge cooling fan [1].

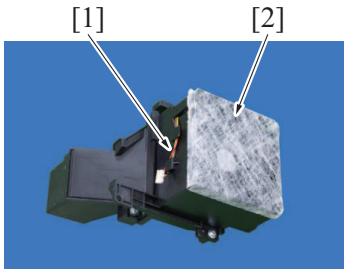
10. To reinstall, reverse the order of removal.

6.7.5 Toner cartridge cooling fan (FM4) (bizhub C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)



9. Disconnect the connector [1].
10. Remove the screw [2], and remove the toner cartridge cooling fan assy [3].

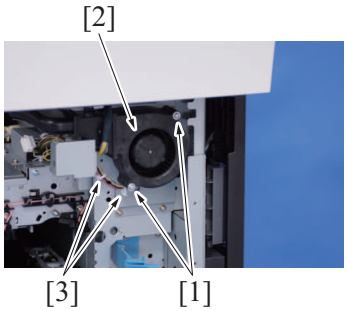


11. Remove the harness from the harness guide [1].
12. Remove the filter [2], and remove the toner cartridge cooling fan [2].

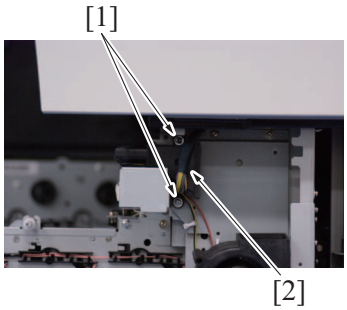
13. To reinstall, reverse the order of removal.

6.7.6 IH coil cooling fan (FM7)

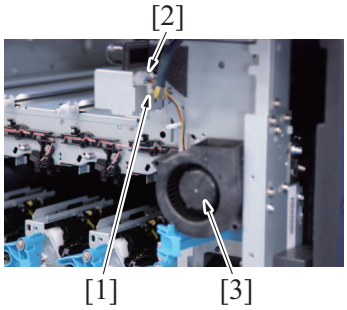
1. Remove the upper front door.
   G.6.2.12 Upper front door
2. Remove the lower front door.
   G.6.2.13 Lower front door
3. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box
4. Remove the front lower cover.
   G.6.2.14 Front lower cover
5. Remove the front cover.
   G.6.2.15 Front cover
6. Remove the toner cartridge.
   F.8.4.1 Replacing the toner cartridge
7. Remove the drum unit.
   F.8.2.1 Replacing the drum unit
8. Remove the developing unit.
   F.8.3.1 Replacing the developing unit
9. Remove the exit cover.
   G.6.2.17 Exit cover
10. Remove the sub hopper drive unit.
    G.6.3.4 Sub hopper unit



11. Remove two screws [1], and remove the IH coil cooling fan [2].
12. Remove the harness from two wire saddles [3].



13. Remove two screws [1], and remove the duct [2].

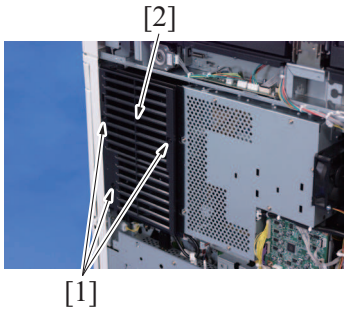


14. Remove the harness from the edge cover [1].
15. Disconnect the connector [2], and remove the IH coil cooling fan [3].

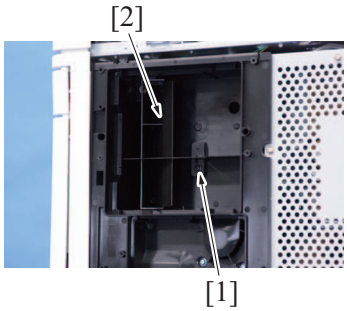
16. To reinstall, reverse the order of removal.

6.7.7 Paper cooling fan (FM8)

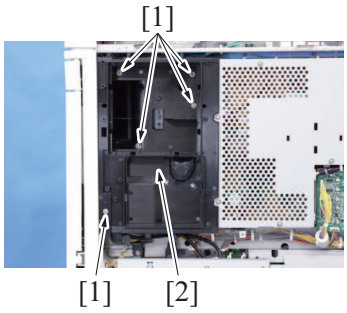
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover



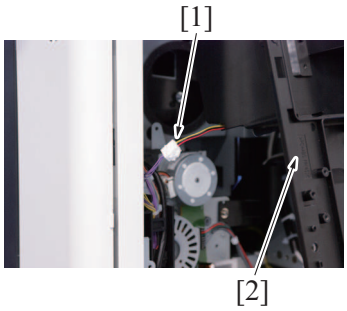
8. Remove three screws [1], and remove the louver [3].



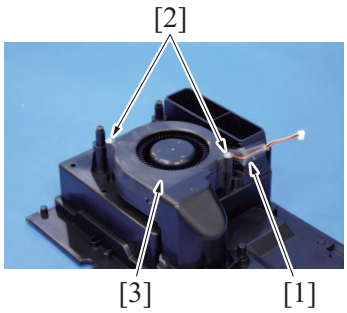
9. Remove the screw [1], and remove the duct [2].



10. Remove five screws [1], and remove the paper cooling fan assy [2].



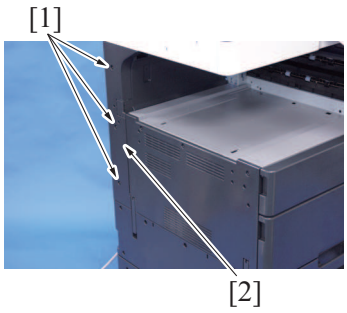
11. Disconnect the connector [1], and remove the paper cooling fan assy [2].



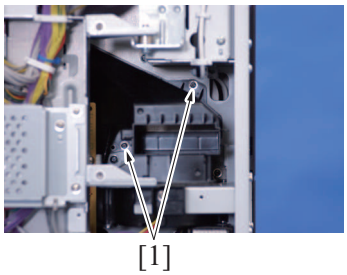
12. Peel off the tape [1].
13. Remove two screws [2], and remove the paper cooling fan [3].
14. To reinstall, reverse the order of removal.

6.7.8 Toner suction fan (FM11)

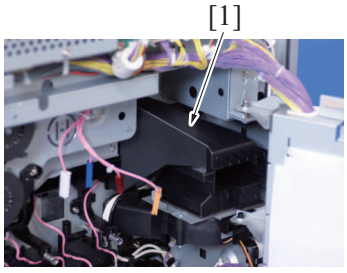
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Open the PWB box /1.
   G.6.3.9 How to open the PWB box/1
5. Remove the high voltage unit.
   G.6.4.11 High voltage unit (HV)



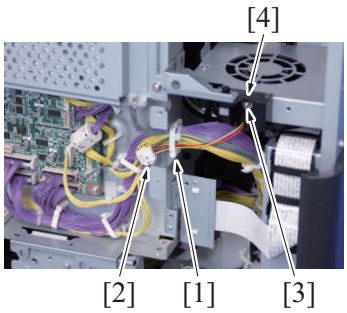
6. Remove three screws [1], and remove the cover [2].



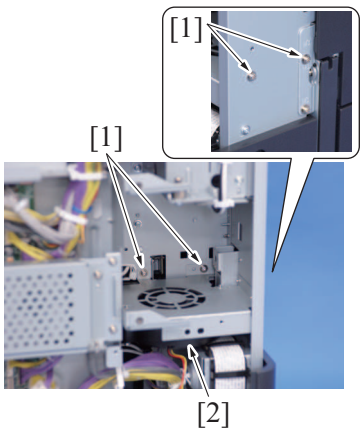
7. Remove two screws [1].
8. Open the PWB box.



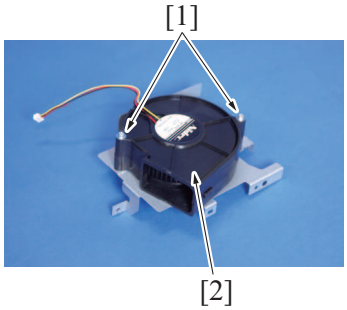
9. Remove the duct [1].
10. Close the PWB box.



11. Remove the harness from the edge cover [1], and disconnect the connector [2].
12. Remove the screw [3], and remove the board box [4].



13. Remove four screws [1], and remove the toner suction fan assy [2].

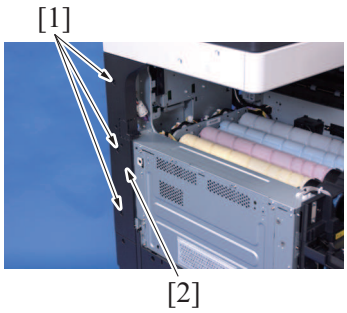


14. Remove two screws [1], and remove the toner suction fan [2].

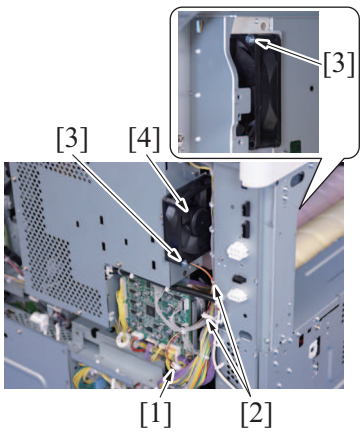
15. To reinstall, reverse the order of removal.

6.7.9 Fusing power supply cooling fan (FM12)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the scanner left cover.
   G.6.2.4 Scanner left cover
5. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
6. Remove the DF cable cover.
   G.6.2.22 DF cable cover
7. Remove the upper rear cover.
   G.6.2.25 Upper rear cover
8. Remove the left cover.
   G.6.2.16 Left cover
9. Remove the exit cover.
   G.6.2.17 Exit cover
10. Remove the output rear cover.
    G.6.2.18 Output rear cover



11. Remove three screws [1], and remove the cover [2].

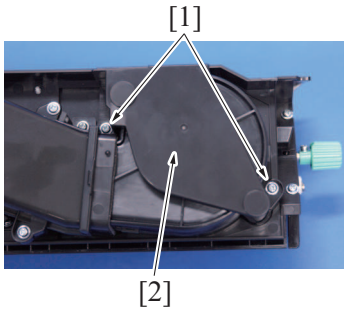


12. Disconnect the connector [1], and remove the harness from two wire saddles [2].
13. Remove two screws [3], and remove the fusing power supply cooling fan [4].

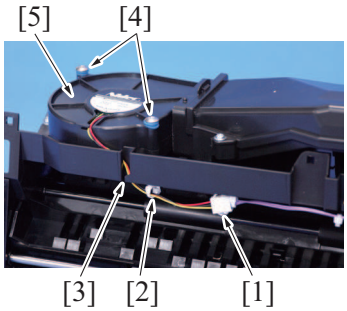
14. To reinstall, reverse the order of removal.

6.7.10 UFP exhaust fan1 (FM17)

1. Remove the ADU transport unit.
G.6.3.18 ADU transport unit



2. Remove two screws [1], and remove the cover [2].

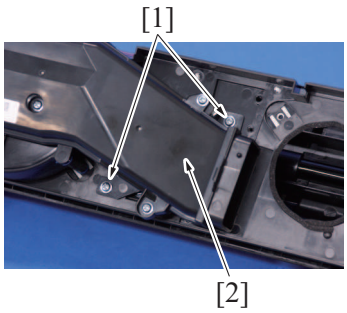


3. Disconnect the connector [1], and remove the harness from the wire saddle [2] and harness guide [3].
4. Remove two screws [4], and remove the UFP exhaust fan 1 [5].

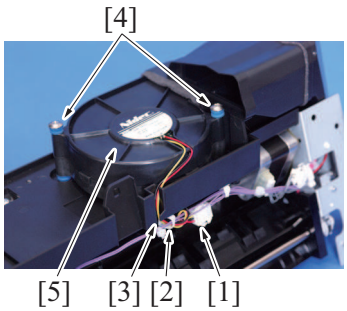
5. To reinstall, reverse the order of removal.

6.7.11 UFP exhaust fan2 (FM18)

1. Remove the ADU transport unit.
G.6.3.18 ADU transport unit
2. Remove the UFP exhaust fan 1.
G.6.7.10 UFP exhaust fan1 (FM17)



3. Remove two screws [1], and remove the duct [2].

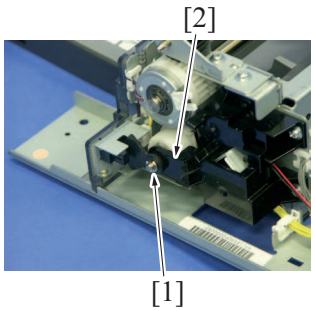


4. Disconnect the connector [1], and remove the harness from the wire saddle [2] and harness guide [3].
5. Remove two screws [4], and remove the UFP exhaust fan 2 [5].
6. To reinstall, reverse the order of removal.

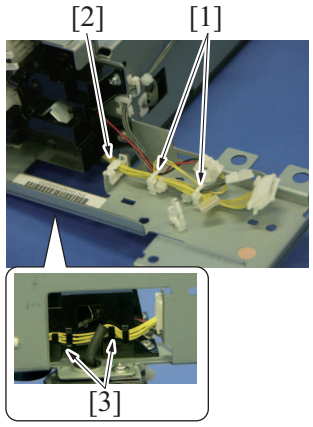
6.8 Disassembly/reassembly procedure (etc.)

6.8.1 Bypass pick-up solenoid (SD1)

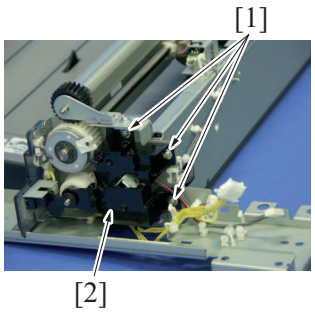
1. Remove the manual bypass tray unit.
G.6.3.6 Manual bypass tray unit



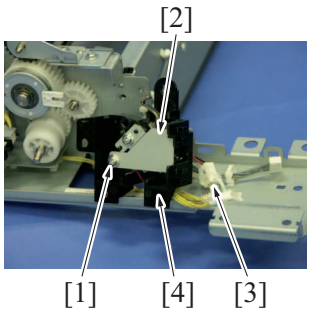
2. Remove the E-ring [1], and remove the actuator [2].



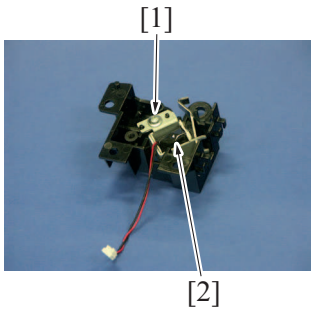
3. Remove the harness from two wire saddles [1] and the edge cover [2].
4. Remove the harness from two harness guides [3].



5. Remove three screws [1], and remove the solenoid cover [2].



6. Remove the screw [1], and remove the cover [2].
7. Disconnect the connector [3], and remove the bypass pick-up solenoid assy [4].

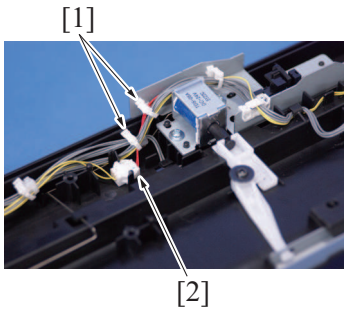


8. Remove the screw [1], and remove the bypass pick-up solenoid [2].

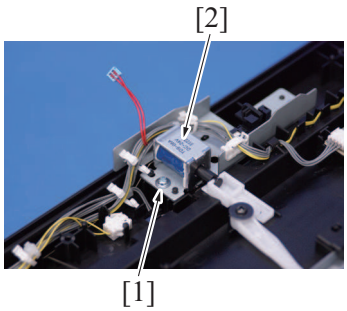
9. To reinstall, reverse the order of removal.

6.8.2 IDC sensor shutter solenoid (SD2)

1. Remove the transport unit.
   G.6.3.12 Transport unit



2. Remove the harness from two wire saddles [1], and disconnect the connector [2].

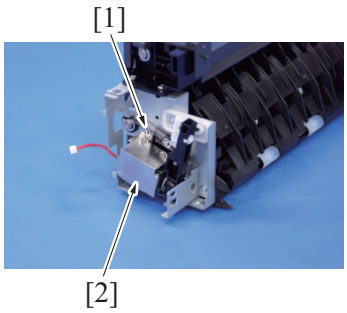


3. Remove the screw [1], and remove the IDC sensor shutter solenoid [2].

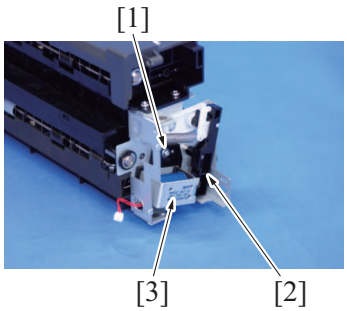
4. To reinstall, reverse the order of removal.

6.8.3 Gate switch solenoid (SD3)

1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
   F.8.10.2 Replacing the fusing unit (bizhub C458)
2. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
3. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover
5. Remove the upper right cover.
   G.6.2.20 Upper right cover
6. Remove the paper exit unit.
   G.6.3.19 Paper exit unit



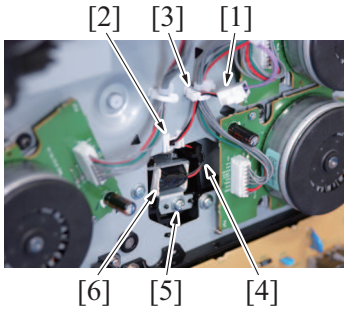
7. Remove the screw [1], and remove the cover [2].



8. Remove the screw [1].
9. Remove the gate switch solenoid [3] as clearing the actuator [2].
10. To reinstall, reverse the order of removal.

6.8.4 Developing solenoid (SD4)

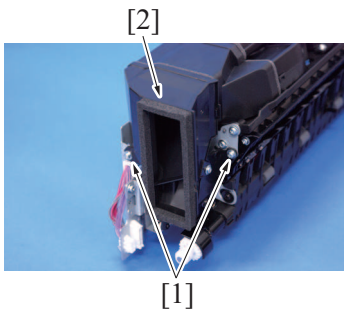
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Open the PWB box.
   G.6.3.9 How to open the PWB box/1
6. Remove the high voltage unit.
   G.6.4.11 High voltage unit (HV)



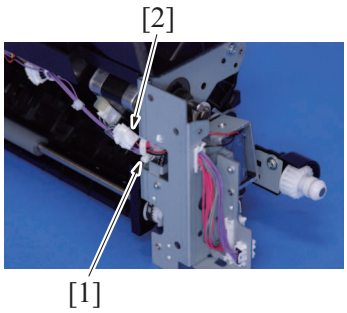
7. Disconnect the connector [1], and remove the harness from the edge cover [2] and the wire saddle [3].
8. Remove the harness from the harness guide [4].
9. Remove the screw [5], and remove the developing solenoid [6].
10. To reinstall, reverse the order of removal.

6.8.5 Soaking roller pressure solenoid (SD5) (bizhub C658/C558)

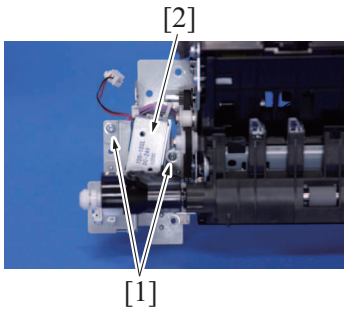
1. Remove the ADU transport unit.
   G.6.3.18 ADU transport unit



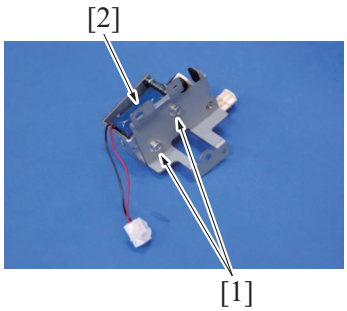
2. Remove two screws [1], and remove the duct [2].



3. Remove the harness from the edge cover [1], and disconnect the connector [2].



4. Remove two screws [1], and remove the soaking roller pressure solenoid assy [2].

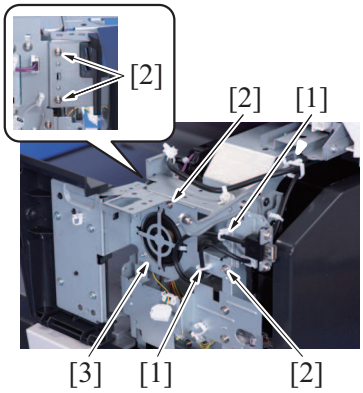


5. Remove two screws [1], and remove the soaking roller pressure solenoid [2].

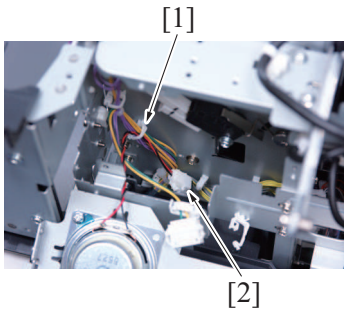
6. To reinstall, reverse the order of removal.

6.8.6 FAX speaker (SP1)

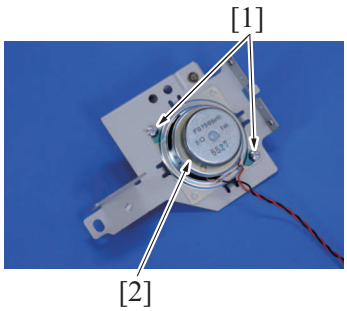
1. Remove the control panel left cover.
   G.6.2.6 Control panel left cover
2. Remove the control panel right cover.
   G.6.2.7 Control panel right cover
3. Remove the control panel upper cover.
   G.6.2.8 Control panel upper cover
4. Remove the control panel front cover.
   G.6.2.9 Control panel front cover
5. Remove the control panel unit.
   G.6.2.10 Control panel unit



6. Remove the cable from two wire saddles [1].
7. Remove four screws [2], and remove the FAX speaker assy [3].



8. Remove the harness from the wire saddle [1], and disconnect the connector [2].

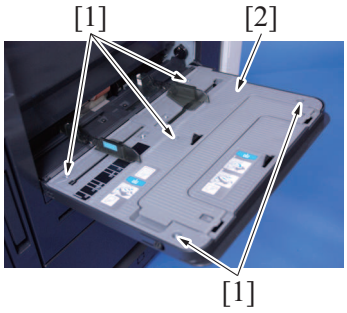


9. Remove two screws [1], and remove the FAX speaker [2].

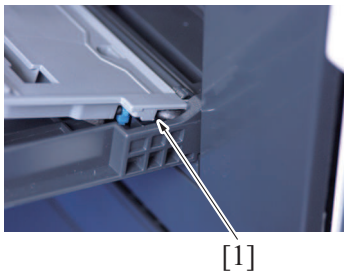
10. To reinstall, reverse the order of removal.

6.8.7 Bypass CD paper size VR (VR1)

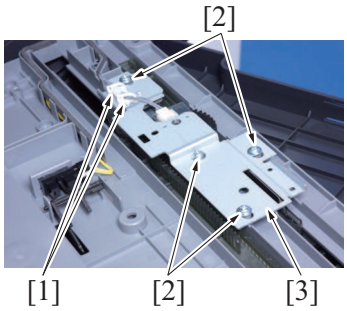
1. Open the bypass tray.



2. Remove five screws [1], and remove the cover [2].

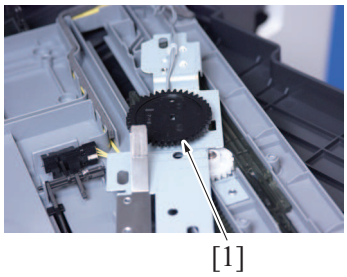


3. Remove the harness from the harness guide [1].

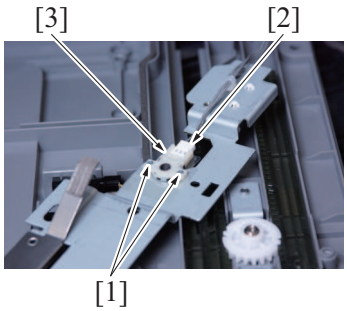


4. Remove the harness from two wire saddles [1].
5. Remove four screws [2], and remove the bypass CD paper size VR assy [3].

6. Remove the gear [1].



7. Remove two screws [1].
8. Disconnect the connector [2], and remove the bypass CD paper size VR [3].



9. To reinstall, reverse the order of removal.

7. Dual scan document feeder

7.1 Disassembly/reassembly parts list

7.1.1 Exterior parts

No.	Part name	Ref. page
1	Front cover	G.7.2.1 Front cover (dual scan document feeder)
2	Rear cover	G.7.2.2 Rear cover (dual scan document feeder)
3	How to open the document feed tray	G.7.2.3 How to open the document feed tray (dual scan document feeder)
4	Stamp unit cover	G.7.2.4 Stamp unit cover (dual scan document feeder)

7.1.2 Units

No.	Part name	Ref. page
1	Lower guide assembly	G.7.2.5 Lower guide assembly (dual scan document feeder)
2	Dual scan document feeder	G.7.2.6 Dual scan document feeder
3	Front side glass cleaning roller unit	G.7.2.7 Front side glass cleaning roller unit (dual scan document feeder)
4	Back side glass cleaning roller unit	G.7.2.8 Back side glass cleaning roller unit (dual scan document feeder)
5	CIS module (CIS)	G.7.2.9 CIS module (CIS) (dual scan document feeder)

7.1.3 Boards

No.	Part name	Ref. page
1	DF control board (DFCB)	G.7.2.10 DF control board (DFCB) (dual scan document feeder)
2	Restriction plate positional volume (VR1)	G.7.2.11 Restriction plate positional volume (VR1) (dual scan document feeder)
3	DF power supply (DFPU)	G.7.2.12 DF power supply (DFPU) (dual scan document feeder)
4	Sensor control board (SCB)	G.7.2.13 Sensor control board (SCB)
5	Multi feed detection board/1 (transmitter) (MFDB/1)	G.7.2.14 Multi feed detection board/1 (transmitter) (MFDB/1) (UK-501)
6	Multi feed detection board/2 (receiver) (MFDB/2)	G.7.2.15 Multi feed detection board/2 (receiver) (MFDB/2)

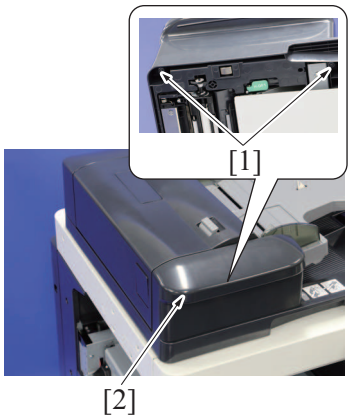
7.1.4 etc.

No.	Part name	Ref. page
1	Take-up motor (M1)	G.7.2.16 Take-up motor (M1) (dual scan document feeder)
2	Registration motor (M2)	G.7.2.17 Registration motor (M2) (dual scan document feeder)
3	Reading motor (M3)	G.7.2.18 Reading motor (M3) (dual scan document feeder)
4	Exit motor (M4)	G.7.2.19 Exit motor (M4) (dual scan document feeder)
5	Reading roller pressure/retraction motor (M6)	G.7.2.20 Reading roller pressure/retraction motor (M6) (dual scan document feeder)
6	Back side cleaning motor (M7)	G.7.2.21 Back side cleaning motor (M7) (dual scan document feeder)
7	Front side cleaning motor (M8)	G.7.2.22 Front side cleaning motor (M8) (dual scan document feeder)
8	Take-up clutch (CL1)	G.7.2.23 Take-up clutch (CL1) (dual scan document feeder)
9	Cooling fan motor (FM)	G.7.2.24 Cooling fan motor (FM) (dual scan document feeder)
10	Separation roller torque limiter	G.7.2.25 Replacing the separation roller torque limiter (dual scan document feeder)
11	Stamp unit	G.7.2.26 Stamp unit (SP-501)
12	Spare TX Marker Stamp 2	G.7.2.27 Stamp (SP-501)

7.2 Disassembly/reassembly procedure (dual scan document feeder/UK-501/SP-501)

7.2.1 Front cover (dual scan document feeder)

1. Open the dual scan document feeder.



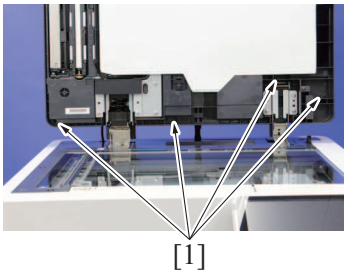
2. Remove two screws [1] and remove the front cover [2].

3. To reinstall, reverse the order of removal.

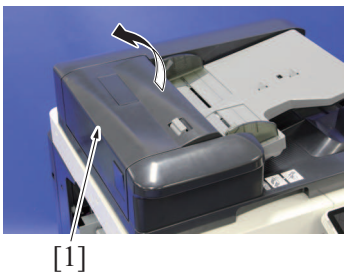
7.2.2 Rear cover (dual scan document feeder)

(1) Removal

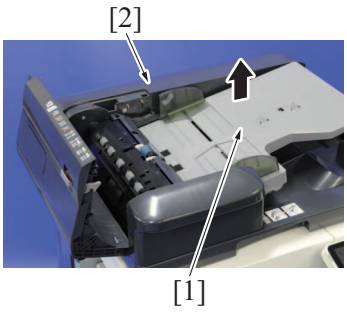
1. Open the dual scan document feeder.



2. Remove four screws [1].
   NOTE
   - **If the dual scan document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the dual scan document feeder can be opened completely.**



3. Open the left cover [1].



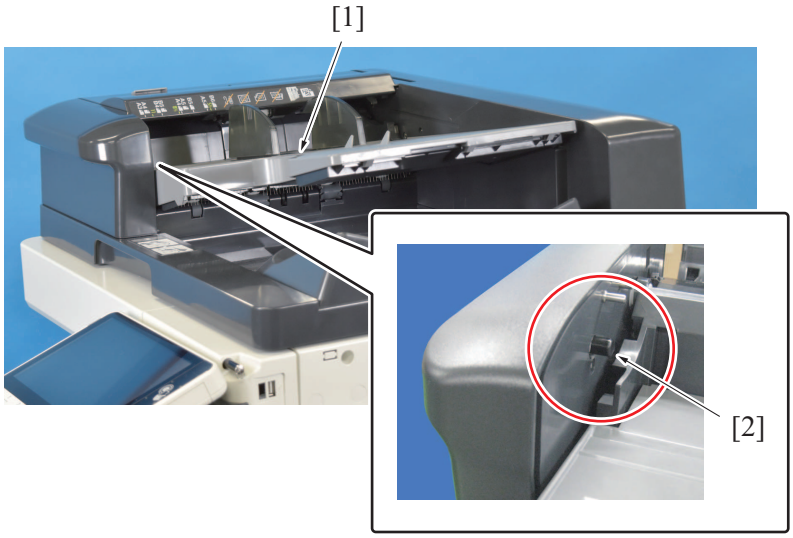
4. Slightly lift up the document feed tray [1].
5. Remove the rear cover [2].

6. To reinstall, reverse the order of removal.

7.2.3 How to open the document feed tray (dual scan document feeder)

NOTE

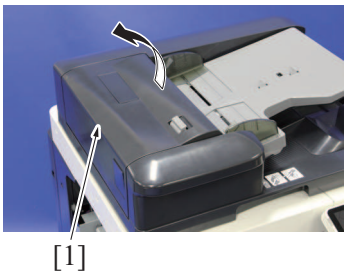
- **The document feed tray has a lock mechanism that includes either a movable lock lever or a fixed lock lever.**
- **Perform the job in accordance with the type of lock mechanism.**



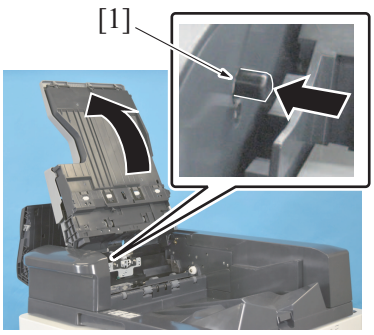
[1]	Document feed tray	[2]	Document feed tray lock lever

(1) Document feed tray with a movable lock lever

1. Open the left cover [1].

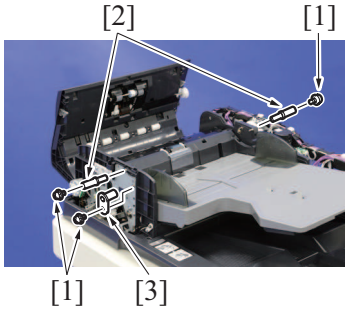


2. While pushing down the document feed tray lock lever [1], raise the document feed tray.
   NOTE
   - **During the procedure, hold and support the document feed tray so that it is not closed.**

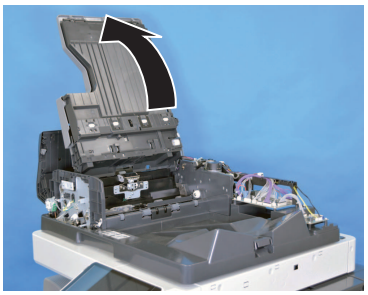


(2) Document feed tray with a fixed lock lever

1. Remove the front cover.
   G.7.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)



3. Remove three screws [1]. Then, remove two document feed tray lock pins [2] and one document feed tray lock lever [3].
   NOTE
   - **The document feed tray lock lever [3] may be a lock pin depending on the timing at which the product was manufactured (the job procedure, however, remains the same).**



4. Open the document feed tray.
   NOTE
   - **During the procedure, hold and support the document feed tray so that it is not closed.**

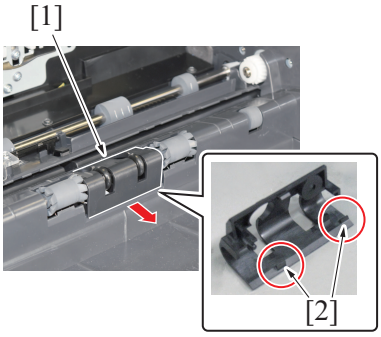
7.2.4 Stamp unit cover (dual scan document feeder)

NOTE

- **The stamp unit cover is available in two types, either a snap-fit type or a screw fixing type.**
- **Perform the procedure in accordance with the applicable cover fixing method.**

(1) For a snap-fit stamp unit cover

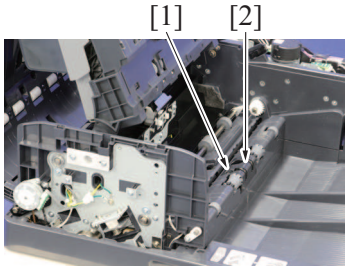
1. Open the document feed tray.
   G.7.2.3 How to open the document feed tray (dual scan document feeder)



2. Release the lock tabs [2] on the lower side of the stamp unit cover [1] and remove the stamp unit cover [1].

(2) For a screw fixing stamp unit cover

1. Open the document feed tray.
   G.7.2.3 How to open the document feed tray (dual scan document feeder)

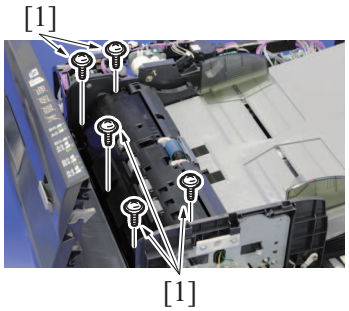


2. Remove the screw [1] and remove the stamp unit cover [2].

7.2.5 Lower guide assembly (dual scan document feeder)

(1) Procedure

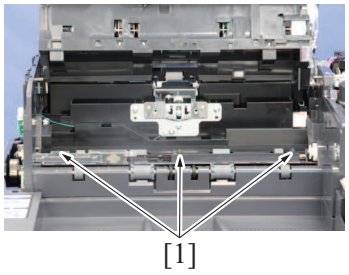
1. Remove the front cover.
   G.7.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)



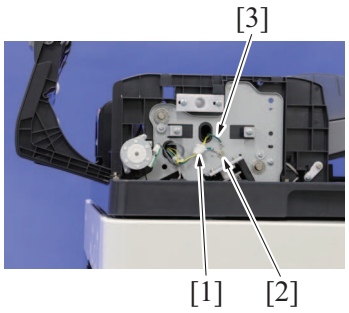
3. Remove five screws [1].

4. Open the document feed tray.
   G.7.2.3 How to open the document feed tray (dual scan document feeder)

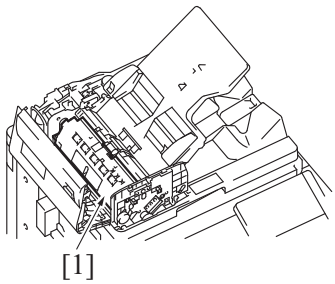
5. Remove three screws [1].



6. Disconnect the connector [1], remove the screw [2], and disconnect the ground wire [3].



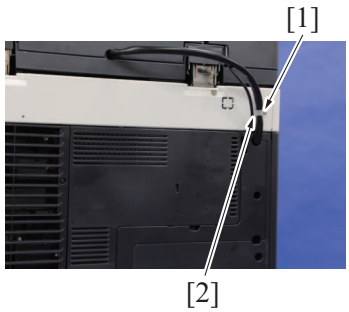
7. Remove the lower guide assy [1].



8. To reinstall, reverse the order of removal.

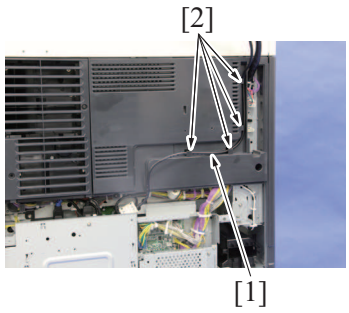
7.2.6 Dual scan document feeder

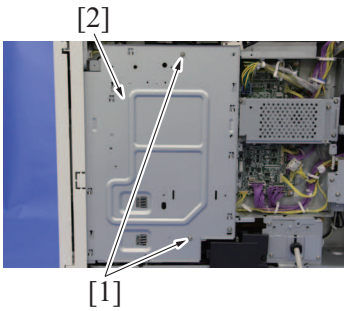
1. Remove the screws [1], and remove the cable tie [2].



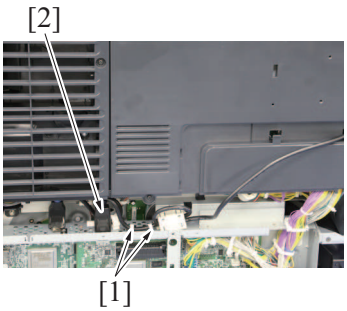
2. Remove the DF cable cover.
   G.6.2.22 DF cable cover
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover

4. Remove the harness [1] from the wire guide [2].

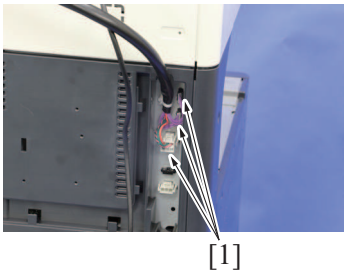




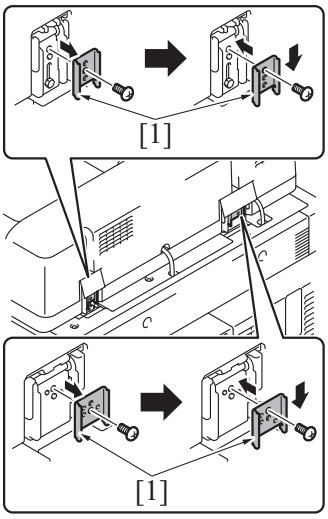
5. Remove two screws [1], and remove the metal plate [2].



6. Remove the harness from the two wire saddles [1], and disconnect the connector [2].

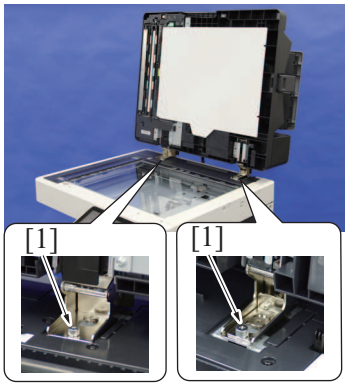


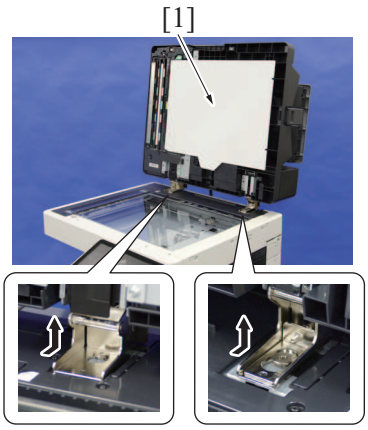
7. Disconnect three connectors [1].



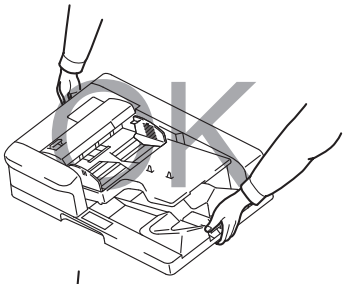
8. Change the set position of the stopper [1] to the lower side.
NOTE
- **After installing the dual scan document feeder, make sure to return the stopper [1] of the hinge to the upper side.**

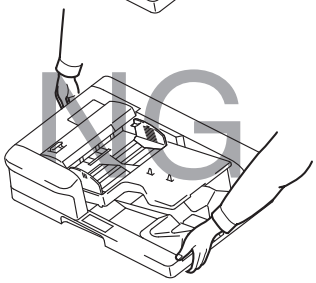
9. Open the dual scan document feeder at 90 degrees.
10. Remove two screws [1].





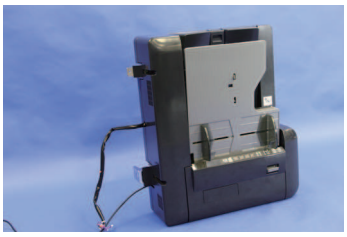
11. Remove the dual scan document feeder [1].





12. **NOTE**

- **When carrying the dual scan document feeder, be sure to hold onto the specified positions. The feeder main body can be distorted if held at inappropriate positions.**
- **After removing the dual scan document feeder from the machine, place it on the floor or the like as shown in the illustration.**

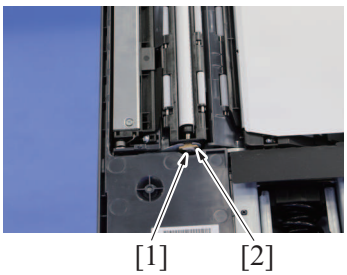


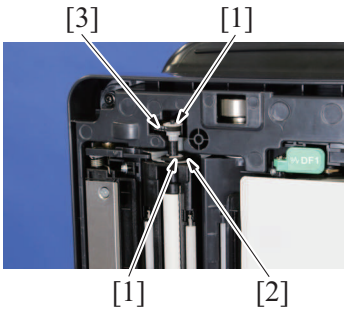
13. To reinstall, reverse the order of removal.

7.2.7 Front side glass cleaning roller unit (dual scan document feeder)

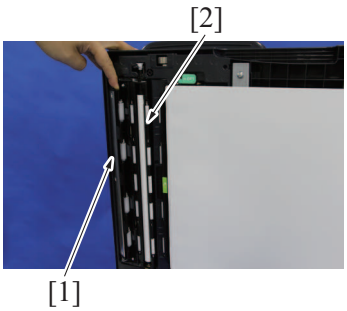
1. Open the dual scan document feeder.

2. Remove the C-clip [1] and the bushing [2].





3. Remove two C-clips [1] shift the bushing [2], and remove the belt [3].

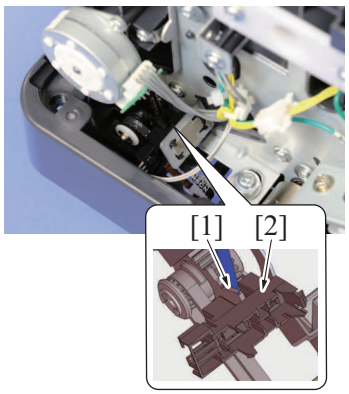


4. Remove the front side glass cleaning roller unit [2] while opening the pre-read sheet assy [1].

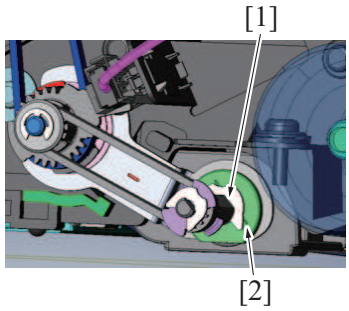
5. To reinstall, reverse the order of removal.

NOTE

- **When installing the front side glass cleaning roller unit, the following adjustment is necessary.**



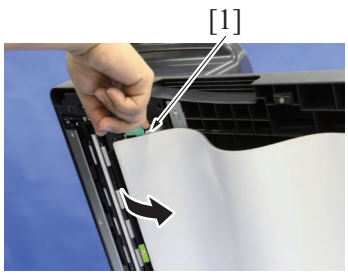
1. **Adjust the actuator [1] so that it is positioned where it blocks the light of the front side cleaning home sensor [2], and install the belt.**



2. **Align the D cut surface [1] of the shaft with the lines [2] marked on the bushing.**

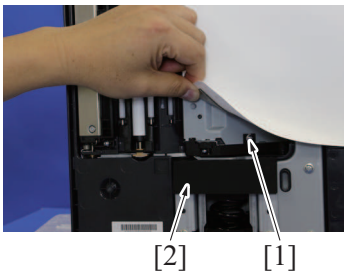
7.2.8 Back side glass cleaning roller unit (dual scan document feeder)

1. Open the dual scan document feeder.

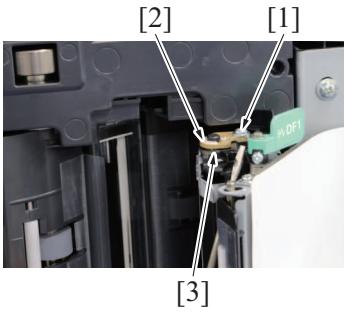


2. Open the opening and closing guide [1].

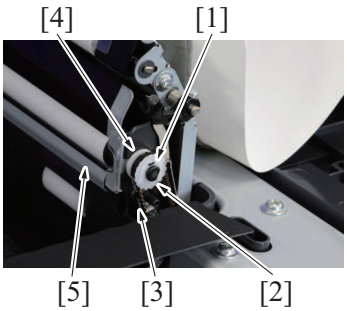
3. While peeling off the mat, remove the screw [1], and while opening the opening and closing guide, remove the cover [2].



4. Remove the screw [1] and the C-clip [2], and remove the bushing [3].



5. Remove the C-clip [1].
6. Remove the gear [2], and remove the belt [3].
7. Remove the bearing [4].
8. Remove the back side glass cleaning roller unit [5].

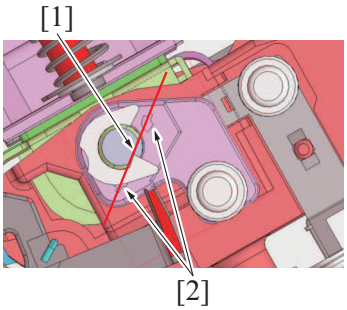


9. To reinstall, reverse the order of removal.

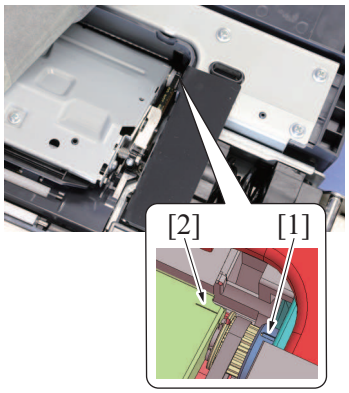
NOTE

- **When installing the back side glass cleaning roller unit, the following adjustment is necessary.**

1. **Align the D cut surface [1] of the shaft with the lines [2] marked on the bushing.**

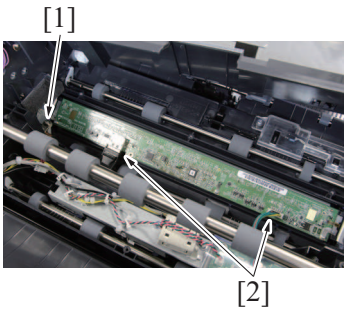


2. **When installing the belt, align the line [1] on the pulley and the line [2] on the transport guide.**

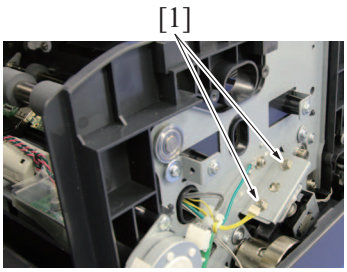


7.2.9 CIS module (CIS) (dual scan document feeder)

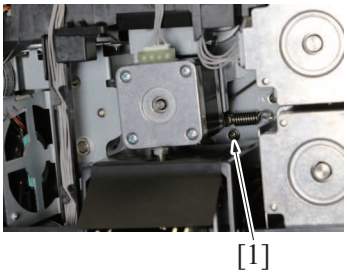
1. Remove the lower guide assembly.
G.7.2.5 Lower guide assembly (dual scan document feeder)



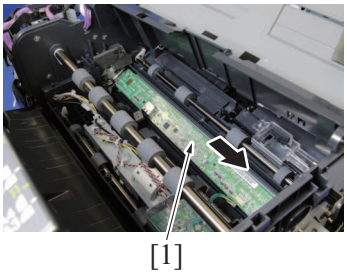
2. Remove the screw [1], and disconnect two connectors [1].



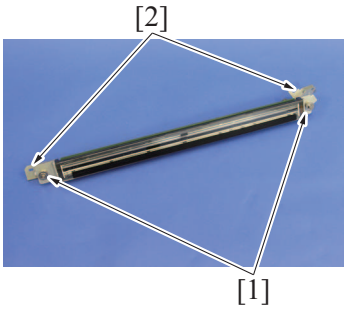
3. Remove two screws (front side) [1].



4. Remove the screw (rear side) [1].



5. Remove the CIS module [1] as shown in the illustration.



6. Remove the E-rings [1] on the right and left, and remove the plates [2].

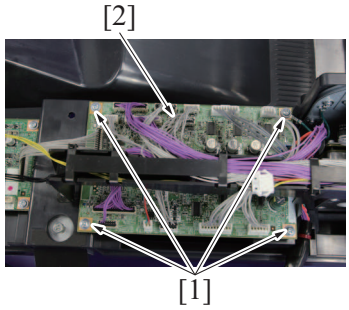
7. To reinstall, reverse the order of removal.

NOTE

- **Be sure to perform the following steps after the CIS module has been replaced with a new one.**
- **Adjust the back side skew feed on the dual scan document feeder.**
  I.13.1.3 Adjusting back side skew feed on dual scan document feeder
- **Execute [Service Mode] -> [System 2] -> [CCD Calibration] .**
- **Execute [Service Mode] -> [System 2] -> [Line Mag Setting] .**
- **Execute [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] .**
- **Execute [Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)] .**
- **Execute [Service Mode] -> [ADF] -> [Main Scanning Direction Zoom] .**

7.2.10 DF control board (DFCB) (dual scan document feeder)

1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)



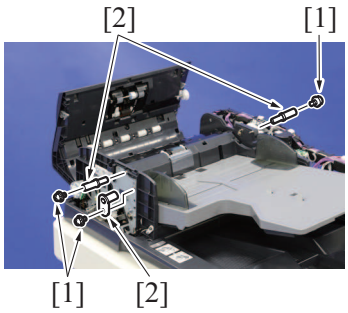
2. Remove all connectors from the board.
3. Remove four screws [1], and remove the DF control board [2].
4. To reinstall, reverse the order of removal.

NOTE

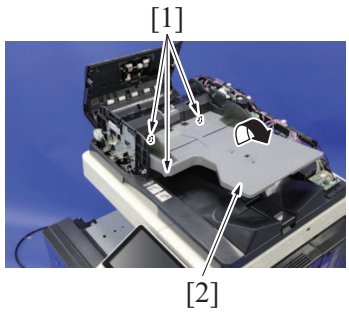
- **Install the firmware when the DF control board is replaced.**
- **Restore the data by executing [Service Mode] -> [Enhanced Security] -> [ADF Data Backup] -> [ADF Data Reflect Mode] when the DF control board is replaced.**

7.2.11 Restriction plate positional volume (VR1) (dual scan document feeder)

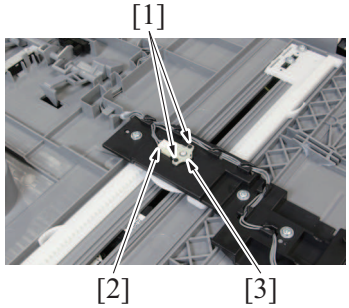
1. Remove the front cover.
   G.7.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)



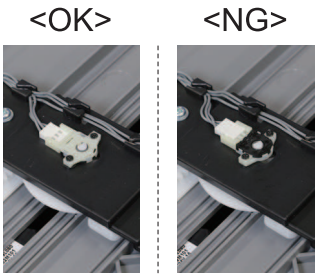
3. Remove three screws [1] and remove three pins [2].



4. Remove three tabs [1].
5. Turning the document feed tray [2] and remove it.



6. Remove two screws [1] and disconnect the connector [2], and remove the restriction plate positional volume [3].



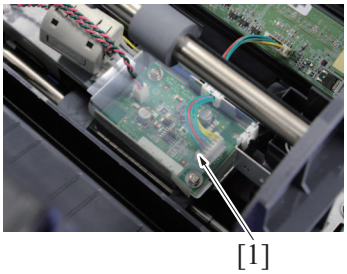
7. **NOTE**
   - **For mounting the restriction plate positional volume, mount it in the direction shown on the illustration.**

8. To reinstall, reverse the order of removal.

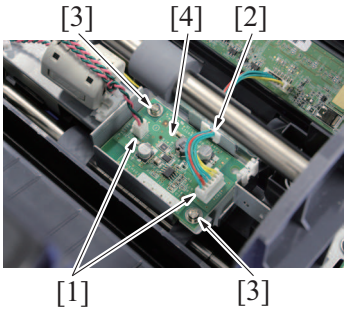
NOTE
- **Be sure to perform the following operation when the restriction plate positional volume is replaced.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width] .**
- **Turn OFF the main power switch and turn it ON again and check whether size detection operates normally.**

7.2.12 DF power supply (DFPU) (dual scan document feeder)

1. Remove the lower guide assy.
   G.7.2.5 Lower guide assembly (dual scan document feeder)
2. Open the protective sheet [1].



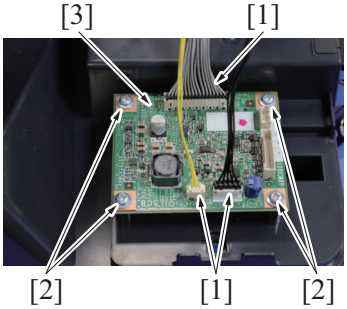
3. Disconnect two connectors [1].
4. Remove the harness from the edge cover [2].
5. Remove two screws [3] and remove the DF power supply [4].



6. To reinstall, reverse the order of removal.

7.2.13 Sensor control board (SCB)

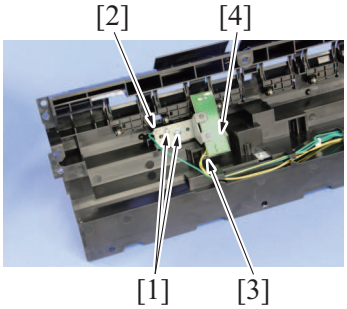
1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)
2. Disconnect three connectors [1], remove four screws [2], and remove the sensor control board [3].



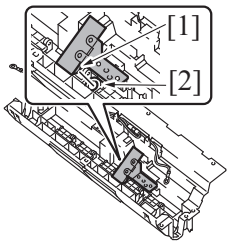
3. To reinstall, reverse the order of removal.
   NOTE
   - **Be sure to perform the following steps after the sensor control board has been replaced with a new one.**
   - **Execute [Service Mode] -> [ADF] -> [Multi-Feed DetectionAdj] .**

7.2.14 Multi feed detection board/1 (transmitter) (MFDB/1) (UK-501)

1. Remove the lower guide assy.
   G.7.2.5 Lower guide assembly (dual scan document feeder)



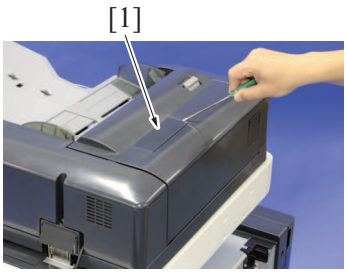
2. Remove two screws [1], and disconnect the ground wire [2].
3. Disconnect the connector [3] and remove the multi feed detection board/1 [4].
4. To reinstall, reverse the order of removal.



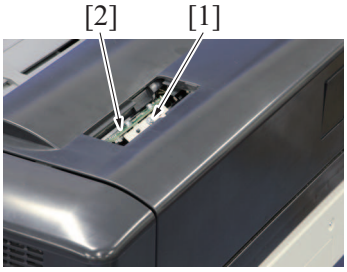
5. **NOTE**
   - **Install the board so that the sensor [1] fits into the depression [2].**
6. **NOTE**

- **Be sure to perform the following steps after the multi feed detection board/1 (transmitter) has been replaced with a new one.**
- **Execute [Service Mode] -> [ADF] ->** [Multi-Feed DetectionAdj] **.**

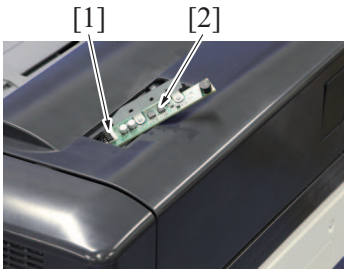
7.2.15 Multi feed detection board/2 (receiver) (MFDB/2)



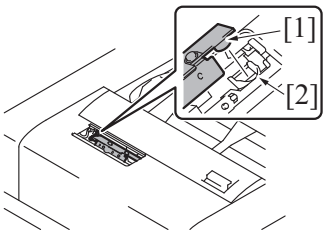
1. Remove the cover from the dual scan document feeder [1].



2. Remove the screw [1] and pull out the multi feed detection board/2 [2].



3. Disconnect the connector [1] and remove the multi feed detection board/2 [2].
4. To reinstall, reverse the order of removal.



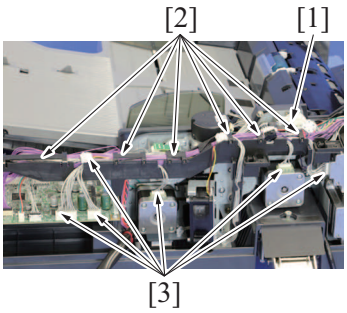
5. **NOTE**
   - **Install the board so that the sensor [1] fits into the depression [2].**

6. **NOTE**

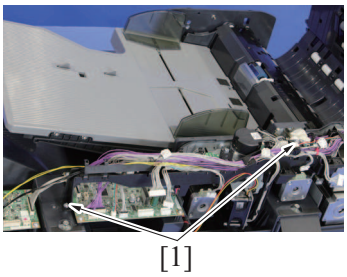
- **Be sure to perform the following steps after the multi feed detection board/2 (receiver) has been replaced with a new one.**
- **Execute [Service Mode] -> [ADF] ->** [Multi-Feed DetectionAdj] **.**

7.2.16 Take-up motor (M1) (dual scan document feeder)

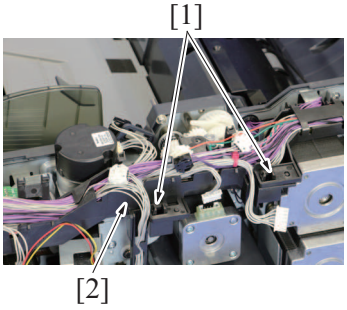
1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)



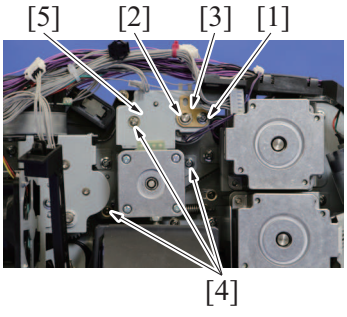
2. Remove the screw, and disconnect the ground wire [1].
3. Remove six wire saddles [2] and disconnect six connectors [3].



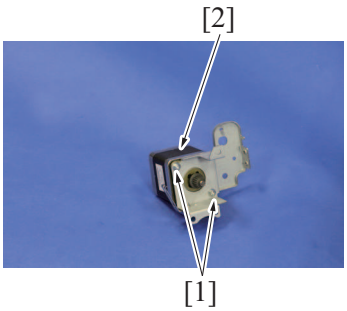
4. Remove two screws [1].



5. Unhook two hooks [1], remove the harness from the harness guide [2], and remove the harness guide [2].



6. Remove the screw [1], E-ring [2], and bushing [3].
7. Remove three screws [4] and remove the take-up motor assy [5].

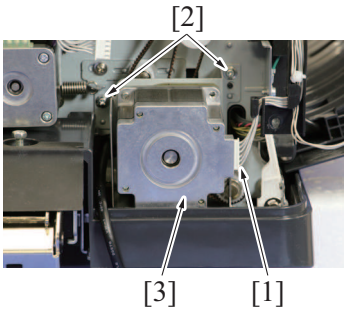


8. Remove the two screws [1] and remove the take-up motor [2].

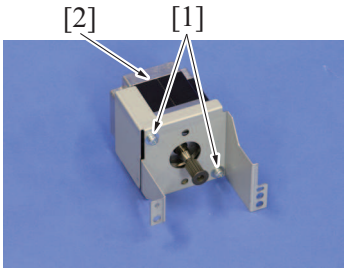
9. To reinstall, reverse the order of removal.

7.2.17 Registration motor (M2) (dual scan document feeder)

1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)
2. Remove the roller pressure/retraction motor.
   G.7.2.20 Reading roller pressure/retraction motor (M6) (dual scan document feeder)
3. Remove the reading motor.
   G.7.2.18 Reading motor (M3) (dual scan document feeder)



4. Disconnect the connector [1].
5. Remove two screws [2] and remove the registration motor assy [3].



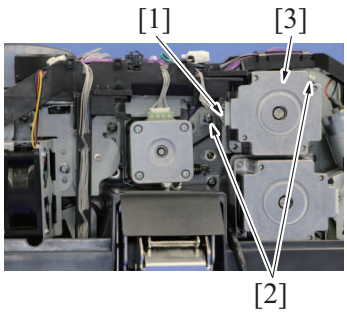
6. Remove two screws [1] and remove the registration motor [2].

7. To reinstall, reverse the order of removal.

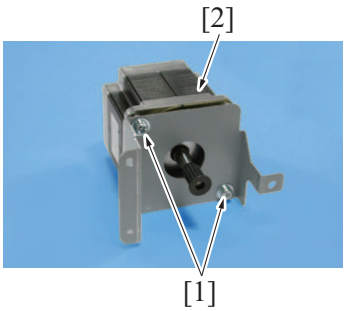
7.2.18 Reading motor (M3) (dual scan document feeder)

(1) Remove procedure

1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)

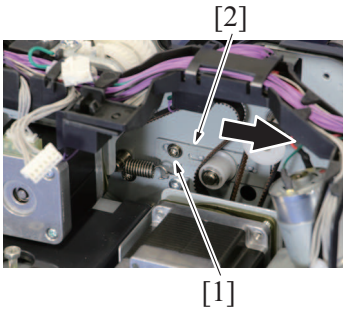


2. Disconnect the connector [1].
3. Remove two screws [2] and remove the reading motor assy [3].

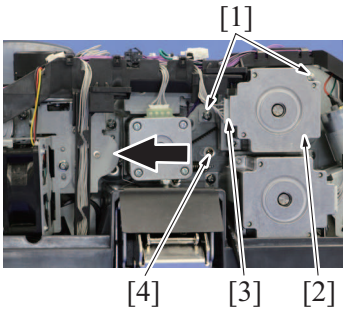


4. Remove two screws [1] and remove the reading motor [2].

(2) Reinstall procedure



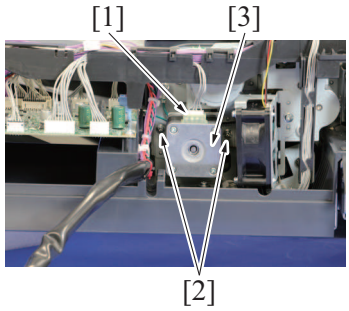
1. Loosen the screw [1] and move the tension plate [2] in the direction of the arrow to reduce the belt tension.
2. Tighten the screw [1].



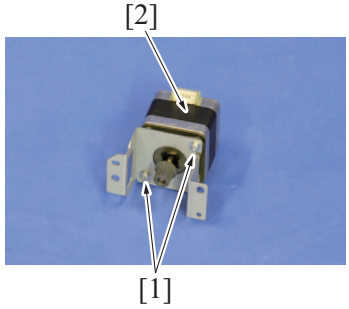
3. Install the reading motor assy [2] with two screws [1].
4. Connect the connector [3].
5. Loosen the screw [4] and apply tension to the belt.
6. Tighten the screw [4].

7.2.19 Exit motor (M4) (dual scan document feeder)

1. Remove the rear cover.
G.7.2.2 Rear cover (dual scan document feeder)



2. Disconnect the connector [1], remove two screws [2], and remove the exit motor assy [3].



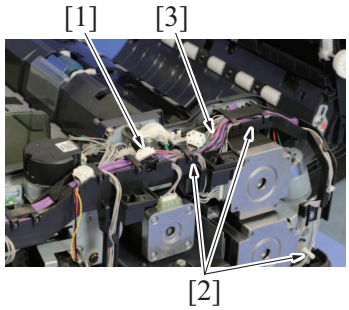
3. Remove two screws [1] and remove the exit motor [2].

4. To reinstall, reverse the order of removal.

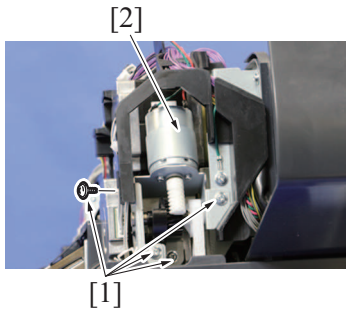
7.2.20 Reading roller pressure/retraction motor (M6) (dual scan document feeder)

1. Remove the rear cover.

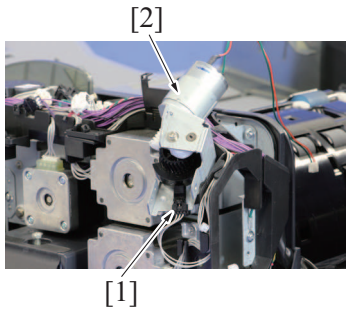
G.7.2.2 Rear cover (dual scan document feeder)



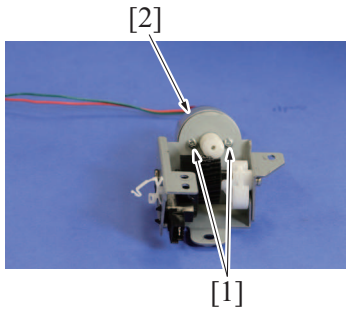
2. Disconnect the connector [1].
3. Remove the harness [3] from three wire saddles [2] and the harness guide.



4. Remove four screws [1] and remove the reading roller pressure/retraction motor assy [2].



5. Disconnect the connector [1] and remove the reading roller pressure/retraction motor assy [2].

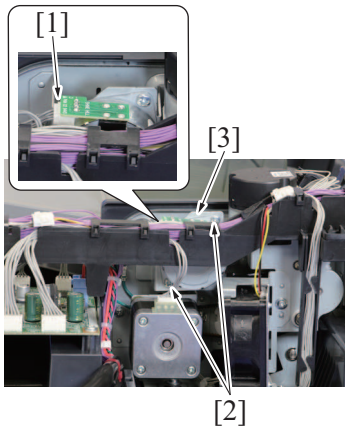


6. Remove two screws [1] and remove the reading roller pressure/retraction motor [2].

7. To reinstall, reverse the order of removal.

7.2.21 Back side cleaning motor (M7) (dual scan document feeder)

1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)

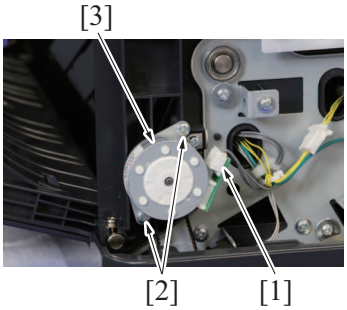


2. Disconnect the connector [1].
3. Remove two crews [2] and remove the back side cleaning motor [3].

4. To reinstall, reverse the order of removal.

7.2.22 Front side cleaning motor (M8) (dual scan document feeder)

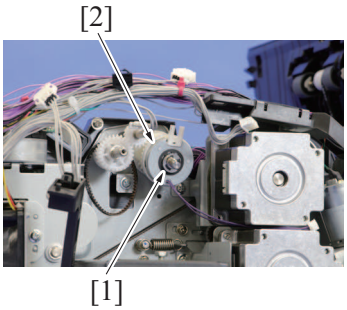
1. Remove the front cover.
   G.7.2.1 Front cover (dual scan document feeder)



2. Disconnect the connector [1].
3. Remove two screws [2] and remove the front side cleaning motor [3].
4. To reinstall, reverse the order of removal.

7.2.23 Take-up clutch (CL1) (dual scan document feeder)

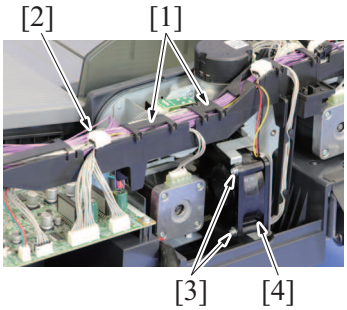
1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)
2. Remove the take-up motor assy.
   G.7.2.16 Take-up motor (M1) (dual scan document feeder)



3. Remove the E-ring [1] and remove the take-up clutch [2].
4. To reinstall, reverse the order of removal.

7.2.24 Cooling fan motor (FM) (dual scan document feeder)

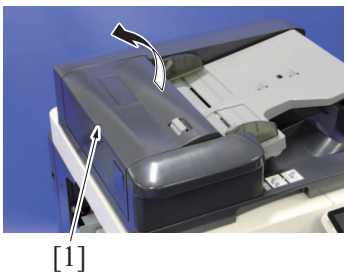
1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)

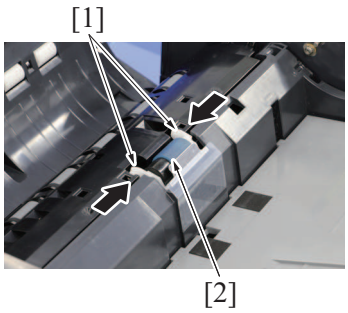


2. Remove two wire saddles [1], disconnect the connector [2], and remove the harness from the wire guide.
3. Remove two screws [3] and remove the cooling fan motor [4].
4. To reinstall, reverse the order of removal.

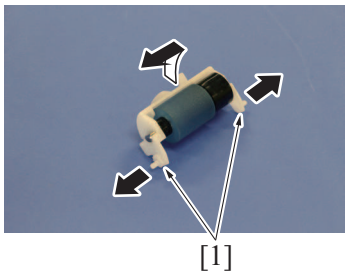
7.2.25 Replacing the separation roller torque limiter (dual scan document feeder)

1. Open the left cover [1].

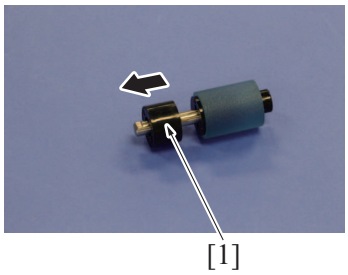




2. Grip both sides [1] of the holder and remove the separation roller assy [2].



3. While opening up the holder [1], remove the shaft.
NOTE
- **Opening the holder too much can break the holder.**

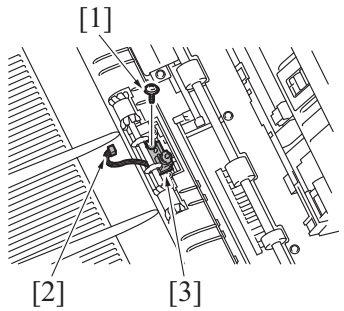


4. Remove the torque limiter [1] from the shaft.
NOTE
- **Be careful not to lose the pin.**

5. To reinstall, reverse the order of removal.

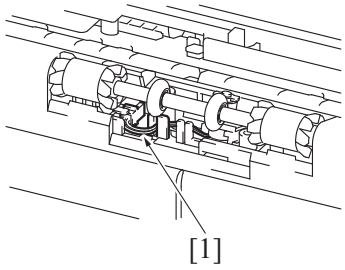
7.2.26 Stamp unit (SP-501)

1. Remove the front cover.
G.7.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
G.7.2.2 Rear cover (dual scan document feeder)
3. Open the document feed tray.
G.7.2.3 How to open the document feed tray (dual scan document feeder)
4. Remove the stamp unit cover.
G.7.2.4 Stamp unit cover (dual scan document feeder)



5. Remove the screw [1] and disconnect the ground wire.
6. Disconnect the connector [2] and remove the stamp unit [3].

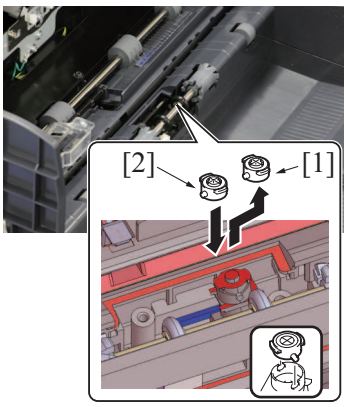
7. To reinstall, reverse the order of removal.



8. **NOTE**
   - **When reinstalling the stamp unit, make sure that the harness [1] does not interfere with the roller.**

7.2.27 Stamp (SP-501)

1. Remove the front cover.
   G.7.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)
3. Open the document feed tray.
   G.7.2.3 How to open the document feed tray (dual scan document feeder)
4. Remove the stamp unit cover.
   G.7.2.4 Stamp unit cover (dual scan document feeder)



5. Remove the used stamp [1] and install the spare TX marker stamp [2].
   NOTE
   - **Align the round pin of the stamp to the groove in the stamp unit.**

8. Option

8.1 Disassembly/reassembly parts list (bizhub C368/C308/C258)

8.1.1 DF-629

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.3.1 Front cover (DF-629)
	Rear cover	G.8.3.2 Rear cover (DF-629)
	Left cover unit	G.8.3.3 Left cover unit (DF-629)
Units	Reverse automatic document feeder	G.8.3.4 Reverse automatic document feeder (DF-629)
	Glass cleaning roller unit	G.8.3.5 Glass cleaning roller unit (DF-629)
Board and etc.	DF control board (DFCB)	G.8.3.6 DF control board (DFCB) (DF-629)
	Document width size sensor (VR1)	G.8.3.7 Document width size sensor (VR1) (DF-629)
Others	Document reading motor (M1)	G.8.3.8 Document reading motor (M1) (DF-629)
	Document feed motor (M2)	G.8.3.9 Document feed motor (M2) (DF-629)
	Registration motor (M3)	G.8.3.10 Registration motor (M3) (DF-629)
	Glass cleaning motor (M4)	G.8.3.11 Glass cleaning motor (M4) (DF-629)
	Reading roll release motor (M5)	G.8.3.12 Reading roll release motor (M5) (DF-629)
	DF cooling fan motor (FM1)	G.8.3.13 DF cooling fan motor (FM1) (DF-629)
	Document exit roller release solenoid (SD1)	G.8.3.14 Document exit roller release solenoid (SD1) (DF-629)
	Stamp unit	G.8.3.15 Stamp unit (SP-501)
	Spare TX Marker Stamp 2	G.8.3.16 Stamp (SP-501)

8.1.2 DF-704

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.4.1 Front cover (DF-704)
	Rear cover	G.8.4.2 Rear cover (DF-704)
	Left cover unit	G.8.4.3 Left cover unit (DF-704)
Units	Dual scan document feeder	G.8.4.4 Dual scan document feeder (DF-704)
	Front side glass cleaning roller unit	G.8.4.5 Front side glass cleaning roller unit (DF-704)
	Back side glass cleaning roller unit	G.8.4.6 Back side glass cleaning roller unit (DF-704)
	CIS module (CIS)	G.8.4.7 CIS module (CIS) (DF-704)
Board and etc.	DF control board (DFCB)	G.8.4.8 DF control board (DFCB) (DF-704)
	Document width size sensor (VR1)	G.8.4.9 Document width size sensor (VR1) (DF-704)
	CIS power supply (CISPU)	G.8.4.10 CIS power supply (CISPU) (DF-704)
	Dual scan image processing board (DSIPB)	G.8.4.11 dual scan image processing board (DSIPB) (DF-704)
Others	Document reading motor (M1)	G.8.4.12 Document reading motor (M1) (DF-704)
	Document feed motor (M2)	G.8.4.13 Document feed motor (M2) (DF-704)
	Registration motor (M3)	G.8.4.14 Registration motor (M3) (DF-704)
	Reading roller release motor (M4)	G.8.4.15 Reading roller release motor (M4) (DF-704)
	CIS cleaning motor (M5)	G.8.4.16 CIS cleaning motor (M5) (DF-704)
	Document reading glass cleaning motor (M6)	G.8.4.17 Document reading glass cleaning motor (M6) (DF-704)
	DF cooling fan motor (FM1)	G.8.4.18 DF cooling fan motor (FM1) (DF-704)
	CIS cable	G.8.4.19 CIS cable (DF-704)
	Stamp unit	G.8.4.20 Stamp unit (SP-501)
	Spare TX Marker Stamp 2	G.8.4.21 Stamp (SP-501)

8.1.3 PC-110/PC-210

Section	Part name	Ref. page
Exterior parts	Right door	G.8.5.1 Right door (PC-110/PC-210)
	Rear right cover	G.8.5.2 Rear right cover (PC-110/PC-210)
	Rear cover	G.8.5.3 Rear cover (PC-110/PC-210)
	Tray 3, Tray 4	G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
Units	Paper feed cabinet	G.8.5.5 Paper feed cabinet (PC-110/PC-210)
	Tray 3 paper feed unit	G.8.5.6 Tray 3 paper feed unit (PC-110/PC-210)
	Tray 4 paper feed unit	G.8.5.7 Tray 4 paper feed unit (PC-210)
Boards	PC control board (PCCB)	G.8.5.8 PC control board (PCCB) (PC-110/PC-210)

Section	Part name	Ref. page
	Tray 3 paper empty indicator board (PEIB/3)	G.8.5.9 Tray 3 paper empty indicator board (PEIB/3), tray 4 paper empty indicator board (PEIB/4) (PC-110/PC-210)
	Tray 4 paper empty indicator board (PEIB/4)	
	Tray 3 FD paper size board (FDPSB/3)	G.8.5.10 Tray 3 FD paper size board (FDPSB/3), tray 4 FD paper size board (FDPSB/4) (PC-110/PC-210)
	Tray 4 FD paper size board (FDPSB/4)	
	Tray 3 CD paper size board (CDPSB/3)	G.8.5.11 Tray 3 CD paper size board (CDPSB/3) (PC-110/PC-210)
	Tray 4 CD paper size board (CDPSB/4)	G.8.5.12 Tray 4 CD paper size board (CDPSB/4) (PC-210)
Motors	Tray 3 paper feed motor (M111)	G.8.5.13 Tray 3 paper feed motor (M111), tray 4 paper feed motor (M121) (PC-110/PC-210)
	Tray 4 paper feed motor (M121)	
	Tray 3 vertical transport motor (M112)	G.8.5.14 Tray 3 vertical transport motor (M112), tray 4 vertical transport motor (M122) (PC-110/PC-210)
	Tray 4 vertical transport motor (M122)	
	Tray 3 lift-up motor (M113)	G.8.5.15 Tray 3 lift-up motor (M113), tray 4 lift-up motor (M123) (PC-110/PC-210)
	Tray 4 lift-up motor (M123)	

8.1.4 PC-410

Section	Part name	Ref. page
Exterior parts	Right door	G.8.7.1 Right door (PC-410)
	Rear right cover	G.8.7.2 Rear right cover (PC-410)
	Rear cover	G.8.7.3 Rear cover (PC-410)
	Paper feed tray	G.8.7.4 Paper feed tray (PC-410)
Units	Paper feed cabinet	G.8.7.5 Paper feed cabinet (PC-410)
	Paper feed unit	G.8.7.6 Paper feed unit (PC-410)
Boards	PC control board (PCCB)	G.8.7.7 PC control board (PCCB) (PC-410)
	Tray 3 paper empty indicator board (PEIB/3)	G.8.7.8 Tray 3 paper empty indicator board (PEIB/3) (PC-410)
Motors	Paper feed motor (M131)	G.8.7.9 Paper feed motor (M131) (PC-410)
	Vertical transport motor (M132)	G.8.7.10 Vertical transport motor (M132) (PC-410)
	Elevator motor (M134)	G.8.7.11 Elevator motor (M134) (PC-410)
	Shifter motor (M133)	G.8.7.12 Shifter motor (M133) (PC-410)
etc.	Wire	G.8.7.13 Wire (PC-410)

8.1.5 LU-302

Section	Part name	Ref. page
Exterior parts	Upper door	G.8.10.1 Upper door (LU-302)
	Right cover	G.8.10.2 Right cover (LU-302)
	Front cover	G.8.10.3 Front cover (LU-302)
	Rear cover	G.8.10.4 Rear cover (LU-302)
	Feed cover	G.8.10.5 Feed cover (LU-302)
Units	Large capacity unit	G.8.10.6 Large capacity unit (LU-302)
Boards	LU drive board (LUDB)	G.8.10.7 LU drive board (LUDB) (LU-302)
Motors	LU Lift-up motor (M1)	G.8.10.8 LU lift-up motor (M1) (LU-302)
Others	Dehumidification heater (DH)	G.8.10.9 Dehumidification heater (DH) (LU-302)
Up/down section	Lift wire	G.8.10.10 Lift wire (LU-302)

8.1.6 FS-533

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.12.1 Front cover (FS-533)
	Upper cover	G.8.12.2 Upper cover (FS-533)
	Rear cover	G.8.12.3 Rear cover (FS-533)
Units	Finisher	G.8.12.4 Finisher (FS-533)
	Stapler unit	G.8.12.5 Stapler unit (FS-533)
	Paper exit tray unit	G.8.12.6 Paper exit tray unit (FS-533)
Boards	FS control board (FSCB)	G.8.12.7 FS control board (FSCB) (FS-533)
	Stapler relay board (STREYB)	G.8.12.8 Stapler relay board (STREYB) (FS-533)
Motors	Paper conveyance motor (M101)	G.8.12.9 Paper conveyance motor (M101) (FS-533)
	Paper exit motor (M102)	G.8.12.10 Paper exit motor (M102) (FS-533)

Section	Part name	Ref. page
	Alignment roller motor (M103)	G.8.12.11 Alignment roller motor (M103) (FS-533)
	Exit roller lift up motor (M104)	G.8.12.12 Exit roller lift up motor (M104) (FS-533)
	Alignment motor/F (M105)	G.8.12.13 Alignment motor/F (M105), Alignment motor/R (M106) (FS-533)
	Alignment motor/R (M106)	
	Stapler movement motor (M107)	G.8.12.14 Stapler movement motor (M107) (FS-533)
	Tray lift up motor (M109)	G.8.12.15 Tray lift up motor (M109) (FS-533)
	Paper surface detect solenoid (SD101)	G.8.12.16 Paper surface detect solenoid (SD101) (FS-533)
	Batch solenoid (SD102)	G.8.12.17 Batch solenoid (SD102) (FS-533)
	Paper exit roller solenoid (SD103)	G.8.12.18 Paper exit roller solenoid (SD103) (FS-533)
etc.	Paper exit paddle	G.8.12.19 Paper exit paddle (FS-533)

8.1.7 JS-506

Section	Part name	Ref. page
Exterior parts	Exit tray 1	G.8.11.1 Exit tray 1 (JS-506)
	Exit tray 2	G.8.11.2 Exit tray 2 (JS-506)
Units	Job separator	G.8.11.3 Job separator (JS-506)
	Sensor unit	G.8.11.4 Sensor unit (JS-506)
Boards	JS control board (JSCB)	G.8.11.5 JS control board (JSCB) (JS-506)
Motors	Tray shift motor (M1)	G.8.11.6 Tray shift motor (M1) (JS-506)

8.1.8 PK-519

Section	Part name	Ref. page
Units	Punch kit	G.8.13.1 Punch kit (PK-519)
Boards	PK control board (PKCB)	G.8.13.2 PK control board (PKCB) (PK-519)
Motors	Punch motor (M201)	G.8.13.3 Punch motor (M201) (PK-519)

8.1.9 FS-534/FS-534SD

Section	Part name	Ref. page
Exterior parts	Rear cover	G.8.14.1 Rear cover (FS-534/FS-534SD)
	Front door	G.8.14.2 Front door (FS-534/FS-534SD)
	Front upper cover	G.8.14.3 Front upper cover (FS-534/FS-534SD)
	Left lower cover	G.8.14.4 Left lower cover (FS-534/FS-534SD)
	Front lower cover	G.8.14.5 Front lower cover (FS-534/FS-534SD)
Units	Finisher	G.8.14.6 Finisher (FS-534/FS-534SD)
	Horizontal transport unit	G.8.14.7 Relay unit (RU-513)
	Stapler unit	G.8.14.8 Stapler unit (FS-534/FS-534SD)
	Sensor unit	G.8.14.9 Sensor unit (FS-534/FS-534SD)
	Saddle unit	G.8.14.10 Saddle unit (FS-534SD)
Boards	FS control board (FSCB)	G.8.14.11 FS control board (FSCB) (FS-534/FS-534SD)
Motors	FNS entry transport motor (M2)	G.8.14.12 FNS entry transport motor (M2) (FS-534/FS-534SD)
	FNS discharge motor (M3)	G.8.14.13 FNS discharge motor (M3) (FS-534/FS-534SD)
	Receiving roller retraction motor (M4)	G.8.14.14 Receiving roller retraction motor (M4) (FS-534/FS-534SD)
	FNS paddle motor (M5)	G.8.14.15 FNS paddle motor (M5) (FS-534/FS-534SD)
	Trailing edge stopper motor (M6)	G.8.14.16 Trailing edge stopper motor (M6) (FS-534/FS-534SD)
	Alignment motor/front (M7)	G.8.14.17 Alignment motor/front (M7) (FS-534/FS-534SD)
	Alignment motor/rear (M8)	G.8.14.18 Alignment motor/rear (M8) (FS-534/FS-534SD)
	Pre-eject drive motor (M9)	G.8.14.19 Pre-eject drive motor (M9) (FS-534/FS-534SD)
	Bundle eject motor (M10)	G.8.14.20 Bundle eject motor (M10) (FS-534/FS-534SD)
	Main tray up/down motor (M11)	G.8.14.21 Main tray up/down motor (M11) (FS-534/FS-534SD)

Section	Part name	Ref. page
	Paper receiving control motor (M12)	G.8.14.22 Paper receiving control motor (M12) (FS-534/FS-534SD)
	Side stapler movement motor (M13)	G.8.14.23 Side stapler movement motor (M13) (FS-534/FS-534SD)

8.1.10 SD-511

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.15.1 Front cover (SD-511)
Units	Paper exit tray	G.8.15.2 Paper exit tray (SD-511)
	Staple unit	G.8.15.3 Staple unit (SD-511)
Boards	SD drive board (SDDB)	G.8.15.4 SD drive board (SDDB) (SD-511)
Motors	SD transport motor (M1)	G.8.15.5 SD transport motor (M1) (SD-511)
	Paper discharge control motor (M2)	G.8.15.6 Paper discharge control motor (M2) (SD-511)
	Alignment motor (M3)	G.8.15.7 Alignment motor (M3) (SD-511)
	Stopper drive motor (M4)	G.8.15.8 Stopper drive motor (M4) (SD-511)
	Center fold roller motor (M5)	G.8.15.9 Center fold roller motor (M5) (SD-511)
	Tri-folding guide motor (M6)	G.8.15.10 Tri-folding guide motor (M6) (SD-511)
	SD paddle motor (M7)	G.8.15.11 SD paddle motor (M7) (SD-511)
	Center fold guide motor (M8)	G.8.15.12 Center fold guide motor (M8) (SD-511)
	Center fold knife motor (M9)	G.8.15.13 Center fold knife motor (M9) (SD-511)
	Stopper solenoid (SD1)	G.8.15.14 Stopper solenoid (SD1) (SD-511)

8.1.11 RU-513

Section	Part name	Ref. page
Exterior parts	RU transport motor (M1)	G.8.25.1 RU transport motor (M1)

8.1.12 PK-520

Section	Part name	Ref. page
Units	Punch kit	G.8.18.1 Punch kit (PK-520)

8.1.13 SC-508

Section	Part name	Ref. page
Boards	DSC board/1 (for front side)	G.8.27.1 DSC board/1 (for front side) (SC-508) (bizhub C368/C308/C258)
	DSC board/2 (for back side)	G.8.27.2 DSC board/2 (for back side) (SC-508) (bizhub C368/C308/C258)

8.1.14 UK-211

Section	Part name	Ref. page
Units	Upgrade kit	G.8.28.1 Upgrade kit (UK-211)

8.1.15 UK-212

Section	Part name	Ref. page
Units	Upgrade kit	G.8.29.1 Upgrade kit (UK-212) (bizhub C368/C308/C258)

8.1.16 UK-215

Section	Part name	Ref. page
Units	Upgrade kit	G.8.30.1 Upgrade kit (UK-215) (bizhub C368/C308/C258)

8.1.17 FK-515

Section	Part name	Ref. page
Units	FAX board (line 3), FAX board (line 4)	G.8.31.1 FAX board (line 3), FAX board (line 4) (FK-515)

8.1.18 FK-514

Section	Part name	Ref. page
Units	FAX board (line 1), FAX board (line 2)	G.8.32.1 FAX Kit (Line1), FAX Kit (Line2) (FK-514)

Section	Part name	Ref. page
		G.8.32.2 FAX Kit (Line1), FAX Kit (Line2) (FK-514) (with MK-742)

8.1.19 HD-524

Section	Part name	Ref. page
Units	Hard disk (B)	G.8.33.1 Hard disk (B) (HD-524) (bizhub C368/C308/C258)
	Hard disk (B)	G.8.33.2 Hard disk (B) (HD-524: Cover type) (bizhub C368/C308/C258)

8.1.20 CU-101

Section	Part name	Ref. page
Exterior parts	Clean unit cover	G.8.34.1 Clean unit cover
Units	Clean unit	G.8.34.2 Clean unit (CU-101)
Boards	Clean unit drive board (CUDB)	G.8.34.3 Clean unit drive board (CUDB)
Fans	Exhaust fan/1 (FM14)	G.8.34.4 Exhaust fan/1 (FM14)
	Exhaust fan/2 (FM15)	G.8.34.5 Exhaust fan/2 (FM15)
	Suction fan (FM16)	G.8.34.6 Suction fan (FM16)
etc.	Deodorant filter/UFP filter	G.8.34.7 Deodorant filter/UFP filter

8.1.21 KP-101

Section	Part name	Ref. page
Units	Keypad	G.8.36.1 Keypad (KP-101)

8.1.22 VI-508

Section	Part name	Ref. page
Units	Video Interface Kit	G.8.37.1 Video Interface Kit (VI-508)

8.2 Disassembly/reassembly parts list (bizhub C658/C558/C458)

8.2.1 PC-115/PC-215

Section	Part name	Ref. page
Exterior parts	Right door	G.8.6.1 Right door (PC-115/PC-215)
	Rear right cover	G.8.6.2 Rear right cover (PC-115/PC-215)
	Rear cover	G.8.6.3 Rear cover (PC-115/PC-215)
	Tray 3, Tray 4	G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
Units	Paper feed cabinet	G.8.6.5 Paper feed cabinet (PC-115/PC-215)
	Tray 3 paper feed unit	G.8.6.6 Tray 3 paper feed unit (PC-115/PC-215)
	Tray 4 paper feed unit	G.8.6.7 Tray 4 paper feed unit (PC-215)
Boards	PC control board (PCCB)	G.8.6.8 PC control board (PCCB) (PC-115/PC-215)
	Tray 3 paper empty indicator board (PEIB/3)	G.8.6.9 Tray 3 paper empty indicator board (PEIB/3), tray 4 paper empty indicator board (PEIB/4) (PC-115/PC-215)
	Tray 4 paper empty indicator board (PEIB/4)	
	Tray 3 FD paper size board (FDPSB/3)	G.8.6.10 Tray 3 FD paper size board (FDPSB/3), tray 4 FD paper size board (FDPSB/4) (PC-115/PC-215)
	Tray 4 FD paper size board (FDPSB/4)	
	Tray 3 CD paper size board (CDPSB/3)	G.8.6.11 Tray 3 CD paper size board (CDPSB/3) (PC-115/PC-215)
	Tray 4 CD paper size board (CDPSB/4)	G.8.6.12 Tray 4 CD paper size board (CDPSB/4) (PC-215)
Motors	Tray 3 paper feed motor (M111)	G.8.6.13 Tray 3 paper feed motor (M111), tray 4 paper feed motor (M121) (PC-115/PC-215)
	Tray 4 paper feed motor (M121)	
	Tray 3 vertical transport motor (M112)	G.8.6.14 Tray 3 vertical transport motor (M112), tray 4 vertical transport motor (M122) (PC-115/PC-215)
	Tray 4 vertical transport motor (M122)	
	Tray 3 lift-up motor (M113)	G.8.6.15 Tray 3 lift-up motor (M113), tray 4 lift-up motor (M123) (PC-115/PC-215)
	Tray 4 lift-up motor (M123)	

8.2.2 PC-415

Section	Part name	Ref. page
Exterior parts	Right door	G.8.8.1 Right door (PC-415)
	Rear right cover	G.8.8.2 Rear right cover (PC-415)
	Rear cover	G.8.8.3 Rear cover (PC-415)
	Paper feed tray	G.8.8.4 Paper feed tray (PC-415)
Units	Paper feed cabinet	G.8.8.5 Paper feed cabinet (PC-415)
	Paper feed unit	G.8.8.6 Paper feed unit (PC-415)
Boards	PC control board (PCCB)	G.8.8.7 PC control board (PCCB) (PC-415)
	Tray 3 paper empty indicator board (PEIB/3)	G.8.8.8 Tray 3 paper empty indicator board (PEIB/3) (PC-415)
Motors	Paper feed motor (M131)	G.8.8.9 Paper feed motor (M131) (PC-415)
	Vertical transport motor (M132)	G.8.8.10 Vertical transport motor (M132) (PC-415)
	Elevator motor (M134)	G.8.8.11 Elevator motor (M134) (PC-415)
	Shifter motor (M133)	G.8.8.12 Shifter motor (M133) (PC-415)
etc.	Wire	G.8.8.13 Wire (PC-415)

8.2.3 LU-207

Section	Part name	Ref. page
Exterior parts	Right cover	G.8.9.1 Right cover (LU-207)
	Front cover	G.8.9.2 Front cover (LU-207)
	Rear cover	G.8.9.3 Rear cover (LU-207)
	Feed cover	G.8.9.4 Feed cover (LU-207)
Units	Large capacity unit	G.8.9.5 Large capacity unit (LU-207)
Boards	LU drive board (LUDB)	G.8.9.6 LU drive board (LUDB) (LU-207)
Electrical part	LU lift-up motor (M1)	G.8.9.7 LU lift-up motor (M1) (LU-207)
	LU paper feed motor (M2)	G.8.9.8 LU paper feed motor (M2) (LU-207)
	LU transport motor (M3)	G.8.9.9 LU transport motor (M3) (LU-207)
	Dehumidification heater (DH)	G.8.9.10 Dehumidification heater (DH) (LU-207)
Up/down section	Lift wire	G.8.9.11 Lift wire (LU-207)

8.2.4 LU-302

Section	Part name	Ref. page
Exterior parts	Upper door	G.8.10.1 Upper door (LU-302)
	Right cover	G.8.10.2 Right cover (LU-302)
	Front cover	G.8.10.3 Front cover (LU-302)
	Rear cover	G.8.10.4 Rear cover (LU-302)
	Feed cover	G.8.10.5 Feed cover (LU-302)
Units	Large capacity unit	G.8.10.6 Large capacity unit (LU-302)
Boards	LU drive board (LUDB)	G.8.10.7 LU drive board (LUDB) (LU-302)
Motors	LU Lift-up motor (M1)	G.8.10.8 LU lift-up motor (M1) (LU-302)
Others	Dehumidification heater (DH)	G.8.10.9 Dehumidification heater (DH) (LU-302)
Up/down section	Lift wire	G.8.10.10 Lift wire (LU-302)

8.2.5 JS-506(C558/C458 only)

Section	Part name	Ref. page
Exterior parts	Exit tray 1	G.8.11.1 Exit tray 1 (JS-506)
	Exit tray 2	G.8.11.2 Exit tray 2 (JS-506)
Units	Job separator	G.8.11.3 Job separator (JS-506)
	Sensor unit	G.8.11.4 Sensor unit (JS-506)
Boards	JS control board (JSCB)	G.8.11.5 JS control board (JSCB) (JS-506)
Motors	Tray shift motor (M1)	G.8.11.6 Tray shift motor (M1) (JS-506)

8.2.6 FS-533(C558/C458 only)

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.12.1 Front cover (FS-533)
	Upper cover	G.8.12.2 Upper cover (FS-533)
	Rear cover	G.8.12.3 Rear cover (FS-533)

Section	Part name	Ref. page
Units	Finisher	G.8.12.4 Finisher (FS-533)
	Stapler unit	G.8.12.5 Stapler unit (FS-533)
	Paper exit tray unit	G.8.12.6 Paper exit tray unit (FS-533)
Boards	FS control board (FSCB)	G.8.12.7 FS control board (FSCB) (FS-533)
	Stapler relay board (STREYB)	G.8.12.8 Stapler relay board (STREYB) (FS-533)
Motors	Paper conveyance motor (M101)	G.8.12.9 Paper conveyance motor (M101) (FS-533)
	Paper exit motor (M102)	G.8.12.10 Paper exit motor (M102) (FS-533)
	Alignment roller motor (M103)	G.8.12.11 Alignment roller motor (M103) (FS-533)
	Exit roller lift up motor (M104)	G.8.12.12 Exit roller lift up motor (M104) (FS-533)
	Alignment motor/F (M105)	G.8.12.13 Alignment motor/F (M105), Alignment motor/R (M106) (FS-533)
	Alignment motor/R (M106)	
	Stapler movement motor (M107)	G.8.12.14 Stapler movement motor (M107) (FS-533)
	Tray lift up motor (M109)	G.8.12.15 Tray lift up motor (M109) (FS-533)
	Paper surface detect solenoid (SD101)	G.8.12.16 Paper surface detect solenoid (SD101) (FS-533)
	Batch solenoid (SD102)	G.8.12.17 Batch solenoid (SD102) (FS-533)
	Paper exit roller solenoid (SD103)	G.8.12.18 Paper exit roller solenoid (SD103) (FS-533)
etc.	Paper exit paddle	G.8.12.19 Paper exit paddle (FS-533)

8.2.7 PK-519(C558/C458 only)

Section	Part name	Ref. page
Units	Punch kit	G.8.13.1 Punch kit (PK-519)
Boards	PK control board (PKCB)	G.8.13.2 PK control board (PKCB) (PK-519)
Motors	Punch motor (M201)	G.8.13.3 Punch motor (M201) (PK-519)

8.2.8 FS-536/FS-536SD

Section	Part name	Ref. page
Exterior parts	Rear cover	G.8.16.1 Rear cover (FS-536/FS-536SD)
	Front door	G.8.16.2 Front door (FS-536/FS-536SD)
	Front upper cover	G.8.16.3 Front upper cover (FS-536/FS-536SD)
	Left lower cover	G.8.16.4 Left lower cover (FS-536/FS-536SD)
	Front lower cover	G.8.16.5 Front lower cover (FS-536/FS-536SD)
Units	Finisher	G.8.16.6 Finisher (FS-536/FS-536SD)
	Relay unit	G.8.16.7 Relay unit (FS-536/FS-536SD)
	Sensor unit	G.8.16.8 Sensor unit (FS-536/FS-536SD)
	Stapler unit	G.8.16.9 Stapler unit (FS-536/FS-536SD)
Boards	FS control board (FSCB)	G.8.16.10 FS control board (FSCB) (FS-536/FS-536SD)
Motors	FNS entry transport motor (M2)	G.8.16.11 FNS entry transport motor (M2) (FS-536/FS-536SD)
	FNS discharge motor (M3)	G.8.16.12 FNS discharge motor (M3) (FS-536/FS-536SD)
	Receiving roller retraction motor (M4)	G.8.16.13 Receiving roller retraction motor (M4) (FS-536/FS-536SD)
	FNS paddle motor (M5)	G.8.16.14 FNS paddle motor (M5) (FS-536/FS-536SD)
	Trailing edge stopper motor (M6)	G.8.16.15 Trailing edge stopper motor (M6) (FS-536/FS-536SD)
	Alignment motor/front (M7)	G.8.16.16 Alignment motor/front (M7) (FS-536/FS-536SD)
	Alignment motor/rear (M8)	G.8.16.17 Alignment motor/rear (M8) (FS-536/FS-536SD)
	Pre-eject drive motor (M9)	G.8.16.18 Pre-eject drive motor (M9) (FS-536/FS-536SD)
	Bundle eject motor (M10)	G.8.16.19 Bundle eject motor (M10) (FS-536/FS-536SD)
	Main tray up/down motor (M11)	G.8.16.20 Main tray up/down motor (M11) (FS-536/FS-536SD)
	Paper receiving control motor (M12)	G.8.16.21 Paper receiving control motor (M12) (FS-536/FS-536SD)
	Side stapler movement motor (M13)	G.8.16.22 Side stapler movement motor (M13) (FS-536/FS-536SD)

8.2.9 FS-536SD saddle section

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.17.1 Front cover (FS-536SD saddle section)
Units	Saddle unit	G.8.17.2 Saddle unit (FS-536SD)
	Exit tray	G.8.17.3 Exit tray (FS-536SD saddle section)
	Staple unit	G.8.17.4 Staple unit (FS-536SD saddle section)
Boards	SD control board (SDCB)	G.8.17.5 SD control board (SDCB) (FS-536SD saddle section)
Electrical parts	SD transport motor (M1)	G.8.17.6 SD transport motor (M1) (FS-536SD saddle section)
	Paper discharge control motor (M2)	G.8.17.7 Paper discharge control motor (M2) (FS-536SD saddle section)
	Alignment motor (M3)	G.8.17.8 Alignment motor (M3) (FS-536SD saddle section)
	Stopper drive motor (M4)	G.8.17.9 Stopper drive motor (M4) (FS-536SD saddle section)
	Center fold roller motor (M5)	G.8.17.10 Center fold roller motor (M5) (FS-536SD saddle section)
	Center fold guide motor (M6)	G.8.17.11 Center fold guide motor (M6) (FS-536SD saddle section)
	SD paddle motor (M7)	G.8.17.12 SD paddle motor (M7) (FS-536SD saddle section)
	Tri-folding guide motor (M8)	G.8.17.13 Tri-folding guide motor (M8) (FS-536SD saddle section)
	Center fold knife motor (M9)	G.8.17.14 Center fold knife motor (M9) (FS-536SD saddle section)
	Stopper solenoid (SD1)	G.8.17.15 Stopper solenoid (SD1) (FS-536SD saddle section)

8.2.10 PK-520

Section	Part name	Ref. page
Units	Punch kit	G.8.18.1 Punch kit (PK-520)

8.2.11 FS-537/FS-537SD

Section	Part name	Ref. page
Exterior parts	Upper cover /1	G.8.19.1 Upper cover/1 (FS-537/FS-537SD)
	Upper cover /2	G.8.19.2 Upper cover/2 (FS-537/FS-537SD)
	Upper cover /3	G.8.19.3 Upper cover/3 (FS-537/FS-537SD)
	Rear cover	G.8.19.4 Rear cover (FS-537/FS-537SD)
	Front door	G.8.19.5 Front door (FS-537/FS-537SD)
	Front upper cover	G.8.19.6 Front upper cover (FS-537/FS-537SD)
	Front lower cover	G.8.19.7 Front lower cover (FS-537/FS-537SD)
	Main tray (Paper exit lower tray)	G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)
	Sub tray (Paper exit upper tray)	G.8.19.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)
	Left upper cover	G.8.19.10 Left upper cover (FS-537/FS-537SD)
	Left lower cover	G.8.19.11 Left lower cover (FS-537/FS-537SD)
Units	Finisher	G.8.19.12 Finisher (FS-537/FS-537SD)
	Horizontal transport unit	G.8.19.13 Relay unit (FS-537/FS-537SD)
	Sensor unit	G.8.19.14 Sensor unit (FS-537/FS-537SD)
	Stapler unit	G.8.19.15 Stapler unit (FS-537/FS-537SD)
Boards	FS control board (FSCB)	G.8.19.16 FS control board (FSCB) (FS-537/FS-537SD)
Motors	Bundle eject motor (M1)	G.8.19.17 Bundle eject motor (M1) / Pre-eject drive motor (M2) / Stacker plate drive motor (M3) (FS-537/FS-537SD)
	Pre-eject drive motor (M2)	
	Stacker plate drive motor (M3)	
	Route change gate motor (M4)	G.8.19.18 Route change gate motor (M4) (FS-537/FS-537SD)
	Main tray up/down motor (M6)	G.8.19.19 Main tray up/down motor (M6) (FS-537/FS-537SD)
	Paddle up/down motor (M7)	G.8.19.20 Paddle up/down motor (M7) / Arm drive motor (M8) / FNS paddle motor (M9) (FS-537/FS-537SD)
	Arm drive motor (M8)	

Section	Part name	Ref. page
	FNS paddle motor (M9)	
	Receiving roller retraction motor (M10)	G.8.19.21 Receiving roller retraction motor (M10) (FS-537/FS-537SD)
	Trail edge stopper motor/R (M11)	G.8.19.22 Trail edge stopper motor/R (M11) (FS-537/FS-537SD)
	Trail edge stopper motor/F (M12)	G.8.19.23 Trail edge stopper motor/F (M12) (FS-537/FS-537SD)
	Alignment motor/rear (M13)	G.8.19.24 Alignment motor/rear (M13) (FS-537/FS-537SD)
	Alignment motor/front (M14)	G.8.19.25 Alignment motor/front (M14) (FS-537/FS-537SD)
	Paper receiving control motor (M15)	G.8.19.26 Paper receiving control motor (M15) (FS-537/FS-537SD)
	SD discharge motor (M16)	G.8.19.27 SD discharge motor (M16) (FS-537/FS-537SD)
	FNS discharge motor (M17)	G.8.19.28 FNS discharge motor (M17) (FS-537/FS-537SD)
	Sub tray discharge motor (M18)	G.8.19.29 Sub tray discharge motor (M18) (FS-537/FS-537SD)
	Stapler movement motor (M19)	G.8.19.30 Stapler movement motor (M19) (FS-537/FS-537SD)
	FNS entry transport motor (M20)	G.8.19.31 FNS entry transport motor (M20) (FS-537/FS-537SD)
	ZU discharge motor (M21)	G.8.19.32 ZU Discharge Motor (M21) (FS-537/FS-537SD)

8.2.12 FS-537SD saddle section

Section	Part name	Ref. page
Exterior parts	Front cover	G.8.20.1 Front cover (FS-537SD saddle section)
Units	Saddle unit	G.8.20.2 Saddle unit (FS-537SD saddle section)
	Exit tray	G.8.20.3 Exit tray (FS-537SD saddle section)
	Staple unit	G.8.20.4 Staple unit (FS-537SD saddle section)
Boards	SD control board (SDCB)	G.8.20.5 SD control board (SDCB) (FS-537SD saddle section)
Electrical parts	SD transport motor (M1)	G.8.20.6 SD transport motor (M1) (FS-537SD saddle section)
	Paper discharge control motor (M2)	G.8.20.7 Paper discharge control motor (M2) (FS-537SD saddle section)
	Alignment motor (M3)	G.8.20.8 Alignment motor (M3) (FS-537SD saddle section)
	Stopper drive motor (M4)	G.8.20.9 Stopper drive motor (M4) (FS-537SD saddle section)
	Center fold roller motor (M5)	G.8.20.10 Center fold roller motor (M5) (FS-537SD saddle section)
	Center fold guide motor (M6)	G.8.20.11 Center fold guide motor (M6) (FS-537SD saddle section)
	SD paddle motor (M7)	G.8.20.12 SD paddle motor (M7) (FS-537SD saddle section)
	Tri-folding guide motor (M8)	G.8.20.13 Tri-folding guide motor (M8) (FS-537SD saddle section)
	Center fold knife motor (M9)	G.8.20.14 Center fold knife motor (M9) (FS-537SD saddle section)
	Paper transport belt motor (M34)	G.8.20.15 Paper transport belt motor (M34) (FS-537SD saddle section)
	Stopper solenoid (SD1)	G.8.20.16 Stopper solenoid (SD1) (FS-537SD saddle section)

8.2.13 PK-523

Section	Part name	Ref. page
Units	Punch kit	G.8.21.1 Punch Kit (PK-523)
Boards	Punch control board (PKCB)	G.8.21.2 Punch control board (PKCB) (PK-523)
	Paper size detect board (PSDTB)	G.8.21.3 Paper size detect board (PSDTB) (PK-523)
Electrical parts	Punch oscillating motor (M302)	G.8.21.4 Punch oscillating motor (M302) (PK-523)

8.2.14 ZU-609

Section	Part name	Ref. page
Units	Z folding unit	G.8.22.1 Z Folding Unit (ZU-609)
Boards	ZU drive board (ZUDB)	G.8.22.2 ZU drive board (ZUDB) (ZU-609)
	ZU relay board (ZURB)	G.8.22.3 ZU relay board (ZURB) (ZU-609)
Electrical parts	ZU transport motor (M500)	G.8.22.4 ZU transport motor (M500) (ZU-609)
	Folding guide motor (M501)	G.8.22.5 Folding guide motor (M501) (ZU-609)
	Pressure motor (M502)	G.8.22.6 Pressure motor (M502) (ZU-609)

8.2.15 JS-602

Section	Part name	Ref. page
Exterior parts	Paper exit tray	G.8.23.1 Paper exit tray (JS-602)
	Front cover	G.8.23.2 Front cover (JS-602)
	Rear cover	G.8.23.3 Rear cover (JS-602)
Units	Job separator	G.8.23.4 Job separator (JS-602)
Electrical parts	Entrance switching solenoid (SD401)	G.8.23.5 Entrance switching solenoid (SD401) (JS-602)

8.2.16 PI-507

Section	Part name	Ref. page
Exterior parts	Upper cover	G.8.24.1 Upper cover (PI-507)
	Rear cover	G.8.24.2 Rear cover (PI-507)
	Operation panel cover assy	G.8.24.3 Operation panel cover assy (PI-507)
Units	Post inserter	G.8.24.4 Post Inserter (PI-507)
Boards	PI drive board	G.8.24.5 PI drive board (PIDB) (PI-507)
	PI operation board	G.8.24.6 PI operation board (PIOB) (PI-507)
	PI relay board	G.8.24.7 PI relay board (PIRB) (PI-507)
Electrical parts	Tray lift motor /Lw (M202)	G.8.24.8 Tray lift motor /Lw (M202) (PI-507)
	Transfer motor (M203)	G.8.24.9 Transfer motor (M203) (PI-507)
	Transport roller drive motor (M204)	G.8.24.10 Transport roller drive motor (M204) (PI-507)
	Folding guide motor (M501)	G.8.24.11 Folding guide motor (M501) (PI-507)
	Transfer clutch /Lw (CL202)	G.8.24.12 Transfer clutch /Lw (CL202) (PI-507)
	Registration clutch (CL203)	G.8.24.13 Registration clutch (CL203) (PI-507)
	Pick-up solenoid /Lw (SD202)	G.8.24.14 Pick-up solenoid /Lw (SD202) (PI-507)
	Paper size VR /Lw (VR202)	G.8.24.15 Paper size VR /Lw (VR202) (PI-507)

8.2.17 RU-513

Section	Part name	Ref. page
Motors	RU transport motor (M1)	G.8.25.1 RU transport motor (M1)

8.2.18 OT-506

Section	Part name	Ref. page
Exterior parts	Paper exit tray	G.8.26.1 Paper exit tray

8.2.19 SC-508

Section	Part name	Ref. page
Boards	DSC board/1 (for front side)	G.8.27.3 DSC board/1 (for front side) (SC-508) (bizhub C658/C558/C458)
	DSC board/2 (for back side)	G.8.27.4 DSC board/2 (for back side) (SC-508) (bizhub C658/C558/C458)

8.2.20 UK-212

Section	Part name	Ref. page
Units	Upgrade kit	G.8.29.2 Upgrade kit (UK-212) (bizhub C658/C558/C458)

8.2.21 UK-215

Section	Part name	Ref. page
Units	Upgrade kit	G.8.30.2 Upgrade kit (UK-215) (bizhub C658/C558/C458)

8.2.22 FK-515

Section	Part name	Ref. page
Units	FAX board (line 3), FAX board (line 4)	G.8.31.1 FAX board (line 3), FAX board (line 4) (FK-515)

8.2.23 FK-514

Section	Part name	Ref. page
Units	FAX board (line 1), FAX board (line 2)	G.8.32.1 FAX Kit (Line1), FAX Kit (Line2) (FK-514) G.8.32.2 FAX Kit (Line1), FAX Kit (Line2) (FK-514) (with MK-742)

8.2.24 HD-524

Section	Part name	Ref. page
Units	Hard disk (B)	G.8.33.3 Hard disk (B) (bizhub C658/C558/C458)

8.2.25 CU-102

Section	Part name	Ref. page
Units	Clean unit	G.8.35.1 Clean unit (CU-102)
Boards	Clean unit drive board	G.8.35.2 Clean unit drive board (CUDB)
Fan	Exhaust fan/1	G.8.35.3 Exhaust fan/1 (FM14)
	Exhaust fan/2	G.8.35.4 Exhaust fan/2 (FM15)
etc.	UFP filter	G.8.35.5 UFP filter

8.2.26 KP-101

Section	Part name	Ref. page
Units	Keypad	G.8.36.1 Keypad (KP-101)

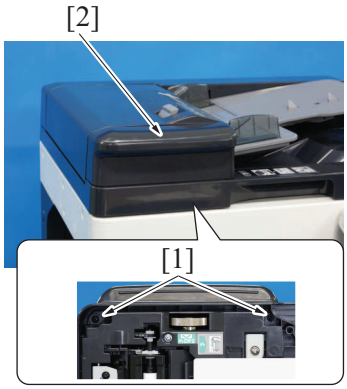
8.2.27 VI-510

Section	Part name	Ref. page
Units	Video Interface Kit	G.8.38.1 Video Interface Kit (VI-510)

8.3 Disassembly/reassembly procedure (DF-629/SP-501)

8.3.1 Front cover (DF-629)

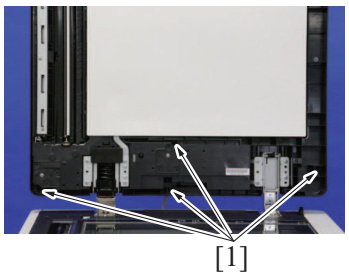
1. Open the reverse automatic document feeder.



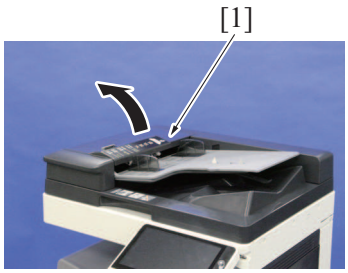
2. Remove two screws [1] and remove the front cover [2].
3. To reinstall, reverse the order of removal.

8.3.2 Rear cover (DF-629)

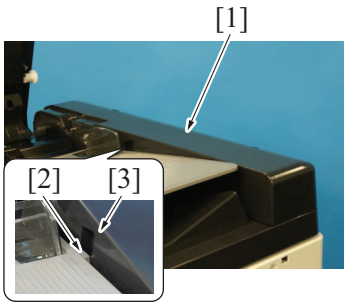
1. Open the reverse automatic document feeder.



2. Remove four screws [1].
   NOTE
   - **If the reverse automatic document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the reverse automatic document feeder can be opened completely.**



3. Open the left cover [1].

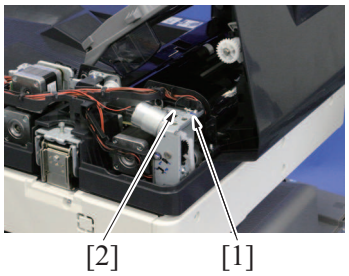


4. Remove the rear cover [1].
NOTE
- **For mounting the rear cover, mount it so that the protrusion [2] of the document feed tray will fit to the groove [3] on the rear cover.**

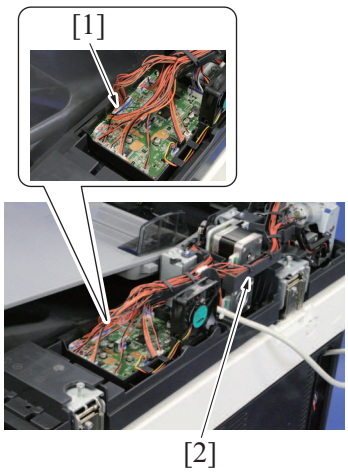
5. To reinstall, reverse the order of removal.

8.3.3 Left cover unit (DF-629)

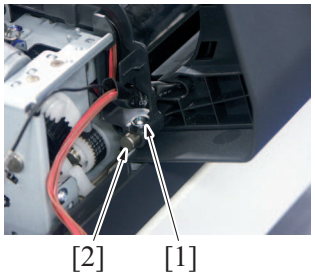
1. Remove the rear cover.
G.8.3.2 Rear cover (DF-629)



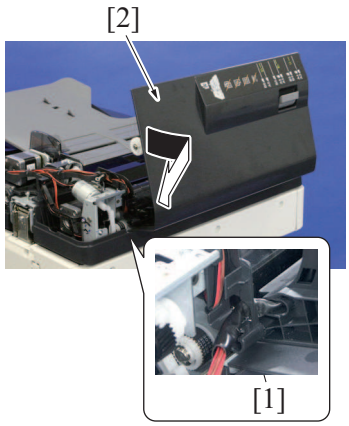
2. Remove the screw [1], and remove the ground earth [2] from the harness guide.



3. Disconnect the connector [1], and remove the harness from the harness guide [2].

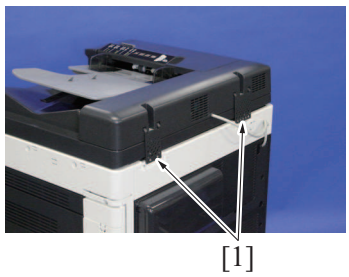


4. Remove the screw [1], and remove the shaft [2].

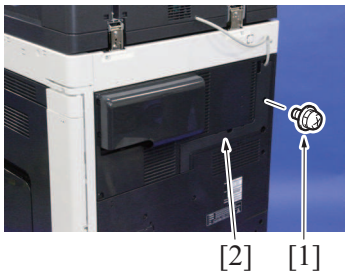


5. Remove the left cover unit [2] as shown in the illustration while pressing the harness into the hole [1] shown in the illustration.
6. To reinstall, reverse the order of removal.

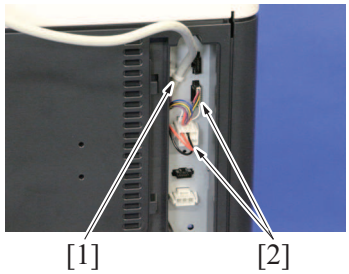
8.3.4 Reverse automatic document feeder (DF-629)



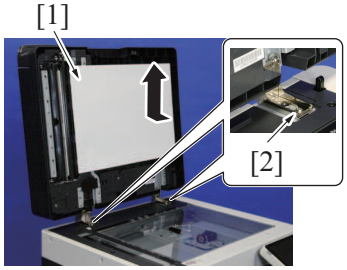
1. Remove two hinge covers [1].



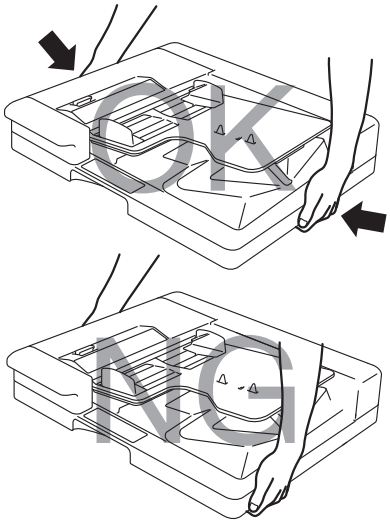
2. Remove the screws [1], and remove the DF cable cover [2] from the back of the main body.

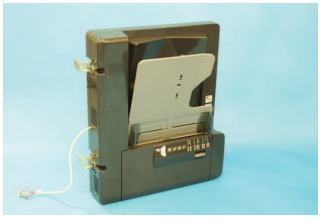


3. Remove the cable tie [1], and disconnect two connectors [2].



4. Open the reverse automatic document feeder [1].
   NOTE
   - **If the reverse automatic document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the reverse automatic document feeder can be opened completely.**
5. Remove two screws [2].
6. Remove the reverse automatic document feeder [1].





7. **NOTE**
   - **When carrying the reverse automatic document feeder, be sure to hold onto the specified positions. The feeder main body can be distorted if held at inappropriate positions.**
   - **After removing the reverse automatic document feeder from the machine, place it on the floor or the like as shown in the illustration.**

8. To reinstall, reverse the order of removal.

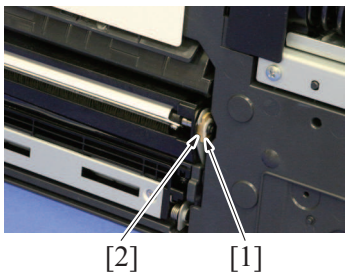
8.3.5 Glass cleaning roller unit (DF-629)

1. Remove the front cover.
   G.8.3.1 Front cover (DF-629)
2. Remove the reverse automatic document feeder.
   G.8.3.4 Reverse automatic document feeder (DF-629)

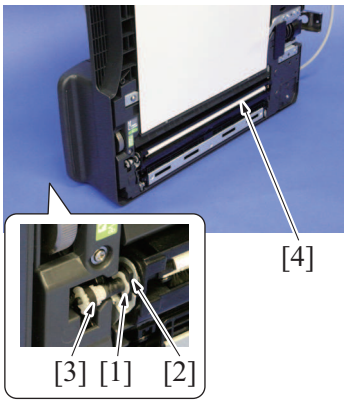


3. Place the reverse automatic document feeder vertically as shown in the illustration.

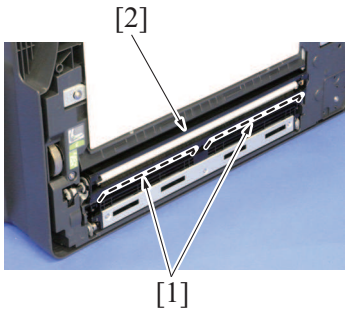
4. Remove the C-clip [1] and the bushing [2].



5. Remove the C-clip [1], and shift the bushing [2], and remove the belt [3].
6. Remove the glass cleaning roller unit [4].



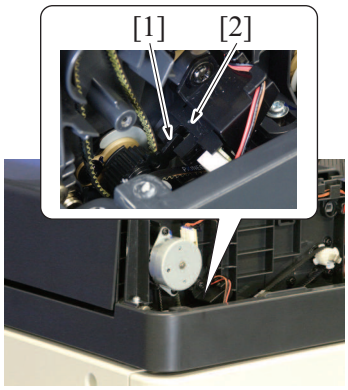
7. **NOTE**
   - **When installing the glass cleaning roller unit [2], make sure that the transparent sheets [1] are outside of the glass cleaning roller unit [2].**



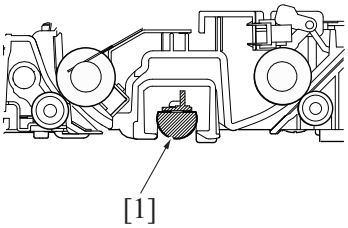
8. To reinstall, reverse the order of removal.

NOTE

- **When installing the glass cleaning roller unit, the following adjustment is necessary.**
  - **Adjust the actuator [1] so that it is positioned where it blocks the light of the document reading glass cleaning sensor [2], and install the belt.**

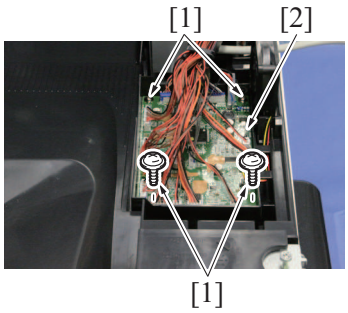


  - **After completing the above adjustment, when you turn ON the main power switch, make sure that the shaft [1] is at the correct position (home position).**



8.3.6 DF control board (DFCB) (DF-629)

1. Remove the rear cover.
   G.8.3.2 Rear cover (DF-629)



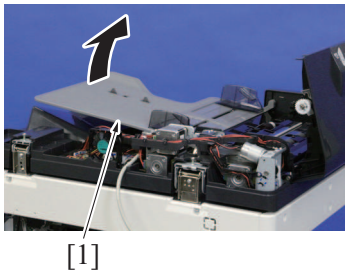
2. Disconnect all 15 connectors from the DF control board.
3. Remove four screws [1], and remove the DF control board [2].
4. To reinstall, reverse the order of removal.

NOTE

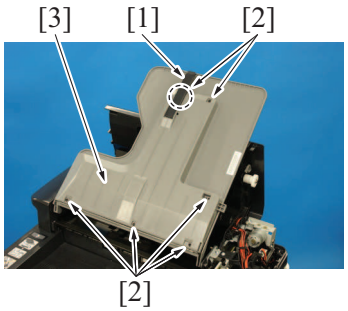
- **Be sure to perform the following steps after the DF control board has been replaced with a new one.**
- **Install the firmware.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width].** **I.5.21.6 Original Tray Width**
- **Execute [Service Mode] -> [ADF] -> [Mixed original Size adjustment].** **I.5.21.10 Mixed original size adjustment**

8.3.7 Document width size sensor (VR1) (DF-629)

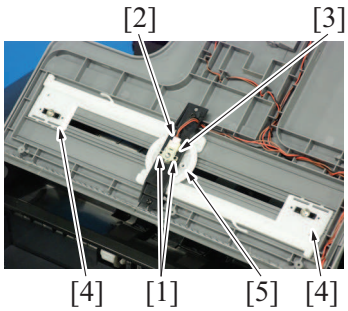
1. Remove the rear cover.
   G.8.3.2 Rear cover (DF-629)



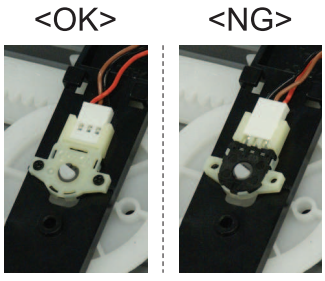
2. Lift up the document feed tray [1].



3. Remove the lever for document exit [1].
4. Remove six screws [2] and remove the cover [3].



5. Remove two screws [1] and disconnect the connector [2], and remove the document width size sensor [3].
6. **NOTE**
   - **For mounting the document width size sensor, widen the side edge stop [4] of the document feed tray fully and make sure that the round hole [5] of the gear is at the position as shown on the illustration.**

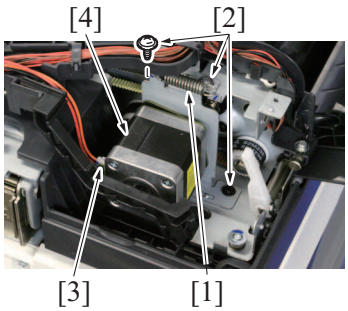


7. **NOTE**
   - **For mounting the document width size sensor, mount it in the direction shown on the illustration.**
8. To reinstall, reverse the order of removal.

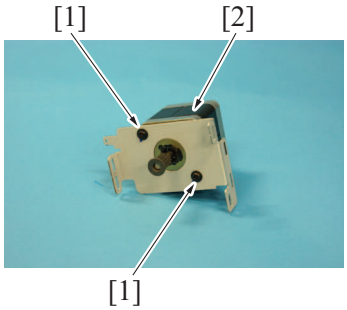
NOTE
- **Be sure to perform the following operation when the document width size sensor is replaced.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width].**
  I.5.21.6 Original Tray Width
- **Turn OFF the main power switch and turn it ON again and check whether size detection operates normally.**

8.3.8 Document reading motor (M1) (DF-629)

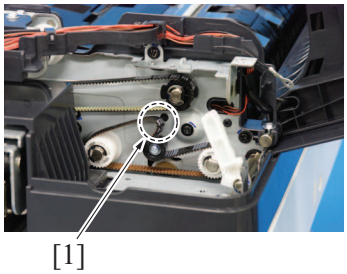
1. Remove the rear cover.
   G.8.3.2 Rear cover (DF-629)
2. Remove the reading roller release motor.
   G.8.3.12 Reading roll release motor (M5) (DF-629)



3. Remove the spring [1], and remove three screws [2].
4. Disconnect the connector [3], and remove the document reading motor assy [4].



5. Remove two screws [1], and remove the document reading motor [2].

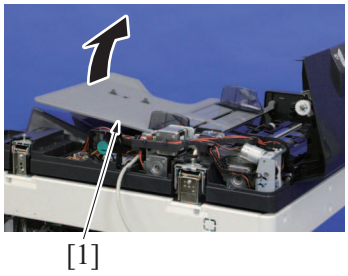


6. **NOTE**
   - **For mounting it, set the document reading motor to the belt position [1] shown on the illustration.**

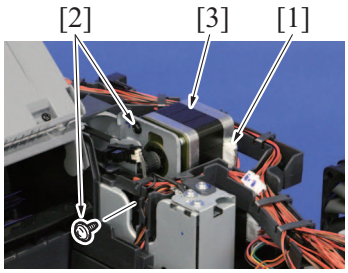
7. To reinstall, reverse the order of removal.

8.3.9 Document feed motor (M2) (DF-629)

1. Remove the rear cover.
   G.8.3.2 Rear cover (DF-629)



2. Lift up the document feed tray [1].

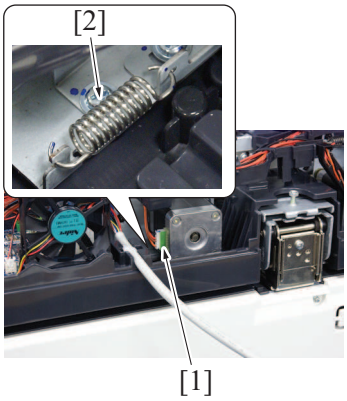


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the document feed motor [3].

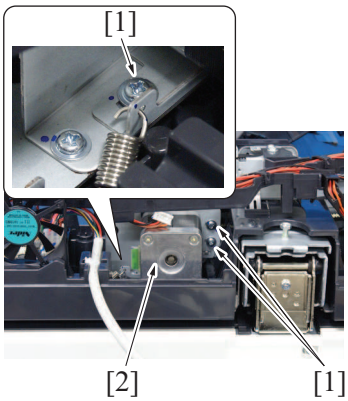
5. To reinstall, reverse the order of removal.

8.3.10 Registration motor (M3) (DF-629)

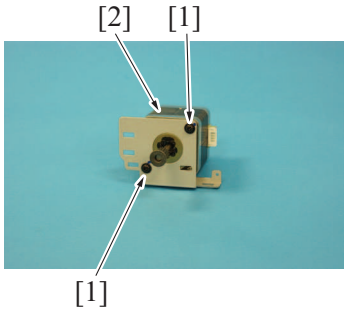
1. Remove the rear cover.
   G.8.3.2 Rear cover (DF-629)
2. Remove the document feed motor.
   G.8.3.9 Document feed motor (M2) (DF-629)



3. Disconnect the connector [1].
4. Remove the spring [2].



5. Remove three screws [1], and remove the registration motor assy [2].

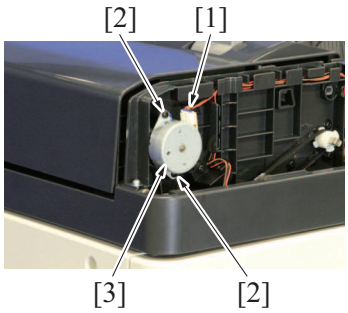


6. Remove two screws [1], and remove the registration motor [2].

7. To reinstall, reverse the order of removal.

8.3.11 Glass cleaning motor (M4) (DF-629)

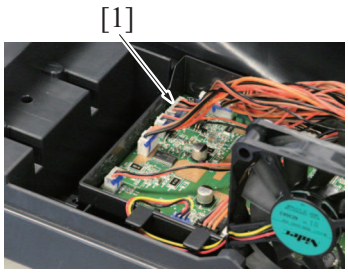
1. Remove the front cover.
   G.8.3.1 Front cover (DF-629)



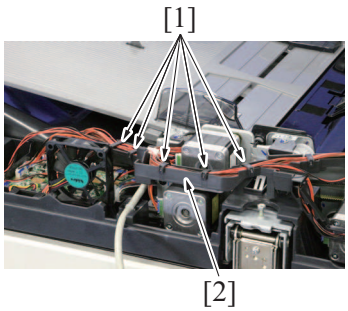
2. Disconnect the connector [1].
3. Remove two screws [2], and remove the glass cleaning motor [3].
4. To reinstall, reverse the order of removal.

8.3.12 Reading roll release motor (M5) (DF-629)

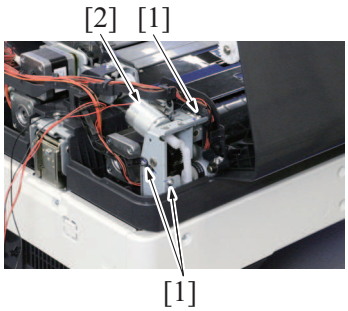
1. Remove the rear cover.
G.8.3.2 Rear cover (DF-629)



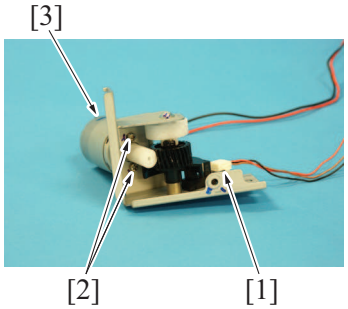
2. Disconnect the connector (J18) [1] on the DF control board.



3. Remove five wire saddles [1] and remove the harness from the harness guide [2].



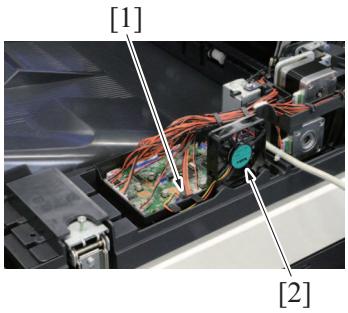
4. Remove three screws [1], and remove the drive assy [2].



5. Disconnect the connector [1].
6. Remove two screws [2], and remove the reading roll release motor [3].
7. To reinstall, reverse the order of removal.

8.3.13 DF cooling fan motor (FM1) (DF-629)

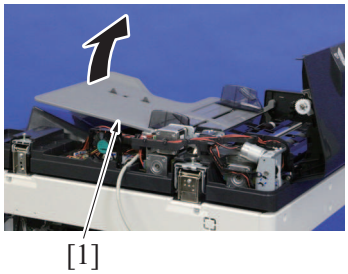
1. Remove the rear cover.
G.8.3.2 Rear cover (DF-629)



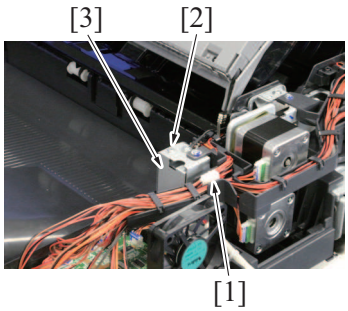
2. Disconnect the connector [1].
3. Remove the DF cooling fan motor [2].
4. To reinstall, reverse the order of removal.

8.3.14 Document exit roller release solenoid (SD1) (DF-629)

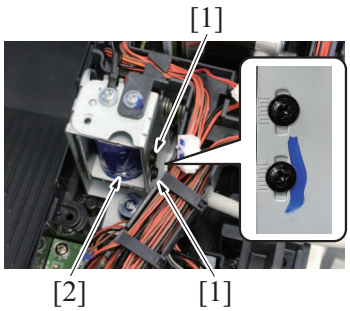
1. Remove the rear cover.
G.8.3.2 Rear cover (DF-629)



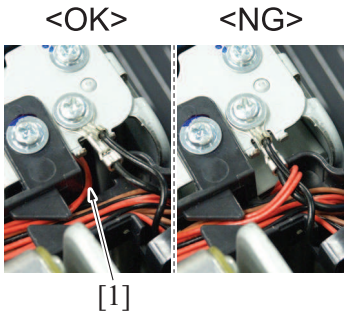
2. Lift up the document feed tray [1].



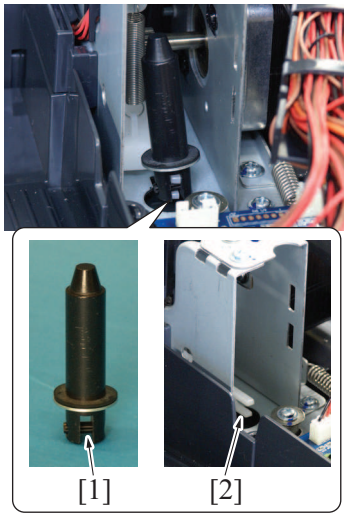
3. Disconnect the hookup connector [1].
4. Remove the screw [2], and remove the plate [3].



5. Remove two screws [1], and remove the document exit roller release solenoid [2].
NOTE
- **Mark the screw installing location so that the document exit roller release solenoid can be mounted on its original location.**



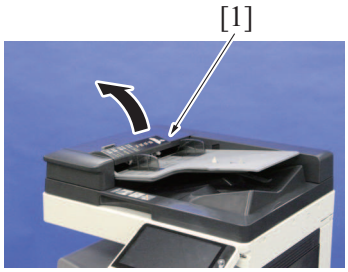
6. **NOTE**
- **When mounting it, set the harness through the hole [1] shown on the illustration.**



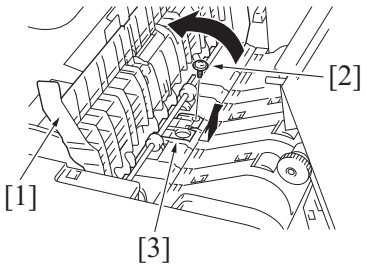
8. To reinstall, reverse the order of removal.

7. **NOTE**
- **Insert the core at the bottom [1] so that the parts shown as [2] on the illustration will be properly set before mounting the document exit roller release solenoid.**

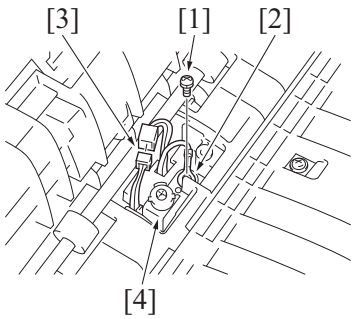
8.3.15 Stamp unit (SP-501)



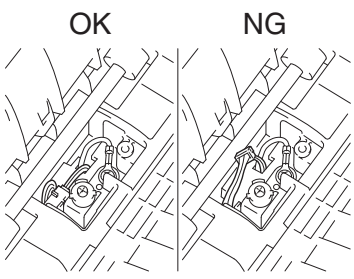
1. Open the left cover [1].



2. Lift up the guide plate DF1 [1].
3. Remove the screw [2], and remove the cover [3].



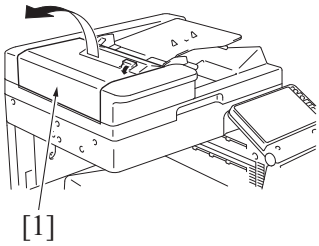
4. Remove the screw [1], and remove the ground terminal [2].
5. Disconnect the connector [3].
6. Remove the stamp unit [4].
NOTE
- **Ensure that the ground terminal is on the upper side of the mounting bracket of stamp unit.**
- **Route the harness as shown in the illustration to place its connector under the guide plate.**



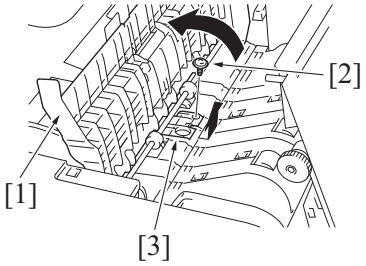
7. To reinstall, reverse the order of removal.

8.3.16 Stamp (SP-501)

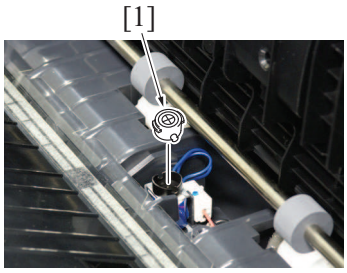
1. Open the left cover [1].



2. Lift up the guide plate DF1 [1].
3. Remove the screw [2], and remove the cover [3].



4. Remove the used stamp, and install the new stamp of replacement [1].
   NOTE
   - **Align the round pin of the stamp with the slit in the stamp unit side.**

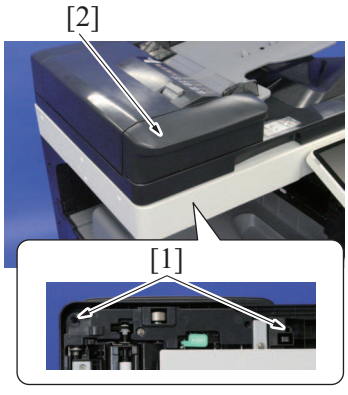


5. To reinstall, reverse the order of removal.

8.4 Disassembly/reassembly procedure (DF-704/SP-501)

8.4.1 Front cover (DF-704)

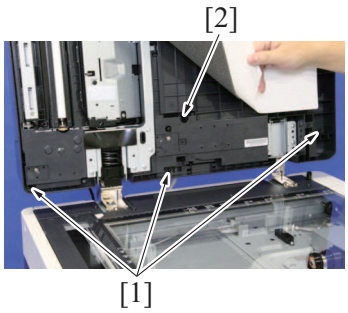
1. Open the dual scan document feeder.
2. Remove two screws [1] and remove the front cover [2].



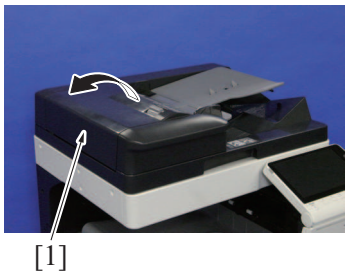
3. To reinstall, reverse the order of removal.

8.4.2 Rear cover (DF-704)

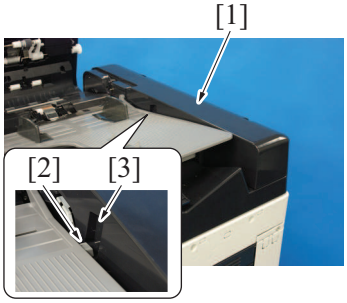
1. Open the dual scan document feeder.



2. Remove three screws [1].
3. While peeling off the mat, remove the screw [2].
   NOTE
   - **If the reverse automatic document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the reverse automatic document feeder can be opened completely.**



4. Open the left cover [1].

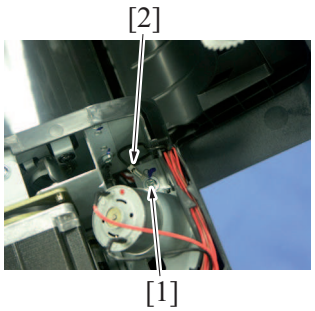


5. Remove the rear cover [1].
   NOTE
   - **For mounting the rear cover, mount it so that the protrusion [2] of the document feed tray will fit to the groove [3] on the rear cover.**

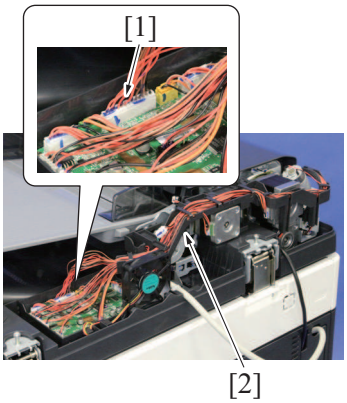
6. To reinstall, reverse the order of removal.

8.4.3 Left cover unit (DF-704)

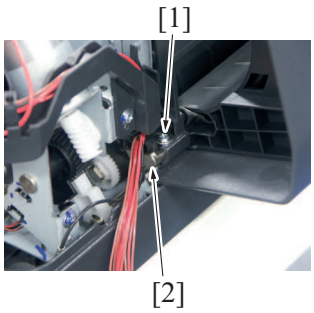
1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



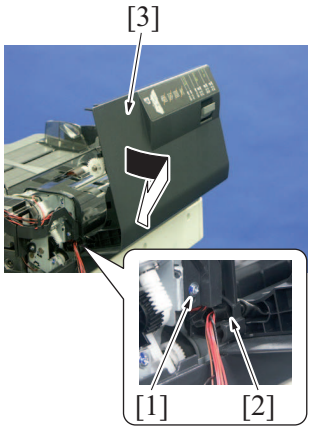
2. Remove the screw [1], and remove the ground earth [2] from the harness guide.



3. Disconnect the connector [1], and remove the harness from the harness guide [2].



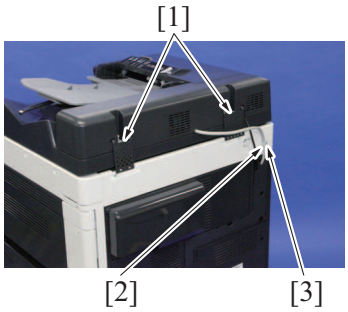
4. Remove the screw [1], and remove the shaft [2].



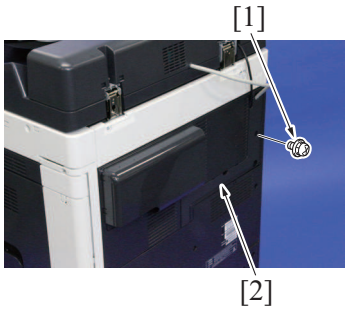
5. Remove the screw [1].
6. Remove the left cover unit [3] as shown in the illustration while pressing the harness into the hole [2] shown in the illustration.

7. To reinstall, reverse the order of removal.

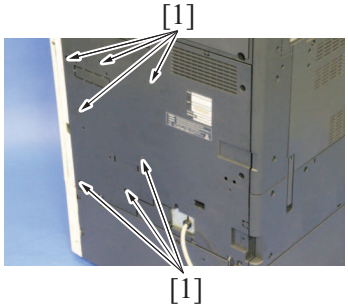
8.4.4 Dual scan document feeder (DF-704)



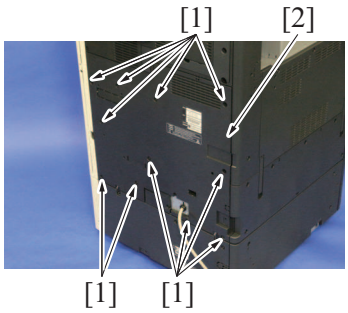
1. Remove two hinge covers [1].
NOTE
- **If the cord clamp [2] is installed, remove the screw [3], and remove the cord clamp [2].**



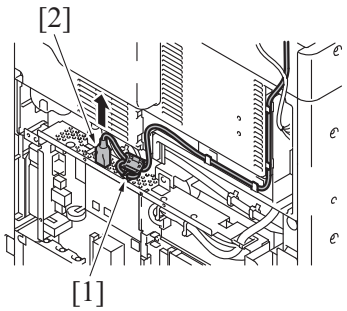
2. Remove the screw [1], and remove the DF cable cover [2] from the back of the main body.



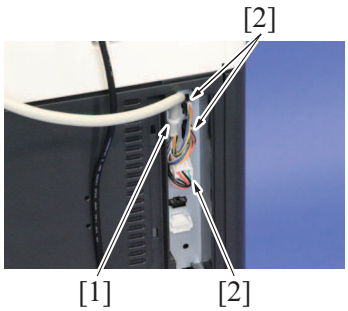
3. Remove seven caps [1].



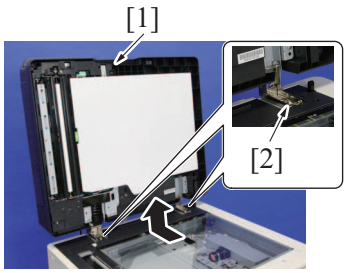
4. Remove 11 screws [1], and remove the lower rear cover [2] from the back of the main body.



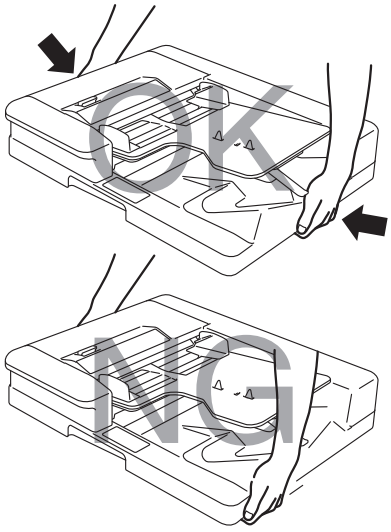
5. Remove the cable from the wire saddle [1], and disconnect the connector [2].



6. Remove the cable tie [1], and disconnect three connectors [2].



7. Open the dual scan document feeder [1].
NOTE
   - **If the reverse automatic document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the reverse automatic document feeder can be opened completely.**
8. Remove two screws [2].
9. Remove the dual scan document feeder [1].





10. **NOTE**
- **When carrying the dual scan document feeder, be sure to hold onto the specified positions. The feeder main body can be distorted if held at inappropriate positions.**
- **After removing the dual scan document feeder from the machine, place it on the floor or the like as shown in the illustration.**

11. To reinstall, reverse the order of removal.

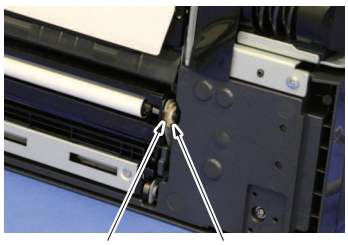
8.4.5 Front side glass cleaning roller unit (DF-704)

1. Remove the front cover.
G.8.4.1 Front cover (DF-704)
2. Remove the dual scan document feeder.
G.8.4.4 Dual scan document feeder (DF-704)

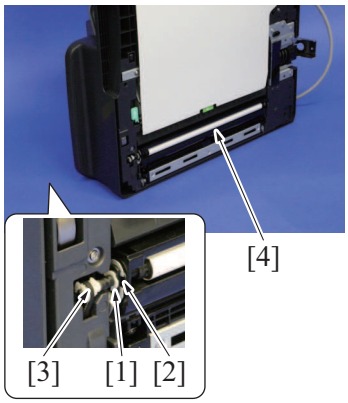
3. Place the dual scan document feeder vertically as shown in the illustration.



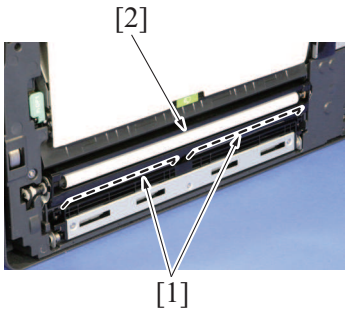
4. Remove the C-clip [1] and the bushing [2].



5. Remove the C-clip [1], and shift the bushing [2], and remove the belt [3].
6. Remove the front side glass cleaning roller unit [4].



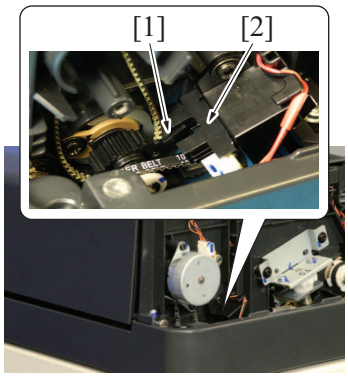
7. **NOTE**
   - **When installing the glass cleaning roller unit [2], make sure that the transparent sheets [1] are outside of the glass cleaning roller unit [2].**



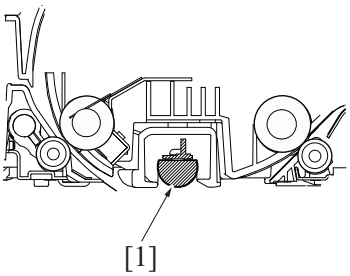
8. To reinstall, reverse the order of removal.

NOTE

- **When installing the front side glass cleaning roller unit, the following adjustment is necessary.**
  - **Adjust the actuator [1] so that it is positioned where it blocks the light of the document reading glass cleaning sensor [2], and install the belt.**



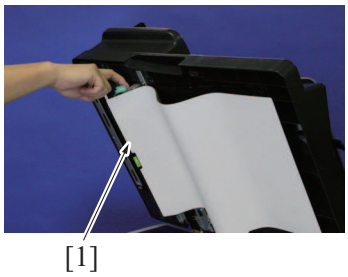
  - **After completing the above adjustment, when you turn ON the main power switch, make sure that the shaft [1] is at the correct position (home position).**



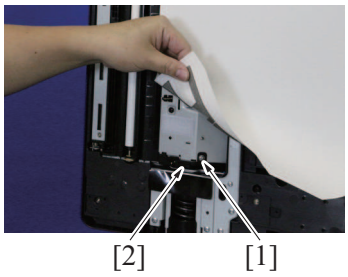
8.4.6 Back side glass cleaning roller unit (DF-704)

1. Open the dual scan document feeder.

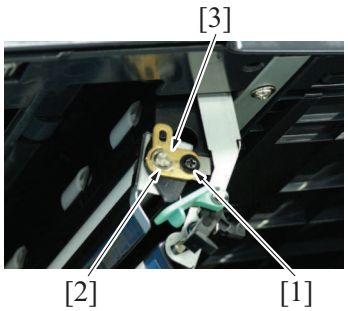
2. Open the opening and closing guide [1].



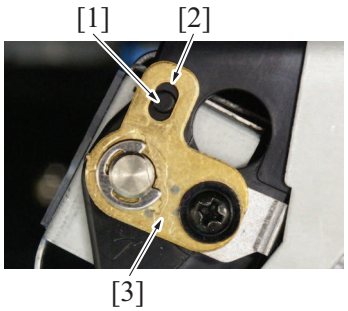
3. While peeling off the mat, remove the screw [1], and while opening the opening and closing guide, remove the cover [2].



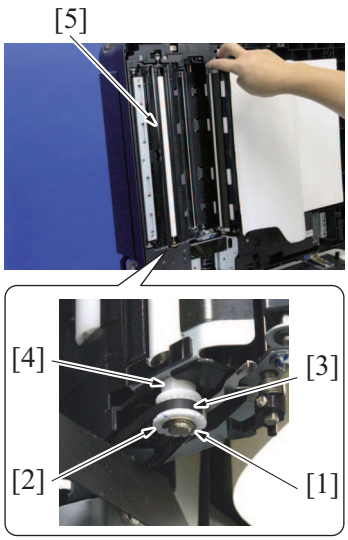
4. Remove the screw [1] and E-ring [2], and remove the bushing [3].



5. **NOTE**
   - **When installing the bushing [3], place the dowel [1] in the middle of the slot [2].**



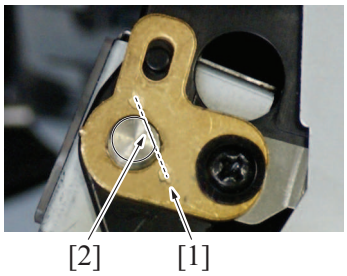
6. Remove the E-ring [1].
7. Remove the gear [2], and remove the belt [3].
8. Remove the bushing [4].
9. Remove the back side glass cleaning roller unit [5].



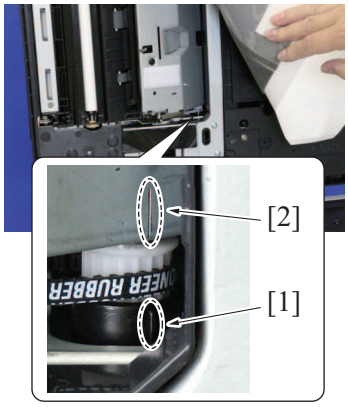
10. To reinstall, reverse the order of removal.

NOTE

- **When installing the back side glass cleaning roller unit, the following adjustment is necessary.**
  - **Align the D cut surface [2] of the shaft with the lines [1] marked on the bushing.**

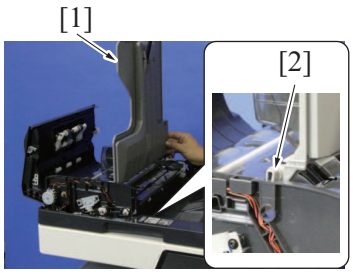


  - **When installing the belt, align the line [1] on the pulley and the line [2] on the transport guide.**

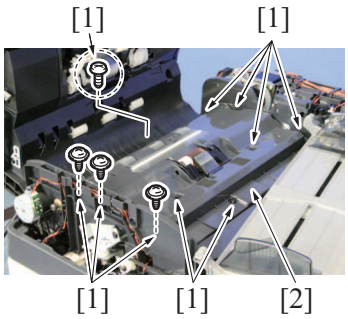


8.4.7 CIS module (CIS) (DF-704)

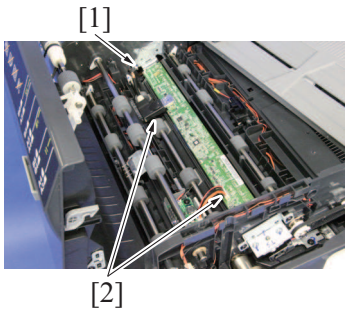
1. Remove the front cover.
   G.8.4.1 Front cover (DF-704)
2. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



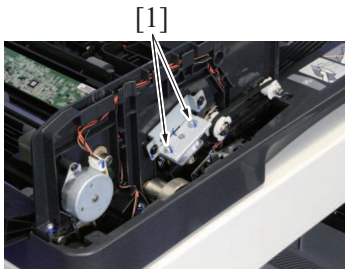
3. Lift up the document feed tray [1].
4. Remove the claw [2] at the front side, and set the document feed tray [1] off the working area.



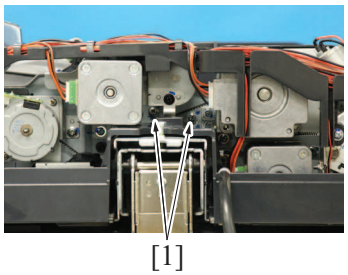
5. Remove 10 screws [1], and remove the transport guide [2].
   NOTE
   - **Use care when mounting the screw [1] in the dashed circle (one on the left when looking from the front) since it is different from other nine screws [1].**



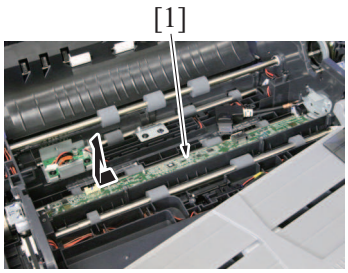
6. Remove the screw [1], and disconnect two connectors [2].



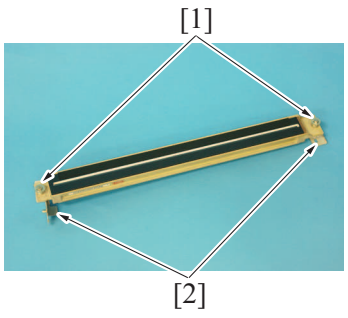
7. Remove two screws (front side) [1].



8. Remove two screws (rear side) [1].



9. Remove the CIS module [1] as shown in the illustration.



10. Remove the E-ring [1] on the right and left and remove the metal set [2].

11. To reinstall, reverse the order of removal.

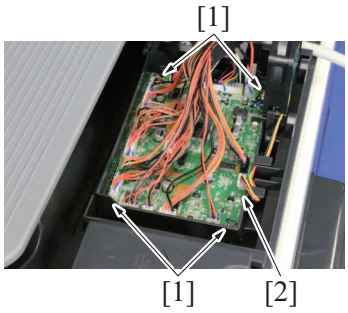
NOTE

- **Be sure to perform the following steps after the CIS module has been replaced with a new one.**
- **Adjust the back side skew feed on the ADF.**
  I.15.1.3 Adjusting back side skew feed on ADF
- **Execute [Service Mode] -> [System 2] -> [CCD Calibration].**
  I.5.16.7 CCD Calibration
- **Execute [Service Mode] -> [System 2] -> [Line Mag Setting].**
  I.5.16.11 Line Mag Setting
- **Execute [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Sub Scanning Direction 2-Side].**
  I.5.21.3 (2) (b) Sub Scanning Direction 2-Side
- **Execute [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning (Back)].**

I.5.21.3 (2) (d) Main Scanning (Back)
- **Execute [Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)].**
  I.5.21.12 FD-Mag. Adj. (B)
- **Execute [Service Mode] -> [ADF] -> [Main Scanning Direction Zoom].**
  I.5.21.13 Main Scanning Direction Zoom

8.4.8 DF control board (DFCB) (DF-704)

1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)

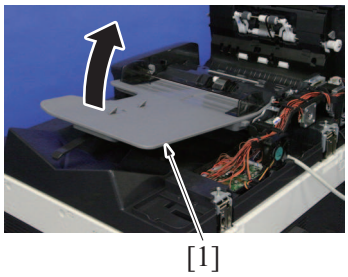


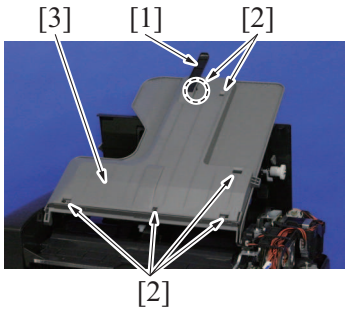
2. Disconnect all 17 connectors from the DF control board.
3. Remove four screws [1], and remove the DF control board [2].
4. To reinstall, reverse the order of removal.

NOTE
- **Be sure to perform the following steps after the DF control board has been replaced with a new one.**
- **Install the firmware.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width].**
  I.5.21.6 Original Tray Width
- **Execute [Service Mode] -> [ADF] -> [Mixed original Size adjustment].**
  I.5.21.10 Mixed original size adjustment

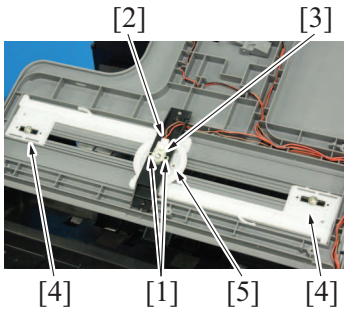
8.4.9 Document width size sensor (VR1) (DF-704)

1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)
2. Lift up the document feed tray [1].

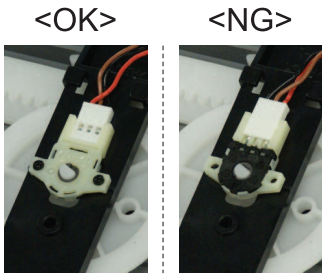




3. Remove the lever for document exit [1].
4. Remove six screws [2] and remove the cover [3].



5. Remove two screws [1] and disconnect the connector [2], and remove the document width size sensor [3].
   NOTE
   - **For mounting the document width size sensor, widen the side edge stop [4] of the document feed tray fully and make sure that the round hole [5] of the gear is at the position as shown on the illustration.**



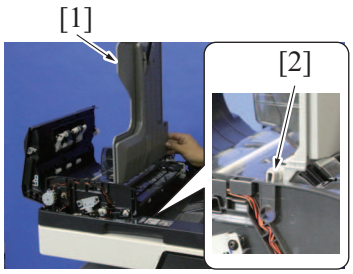
6. **NOTE**
   - **For mounting the document width size sensor, mount it in the direction shown on the illustration.**

7. To reinstall, reverse the order of removal.

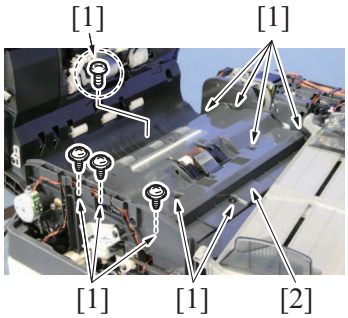
NOTE
- **Be sure to perform the following operation when the document width size sensor is replaced.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width].**
  I.5.21.6 Original Tray Width
- **Turn OFF the main power switch and turn it ON again and check whether size detection operates normally.**

8.4.10 CIS power supply (CISPU) (DF-704)

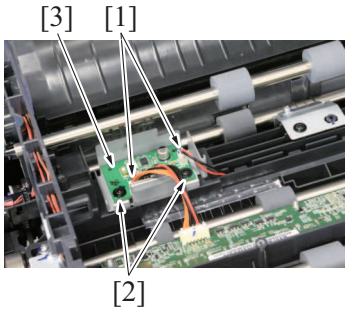
1. Remove the front cover.
   G.8.4.1 Front cover (DF-704)
2. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



3. Lift up the document feed tray [1].
4. Remove the claw [2] at the front side, and set the document feed tray [1] off the working area.



5. Remove 10 screws [1], and remove the transport guide [2].
   NOTE
   - **Use care when mounting the screw [1] in the dashed circle (one on the left when looking from the front) since it is different from other nine screws [1].**

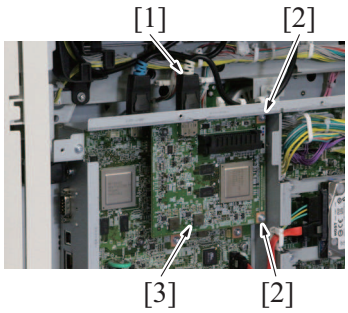


6. Disconnect two connectors [1].
7. Remove two screws [2], and remove the CIS power supply [3].

8. To reinstall, reverse the order of removal.

8.4.11 dual scan image processing board (DSIPB) (DF-704)

1. Remove the lower rear cover of the main body.
2. Remove the DSC board 2 (for back side). (Option)

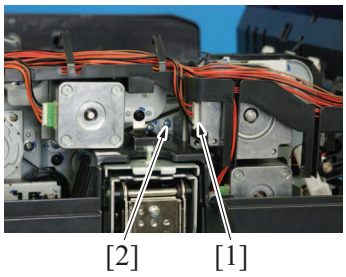


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the dual scan image processing board [3].
5. To reinstall, reverse the order of removal.

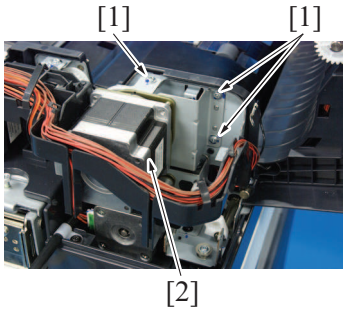
8.4.12 Document reading motor (M1) (DF-704)

(1) Remove procedure

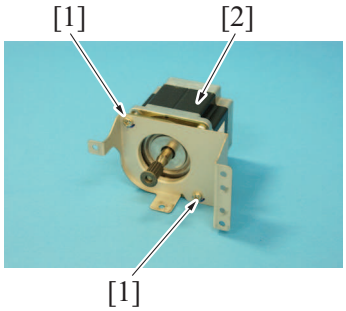
1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)
2. Remove the reading roller release motor.
   G.8.4.15 Reading roller release motor (M4) (DF-704)



3. Disconnect the connector [1].
4. Remove the screw [2].

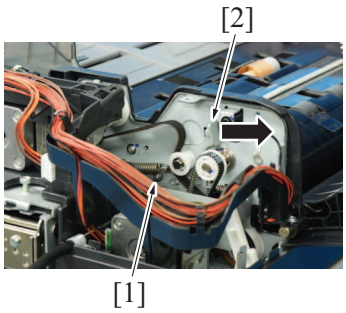


5. Remove three screws [1], and remove the document reading motor assy [2].

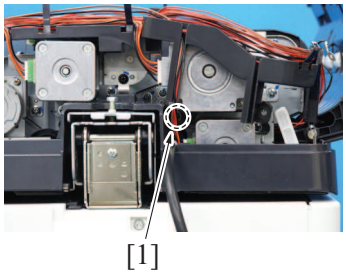


6. Remove two screws [1], and remove the document reading motor [2].

(2) Reinstall procedure



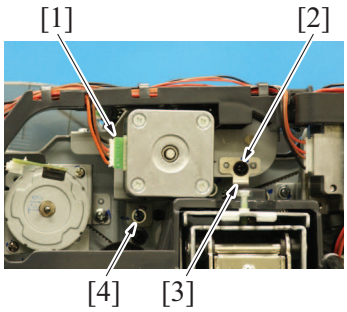
1. Loosen the screw [1] and move the tension plate [2] in the direction of the arrow to reduce the belt tension.
2. Tighten the screw [1].
3. Install the document reading motor assy with four screws.
4. Loosen the screw [1] and apply tension to the belt.
5. Tighten the screw [1].



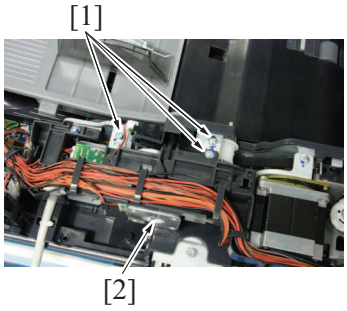
6. To reinstall, reverse the order of removal.

8.4.13 Document feed motor (M2) (DF-704)

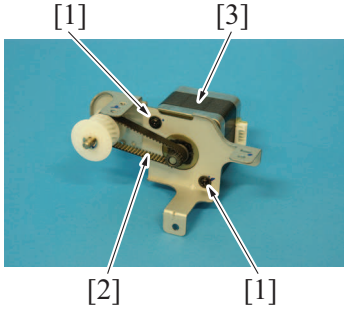
1. Remove the rear cover.
G.8.4.2 Rear cover (DF-704)



2. Disconnect the connector [1].
3. Remove the screw [2], and remove the earth plate [3].
4. Remove the screw [4].



5. Remove three screws [1], and remove the document feed motor assy [2].



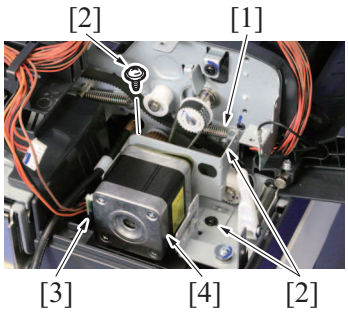
6. Remove two screws [1] and belt [2], and remove the document feed motor [2].
7. To reinstall, reverse the order of removal.

8.4.14 Registration motor (M3) (DF-704)

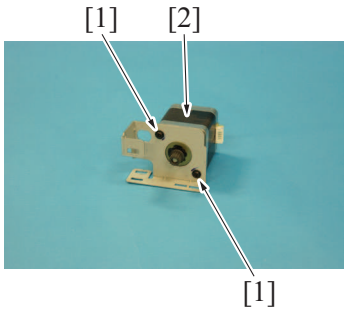
1. Remove the rear cover.

G.8.4.2 Rear cover (DF-704)

2. Remove the reading roller release motor.
   G.8.4.15 Reading roller release motor (M4) (DF-704)
3. Remove the document reading motor.
   G.8.4.12 Document reading motor (M1) (DF-704)



4. Remove the spring [1], and remove three screws [2].
5. Disconnect the connector [3], and remove the registration motor assy [4].

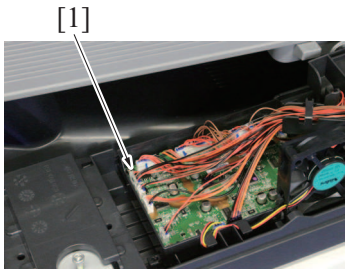


6. Remove two screws [1], and remove the registration motor [2].

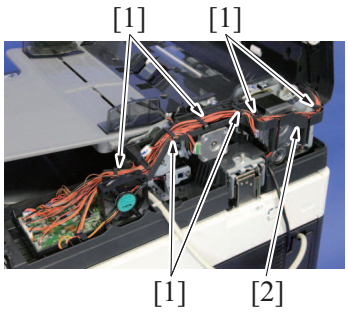
7. To reinstall, reverse the order of removal.

8.4.15 Reading roller release motor (M4) (DF-704)

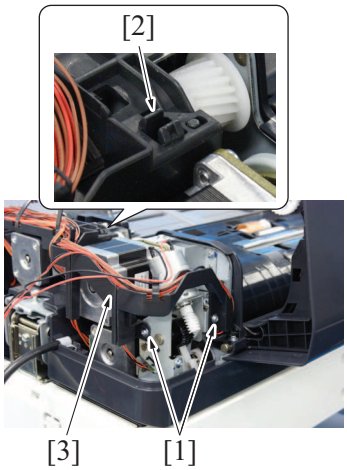
1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



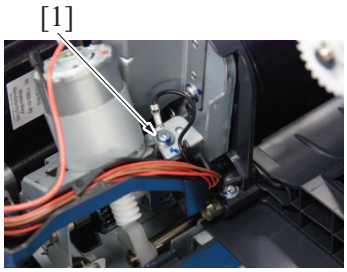
2. Disconnect the connector (J18) [1] on the DF control board.



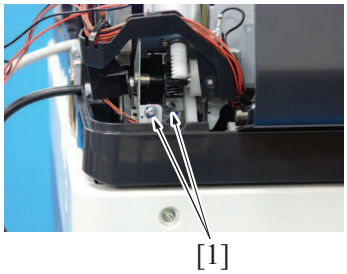
3. Remove six wire saddles [1] and remove the harness from the harness guide [2].



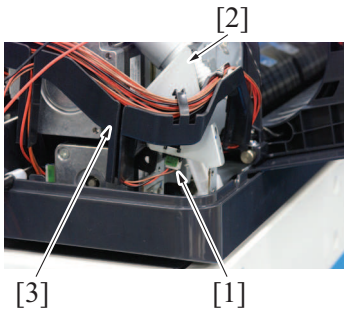
4. Remove two screws [1] and a claw [2], and move the harness guide [3] off the working area.



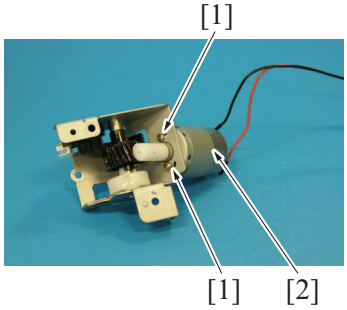
5. Remove the screw [1].



6. Remove two screws [1].



7. Disconnect the connector [1], and remove the reading roller release motor assy [2].
8. Remove the harness from the harness guide [3].

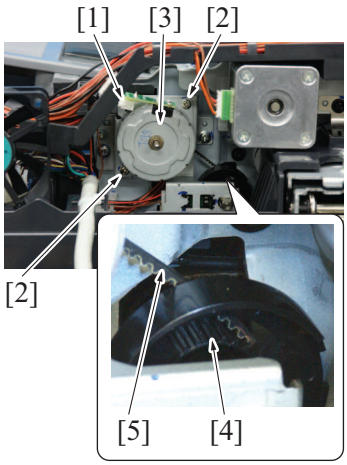


9. Remove two screws [1], and remove the reading roller release motor [2].

10. To reinstall, reverse the order of removal.

8.4.16 CIS cleaning motor (M5) (DF-704)

1. Remove the rear cover.
G.8.4.2 Rear cover (DF-704)

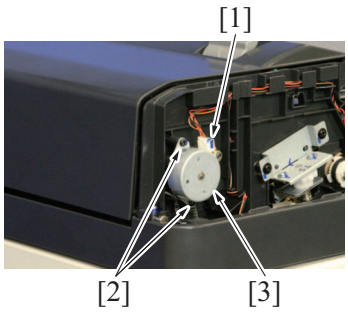


2. Disconnect the connector [1].
3. Remove two screws [2], and remove the CIS cleaning motor [3].
   NOTE
   - **When mounting it, make sure to set the belt [5] to the gear [4] on the pulley firmly.**

4. To reinstall, reverse the order of removal.

8.4.17 Document reading glass cleaning motor (M6) (DF-704)

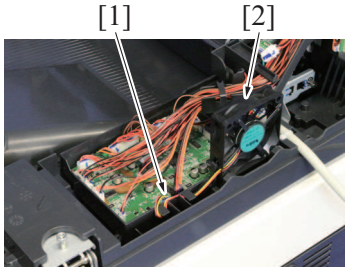
1. Remove the front cover.
   G.8.4.1 Front cover (DF-704)



2. Disconnect the connector [1].
3. Remove two screws [2], and remove the document reading glass cleaning motor [3].
4. To reinstall, reverse the order of removal.

8.4.18 DF cooling fan motor (FM1) (DF-704)

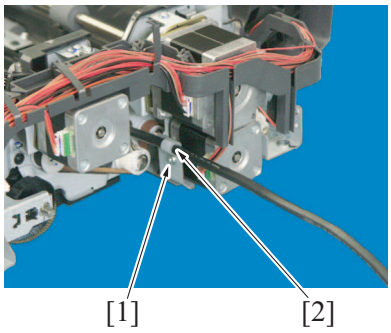
1. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)



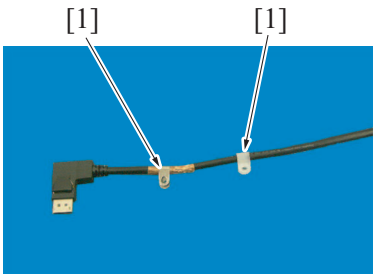
2. Disconnect the connector [1].
3. Remove the DF cooling fan motor [2].
4. To reinstall, reverse the order of removal.

8.4.19 CIS cable (DF-704)

1. Remove the front cover.
   G.8.4.1 Front cover (DF-704)
2. Remove the rear cover.
   G.8.4.2 Rear cover (DF-704)
3. Remove the reading roller release motor.
   G.8.4.15 Reading roller release motor (M4) (DF-704)
4. Remove the CIS cleaning motor.
   G.8.4.16 CIS cleaning motor (M5) (DF-704)
5. Remove the CIS module.
   G.8.4.7 CIS module (CIS) (DF-704)



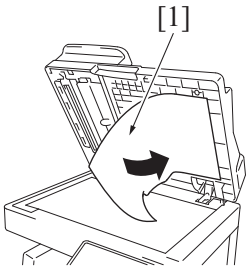
6. Remove one screw [1]. Then, remove the wire saddle [2] from the CIS cable.



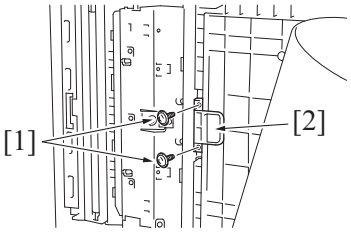
7. Remove the CIS cable.
   NOTE
   - **If the CIS cable is to be replaced with a new one, remove the two wire saddles [1] that are attached to the old CIS cable and attach them to the new cable.**
   - **Attach the wire saddles at the same positions as those at which they were attached.**

8. To reinstall, reverse the order of removal.

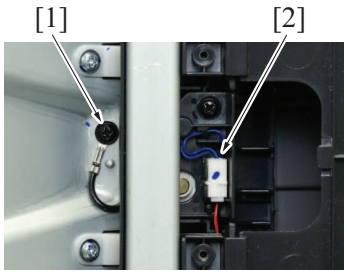
8.4.20 Stamp unit (SP-501)



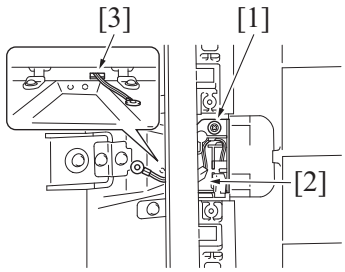
1. Peel off the mat (at two places on the left) [1].



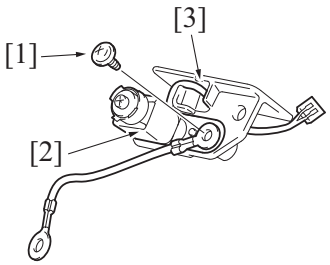
2. Remove the two screws [1], and remove the cover [2].



3. Remove the screw [1].
4. Remove the harness and disconnect the connector [2].



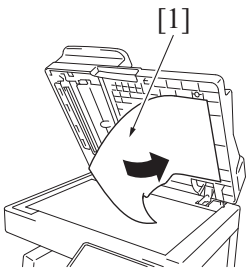
5. Remove the screw [1], and remove the guide plate [2].
NOTE
- **When mounting it, set the ground terminal through the hole [3] shown on the illustration.**



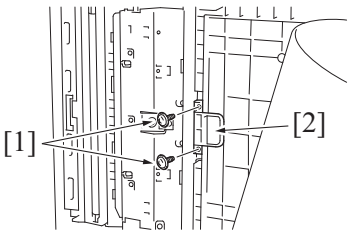
6. Remove the screw [1] and remove the stamp unit [2].
NOTE
- **When mounting it, set the harness through the hole [3] shown on the illustration.**
- **Ensure that the ground terminal is on the upper side of the mounting bracket of stamp unit.**

7. To reinstall, reverse the order of removal.

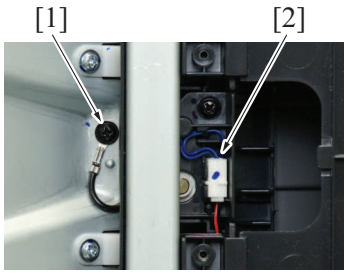
8.4.21 Stamp (SP-501)



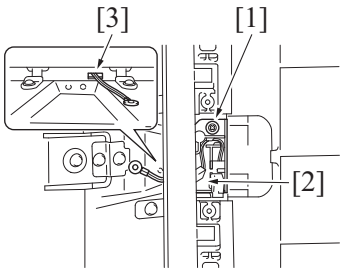
1. Peel off the mat (at two places on the left) [1].



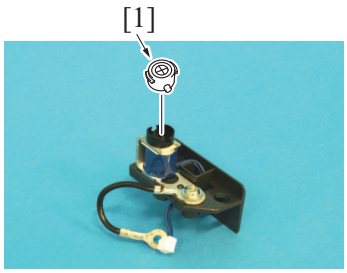
2. Remove the two screws [1], and remove the cover [2].



3. Remove the screw [1].
4. Remove the harness and disconnect the connector [2].



5. Remove the screw [1], and remove the guide plate [2].
NOTE
- **When mounting it, set the ground terminal through the hole [3] shown on the illustration.**



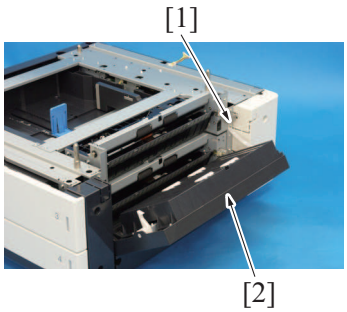
6. Remove the used stamp, and install the new stamp of replacement [1].
NOTE
- **Align the round pin of the stamp with the slit in the stamp unit side.**

7. To reinstall, reverse the order of removal.

8.5 Disassembly/reassembly procedure (PC-110/PC-210)

8.5.1 Right door (PC-110/PC-210)

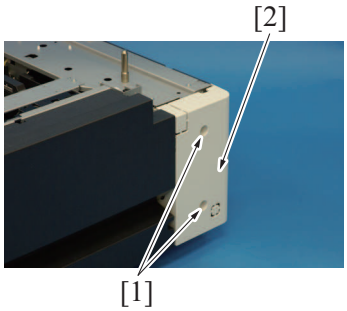
1. Open the right door.



2. Remove the screw [1], and remove the right door [2].

3. To reinstall, reverse the order of removal.

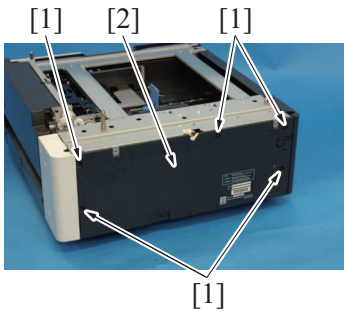
8.5.2 Rear right cover (PC-110/PC-210)



1. Remove two screws [1], and remove the rear right cover [2].

2. To reinstall, reverse the order of removal.

8.5.3 Rear cover (PC-110/PC-210)



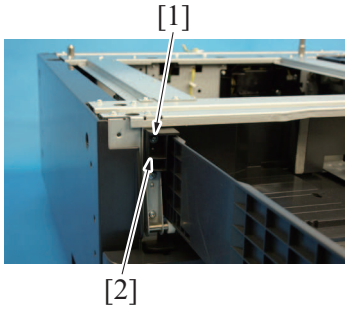
1. Remove five screws [1], and remove the rear cover [2].
2. To reinstall, reverse the order of removal.

8.5.4 Tray 3, tray 4 (PC-110/PC-210)

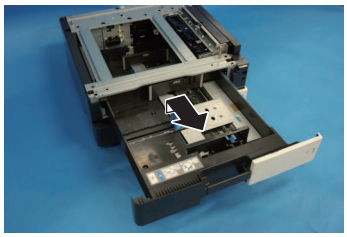
NOTE

- **The tray 3 and the tray 4 are of the same form and mechanism. This procedure shows the steps taken for the tray 3.**

1. Slide out the tray 3, and remove the paper.



2. Remove the screw [1], and remove the stopper [2].
3. Hold up the tray 3 to remove it.



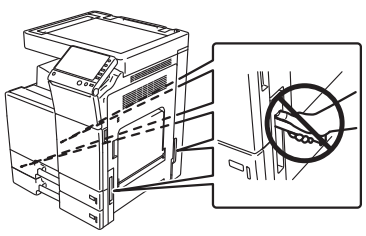
4. To reinstall, reverse the order of removal.

8.5.5 Paper feed cabinet (PC-110/PC-210)

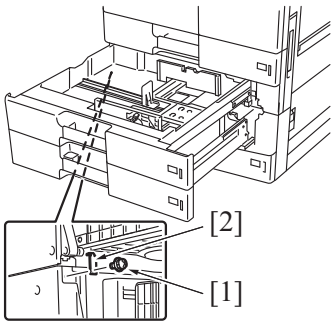
⚠CAUTION

- When holding the transportation handles, be careful not to catch your fingers in the main body.

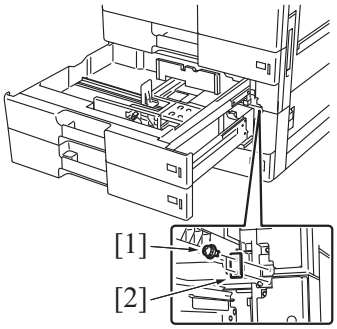




1. Slide out the tray 2 and tray 3.

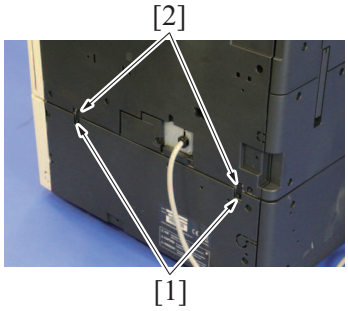


2. Remove the screw [1], and remove the fixing bracket [2].

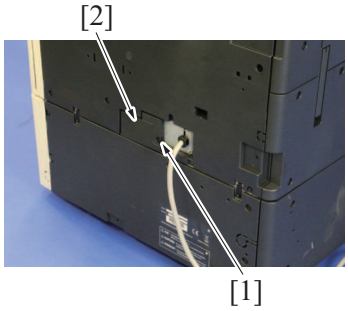


3. Remove two screws [1], and remove the fixing bracket [2].

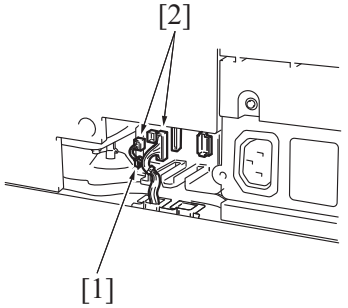
4. Slide the tray 2 and tray 3 back in.



5. Remove two screws [1], and remove two fixing brackets [2].

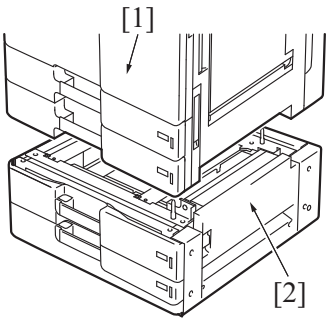


6. Remove the screw [1], and remove the rear under cover [2].



7. Remove the harness from the wire saddle [1].
8. Disconnect two connectors [2].

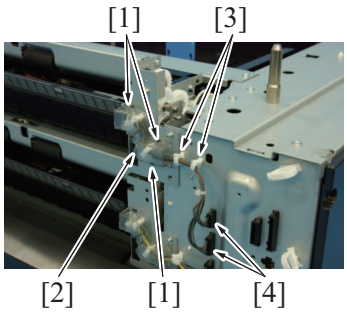
9. Pull out the transportation handles.



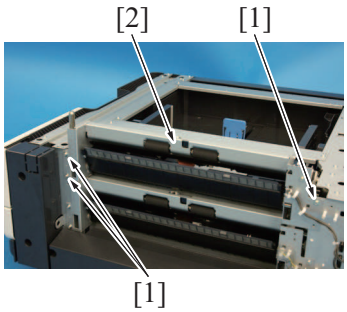
10. Hold the transportation handles at the right and left of the main body, and lift the main body [1] and then remove the paper feed cabinet [2].
NOTE
- **When transporting or moving the main body, assign adequate number of persons.**

8.5.6 Tray 3 paper feed unit (PC-110/PC-210)

1. Remove the right door.
G.8.5.1 Right door (PC-110/PC-210)
2. Remove the rear right cover.
G.8.5.2 Rear right cover (PC-110/PC-210)
3. Slide out the tray 3.



4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from two wire saddles [3].
6. Disconnect two connectors [4].

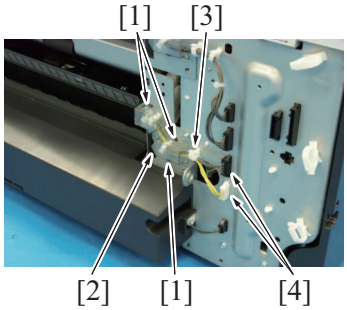


7. Remove three screws [1], and remove the tray 3 paper feed unit [2].

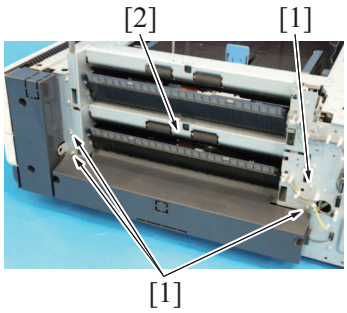
8. To reinstall, reverse the order of removal.

8.5.7 Tray 4 paper feed unit (PC-210)

1. Remove the right door.
G.8.5.1 Right door (PC-110/PC-210)
2. Remove the rear right cover.
G.8.5.2 Rear right cover (PC-110/PC-210)
3. Slide out the tray 4.



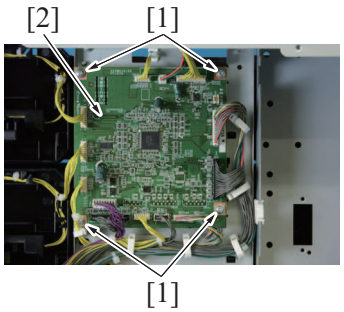
4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from the wire saddle [3].
6. Disconnect two connectors [4].



7. Remove four screws [1], and remove the tray 4 paper feed unit [2].
8. To reinstall, reverse the order of removal.

8.5.8 PC control board (PCCB) (PC-110/PC-210)

1. Remove the rear cover.
G.8.5.3 Rear cover (PC-110/PC-210)



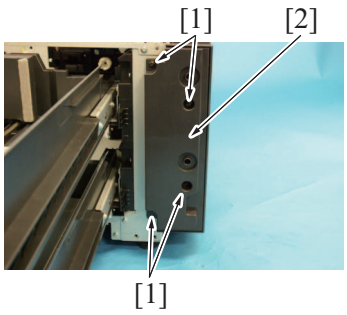
2. Disconnect all connectors on the PC control board.
3. Remove four screws [1], and remove the PC control board [2].
4. To reinstall, reverse the order of removal.

8.5.9 Tray 3 paper empty indicator board (PEIB/3), tray 4 paper empty indicator board (PEIB/4) (PC-110/PC-210)

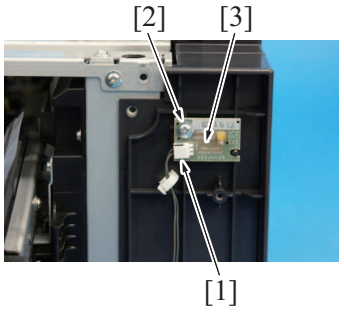
NOTE

- **The tray 3 paper empty indicator board and the tray 4 paper empty indicator board are of the same form and mechanism. This procedure shows the steps taken for the tray 3 paper empty indicator board.**

1. Slide out the tray 3.
2. Slide out the tray 4.



3. Remove four screws [1], and remove the right front cover [2].



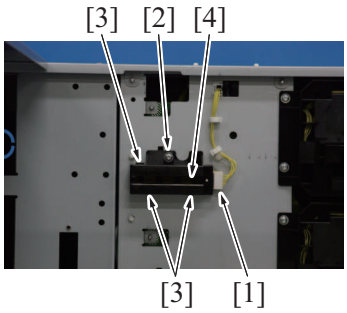
4. Disconnect the connector [1].
5. Remove the screw [2], and remove the tray 3 paper empty indicator board [3].
6. To reinstall, reverse the order of removal.

8.5.10 Tray 3 FD paper size board (FDPSB/3), tray 4 FD paper size board (FDPSB/4) (PC-110/PC-210)

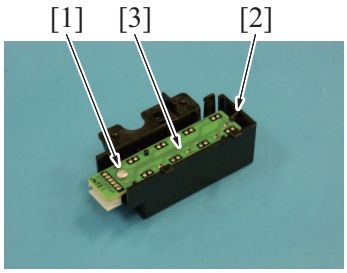
NOTE

- **The tray 3 FD paper size board and the tray 4 FD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 3 FD paper size board.**

1. Remove the tray 3.
G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
2. Remove the tray 4.
G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



3. Disconnect the connector [1].
4. Remove the screw [2] and three tabs [3], and remove the tray 3 FD paper size board assy [4].

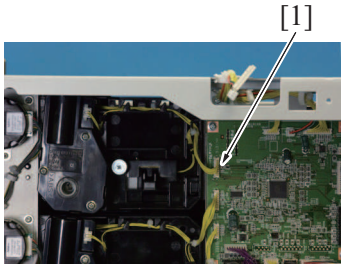


5. Remove the screw [1] and the tab [2], and remove the tray 3 FD paper size board [3].

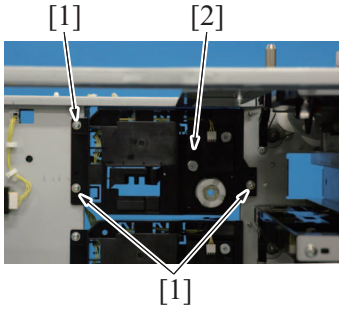
6. To reinstall, reverse the order of removal.

8.5.11 Tray 3 CD paper size board (CDPSB/3) (PC-110/PC-210)

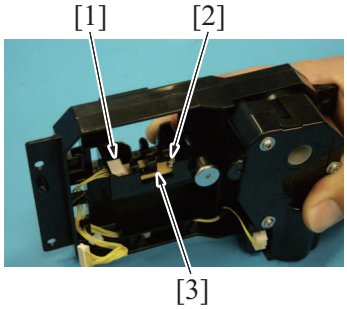
1. Remove the rear cover.
   G.8.5.3 Rear cover (PC-110/PC-210)



2. Disconnect the connector [1] on the PC control board.
3. Remove the tray 3.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
4. Remove the tray 4.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



5. Remove three screws [1], and remove the tray 3 lift-up motor assy [2].

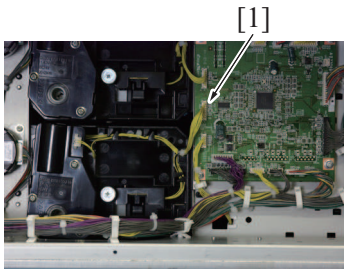


6. Disconnect the connector [1].
7. Remove the screw [2], and remove the tray 3 CD paper size board [3].

8. To reinstall, reverse the order of removal.

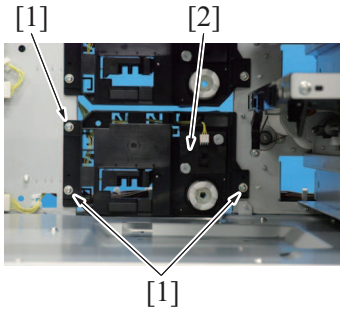
8.5.12 Tray 4 CD paper size board (CDPSB/4) (PC-210)

1. Remove the rear cover.
   G.8.5.3 Rear cover (PC-110/PC-210)

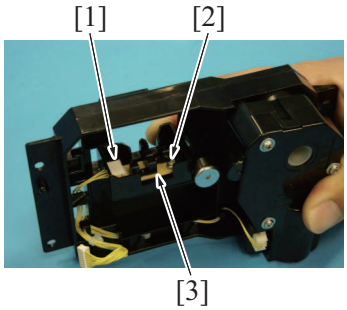


2. Disconnect the connector [1] on the PC control board.

3. Remove the tray 3 and tray 4.
G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



4. Remove three screws [1], and remove the tray 4 lift-up motor assy [2].



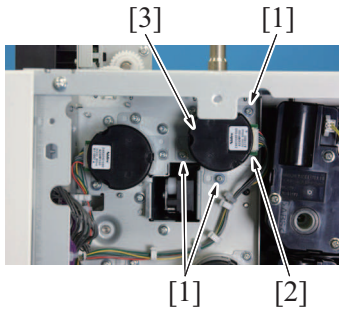
5. Disconnect the connector [1].
6. Remove the screw [2], and remove the tray 4 CD paper size board [3].
7. To reinstall, reverse the order of removal.

8.5.13 Tray 3 paper feed motor (M111), tray 4 paper feed motor (M121) (PC-110/PC-210)

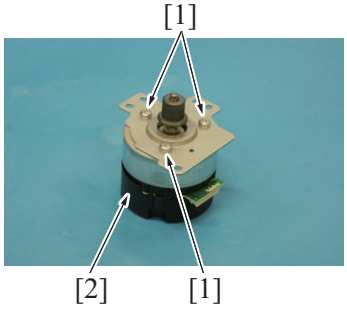
NOTE

- **The tray 3 paper feed motor and the tray 4 paper feed motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 paper feed motor.**

1. Remove the rear cover.
G.8.5.3 Rear cover (PC-110/PC-210)



2. Remove three screws [1].
3. Disconnect the connector [2], and remove the tray 3 paper feed motor assy [3].
NOTE
- **When mounting the tray 3 paper feed motor assy, use care not to forget to set the belt to the gear.**



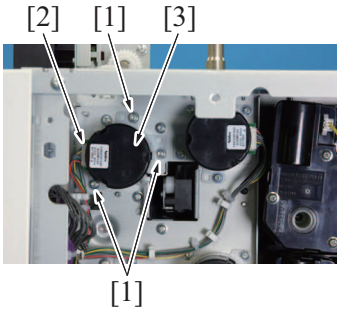
4. Remove three screws [1], and remove the tray 3 paper feed motor [2].
5. To reinstall, reverse the order of removal.

8.5.14 Tray 3 vertical transport motor (M112), tray 4 vertical transport motor (M122) (PC-110/PC-210)

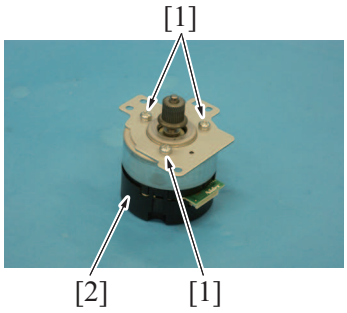
NOTE

- **The tray 3 vertical transport motor and the tray 4 vertical transport motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 vertical transport motor.**

1. Remove the rear cover.
   G.8.5.3 Rear cover (PC-110/PC-210)



2. Remove three screws [1].
3. Disconnect the connector [2], and remove the tray 3 vertical transport motor assy [3].
   NOTE
   - **When mounting the tray 3 vertical transport motor assy, use care not to forget to set the belt to the gear.**



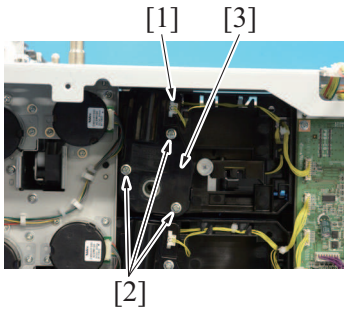
4. Remove three screws [1], and remove the tray 3 vertical transport motor [2].
5. To reinstall, reverse the order of removal.

8.5.15 Tray 3 lift-up motor (M113), tray 4 lift-up motor (M123) (PC-110/PC-210)

NOTE

- **The tray 3 lift-up motor and the tray 4 lift-up motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 lift-up motor.**

1. Remove the rear cover.
   G.8.5.3 Rear cover (PC-110/PC-210)

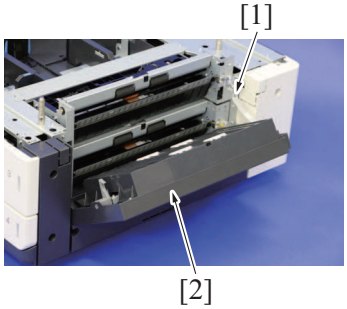


2. Disconnect the connector [1].
3. Remove three screws [2], and remove the tray 3 lift-up motor [3].
4. To reinstall, reverse the order of removal.

8.6 Disassembly/reassembly procedure (PC-115/PC-215)

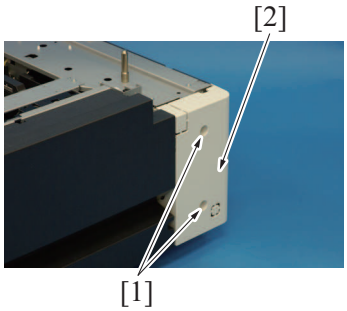
8.6.1 Right door (PC-115/PC-215)

1. Open the right door.



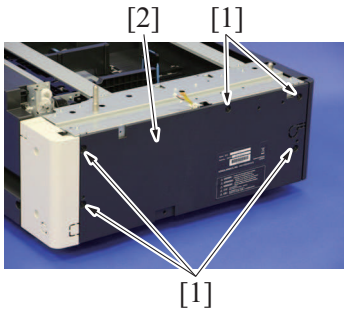
2. Remove the screw [1], and remove the right door [2].
3. To reinstall, reverse the order of removal.

8.6.2 Rear right cover (PC-115/PC-215)



1. Remove two screws [1], and remove the rear right cover [2].
2. To reinstall, reverse the order of removal.

8.6.3 Rear cover (PC-115/PC-215)



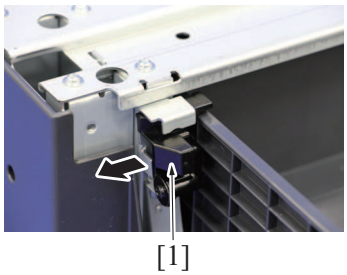
1. Remove five screws [1], and remove the rear cover [2].
2. To reinstall, reverse the order of removal.

8.6.4 Tray 3, tray 4 (PC-115/PC-215)

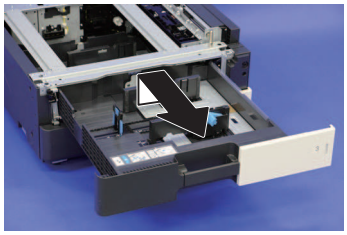
NOTE

- **The tray 3 and the tray 4 are of the same form and mechanism. This procedure shows the steps taken for the tray 3.**

1. Slide out the tray 3, and remove the paper.
2. Shift the stopper [1] to the left.



3. Hold up the tray 3 to remove it.



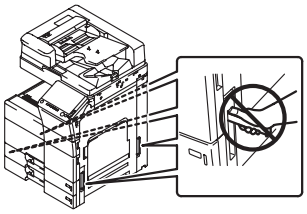
4. To reinstall, reverse the order of removal.

8.6.5 Paper feed cabinet (PC-115/PC-215)

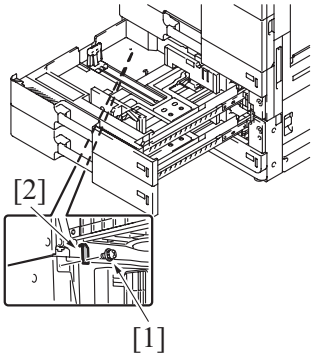
⚠CAUTION

- When holding the transportation handles, be careful not to catch your fingers in the main body.



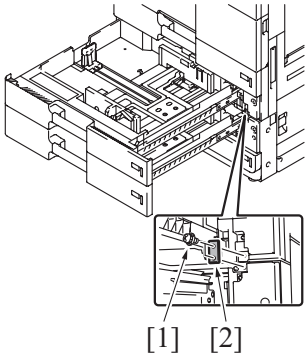


1. Slide out the tray 2 and tray 3.



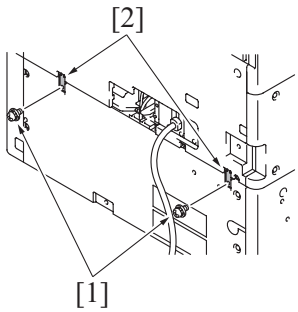
2. Remove the screw [1], and remove the fixing bracket [2].

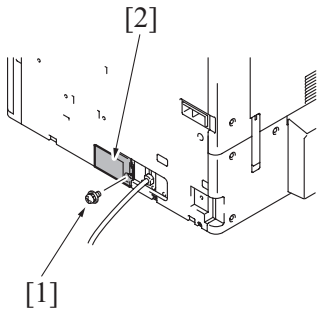
3. Remove two screws [1], and remove the fixing bracket [2].



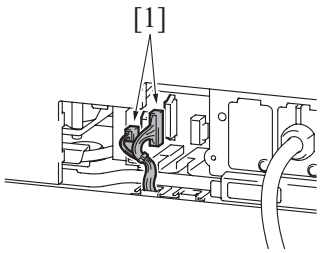
4. Slide the tray 2 and tray 3 back in.

5. Remove two screws [1], and remove two fixing brackets [2].



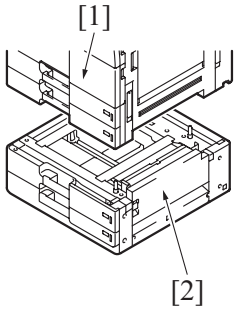


6. Remove the screw [1], and remove the rear under cover [2].



7. Disconnect two connectors [1].

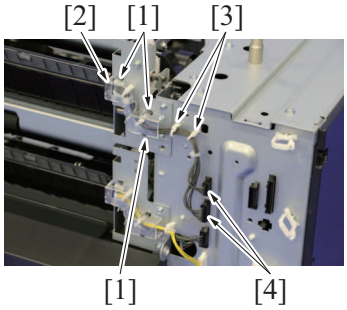
8. Pull out the transportation handles.



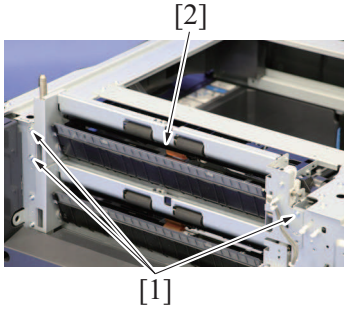
9. Hold the transportation handles at the right and left of the main body, and lift the main body [1] and then remove the paper feed cabinet [2].
NOTE
- **When transporting or moving the main body, assign adequate number of persons.**

8.6.6 Tray 3 paper feed unit (PC-115/PC-215)

1. Remove the right door.
G.8.6.1 Right door (PC-115/PC-215)
2. Remove the rear right cover.
G.8.6.2 Rear right cover (PC-115/PC-215)
3. Slide out the tray 3.



4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from two wire saddles [3].
6. Disconnect two connectors [4].

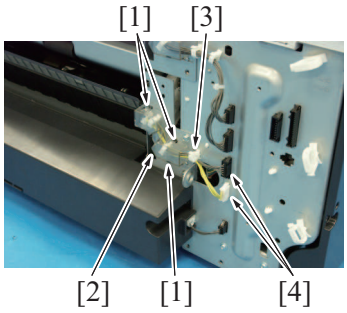


7. Remove three screws [1], and remove the tray 3 paper feed unit [2].

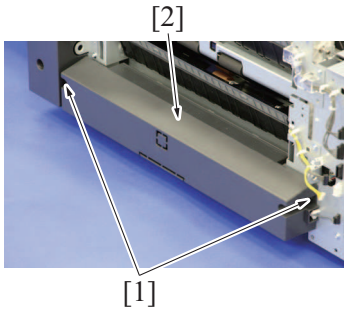
8. To reinstall, reverse the order of removal.

8.6.7 Tray 4 paper feed unit (PC-215)

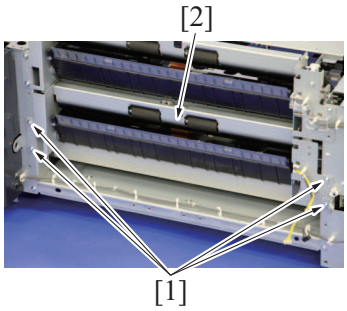
1. Remove the right door.
   G.8.6.1 Right door (PC-115/PC-215)
2. Remove the rear right cover.
   G.8.6.2 Rear right cover (PC-115/PC-215)
3. Slide out the tray 4.



4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from the wire saddle [3].
6. Disconnect two connectors [4].



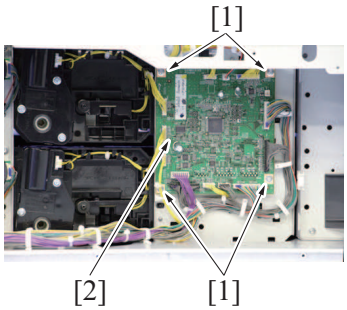
7. Remove two screws [1], and remove the cover [2].



8. Remove four screws [1], and remove the tray 4 paper feed unit [2].
9. To reinstall, reverse the order of removal.

8.6.8 PC control board (PCCB) (PC-115/PC-215)

1. Remove the rear cover.
   G.8.6.3 Rear cover (PC-115/PC-215)



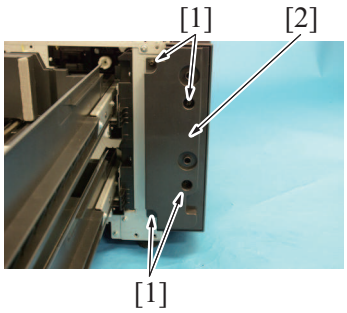
2. Disconnect all connectors on the PC control board.
3. Remove four screws [1], and remove the PC control board [2].
4. To reinstall, reverse the order of removal.

8.6.9 Tray 3 paper empty indicator board (PEIB/3), tray 4 paper empty indicator board (PEIB/4) (PC-115/PC-215)

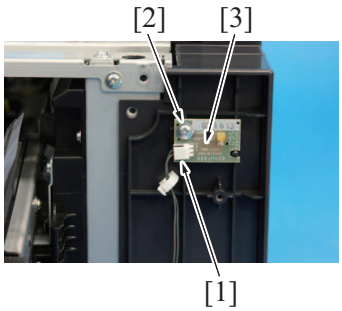
NOTE

- **The tray 3 paper empty indicator board and the tray 4 paper empty indicator board are of the same form and mechanism. This procedure shows the steps taken for the tray 3 paper empty indicator board.**

1. Slide out the tray 3.
2. Slide out the tray 4.



3. Remove four screws [1], and remove the right front cover [2].



4. Disconnect the connector [1].
5. Remove the screw [2], and remove the tray 3 paper empty indicator board [3].

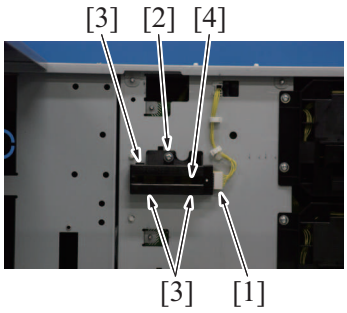
6. To reinstall, reverse the order of removal.

8.6.10 Tray 3 FD paper size board (FDPSB/3), tray 4 FD paper size board (FDPSB/4) (PC-115/PC-215)

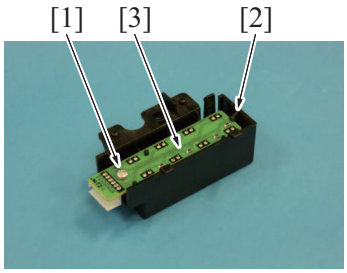
NOTE

- **The tray 3 FD paper size board and the tray 4 FD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 3 FD paper size board.**

1. Remove the tray 3.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
2. Remove the tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



3. Disconnect the connector [1].
4. Remove the screw [2] and three tabs [3], and remove the tray 3 FD paper size board assy [4].

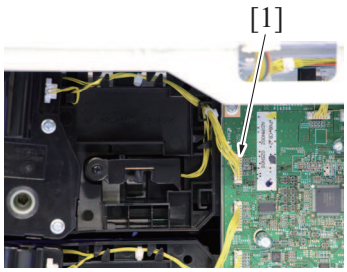


5. Remove the screw [1] and the tab [2], and remove the tray 3 FD paper size board [3].

6. To reinstall, reverse the order of removal.

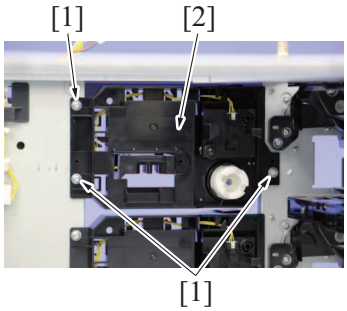
8.6.11 Tray 3 CD paper size board (CDPSB/3) (PC-115/PC-215)

1. Remove the rear cover.
   G.8.6.3 Rear cover (PC-115/PC-215)

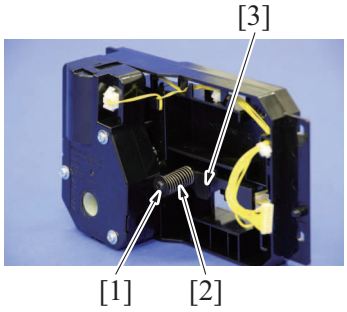


2. Disconnect the connector [1] on the PC control board.

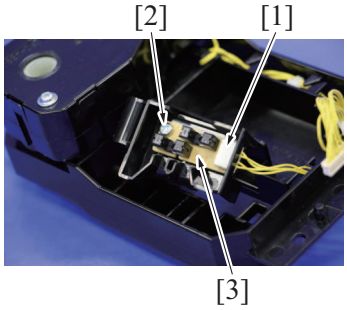
3. Remove the tray 3.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
4. Remove the tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



5. Remove three screws [1], and remove the tray 3 lift-up motor assy [2].



6. Remove the screw [1], spring [2], and tray 3 CD paper size board assy [3].

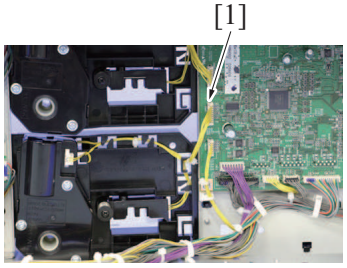


7. Disconnect the connector [1].
8. Remove the screw [2], and remove the tray 3 CD paper size board [3].

9. To reinstall, reverse the order of removal.

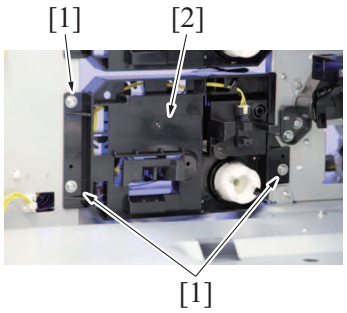
8.6.12 Tray 4 CD paper size board (CDPSB/4) (PC-215)

1. Remove the rear cover.
   G.8.6.3 Rear cover (PC-115/PC-215)

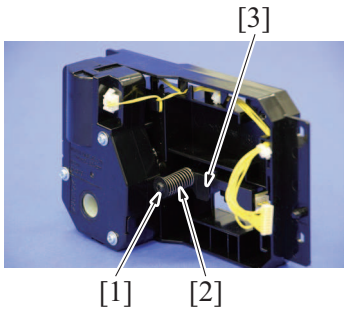


2. Disconnect the connector [1] on the PC control board.

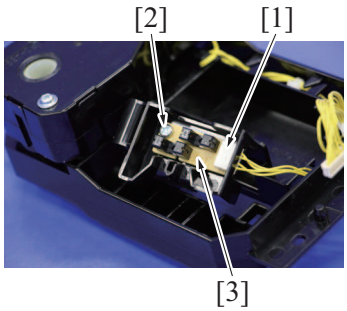
3. Remove the tray 3 and tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



4. Remove three screws [1], and remove the tray 4 lift-up motor assy [2].



5. Remove the screw [1], spring [2], and tray 4 CD paper size board assy [3].



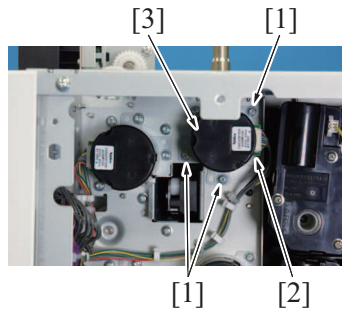
6. Disconnect the connector [1].
7. Remove the screw [2], and remove the tray 4 CD paper size board [3].
8. To reinstall, reverse the order of removal.

8.6.13 Tray 3 paper feed motor (M111), tray 4 paper feed motor (M121) (PC-115/PC-215)

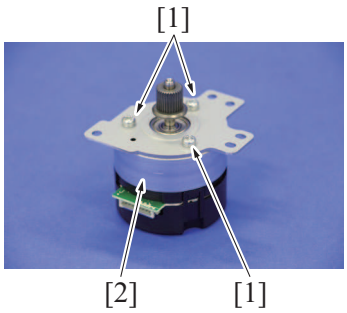
NOTE

- **The tray 3 paper feed motor and the tray 4 paper feed motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 paper feed motor.**

1. Remove the rear cover.
G.8.6.3 Rear cover (PC-115/PC-215)



2. Remove three screws [1].
3. Disconnect the connector [2], and remove the tray 3 paper feed motor assy [3].
NOTE
- **When mounting the tray 3 paper feed motor assy, use care not to forget to set the belt to the gear.**



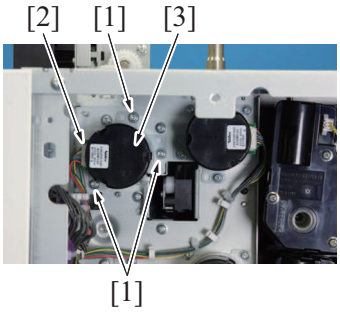
4. Remove three screws [1], and remove the tray 3 paper feed motor [2].
5. To reinstall, reverse the order of removal.

8.6.14 Tray 3 vertical transport motor (M112), tray 4 vertical transport motor (M122) (PC-115/PC-215)

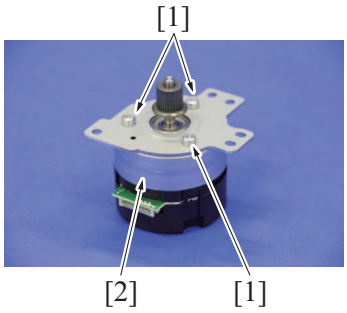
NOTE

- **The tray 3 vertical transport motor and the tray 4 vertical transport motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 vertical transport motor.**

1. Remove the rear cover.
   G.8.6.3 Rear cover (PC-115/PC-215)



2. Remove three screws [1].
3. Disconnect the connector [2], and remove the tray 3 vertical transport motor assy [3].
   NOTE
   - **When mounting the tray 3 vertical transport motor assy, use care not to forget to set the belt to the gear.**



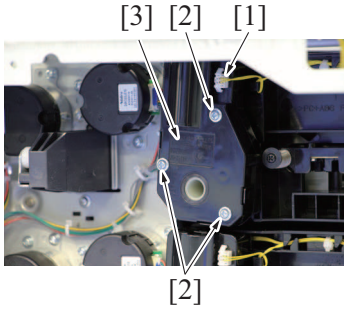
4. Remove three screws [1], and remove the tray 3 vertical transport motor [2].
5. To reinstall, reverse the order of removal.

8.6.15 Tray 3 lift-up motor (M113), tray 4 lift-up motor (M123) (PC-115/PC-215)

NOTE

- **The tray 3 lift-up motor and the tray 4 lift-up motor are of the same form and mechanism. This procedure shows the steps taken for the tray 3 lift-up motor.**

1. Remove the rear cover.
   G.8.6.3 Rear cover (PC-115/PC-215)

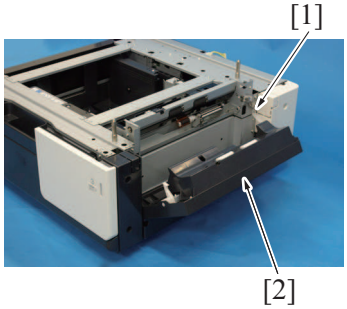


2. Disconnect the connector [1].
3. Remove three screws [2], and remove the tray 3 lift-up motor [3].
4. To reinstall, reverse the order of removal.

8.7 Disassembly/reassembly procedure (PC-410)

8.7.1 Right door (PC-410)

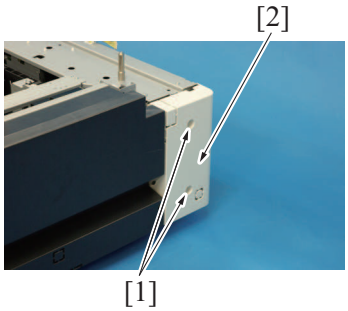
1. Open the right door.



2. Remove the screw [1], and remove the right door [2].
3. To reinstall, reverse the order of removal.

8.7.2 Rear right cover (PC-410)

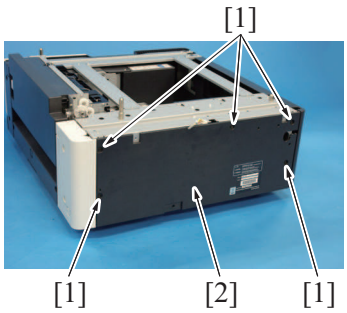
1. Remove two screws [1], and remove the rear right cover [2].



2. To reinstall, reverse the order of removal.

8.7.3 Rear cover (PC-410)

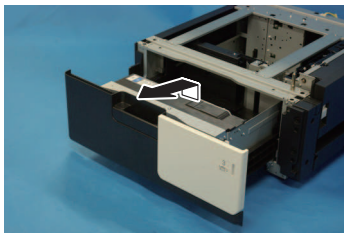
1. Remove five screws [1], and remove the rear cover [2].



2. To reinstall, reverse the order of removal.

8.7.4 Paper feed tray (PC-410)

1. Slide out the paper feed tray, and remove the paper.
2. Hold up the paper feed tray to remove it.

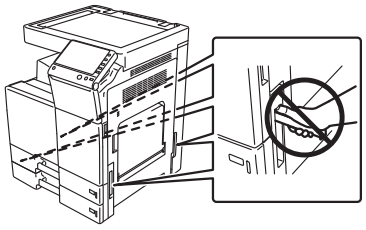


3. To reinstall, reverse the order of removal.

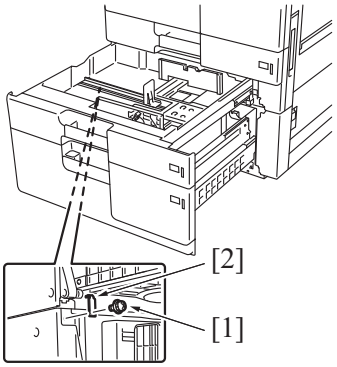
8.7.5 Paper feed cabinet (PC-410)

⚠CAUTION

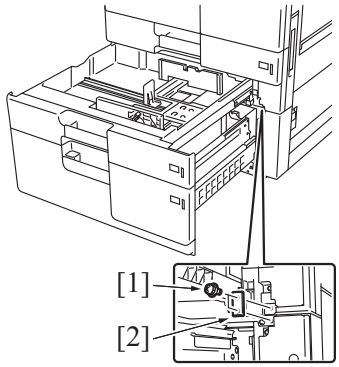
- When holding the transportation handles, be careful not to catch your fingers in the main body.



1. Slide out the tray 2 and tray 3.

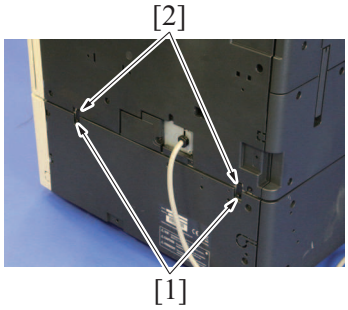


2. Remove the screw [1], and remove the fixing bracket [2].

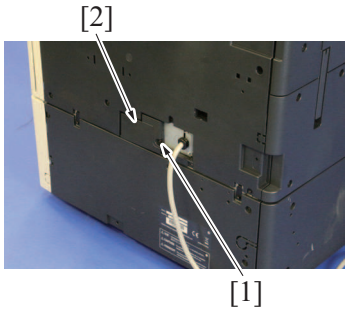


3. Remove two screws [1], and remove the fixing bracket [2].

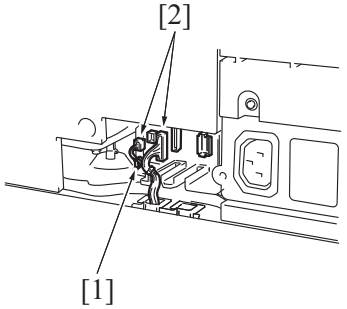
4. Slide the tray 2 and tray 3 back in.



5. Remove two screws [1], and remove two fixing brackets [2].

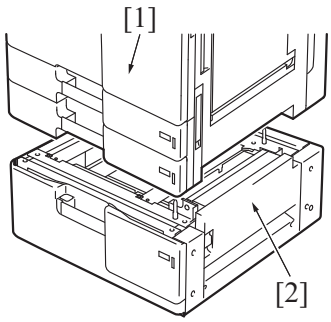


6. Remove the screw [1], and remove the rear under cover [2].



7. Remove the harness from the wire saddle [1].
8. Disconnect two connectors [2].

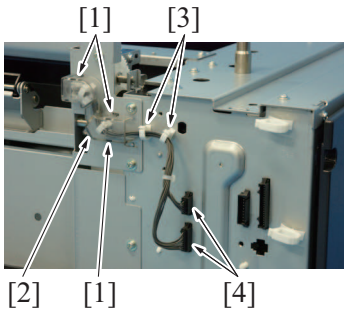
9. Pull out the transportation handles.



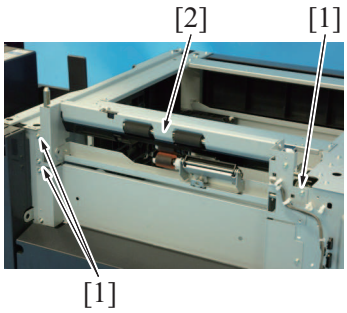
10. Hold the transportation handles at the right and left of the main body, and lift the main body [1] and then remove the paper feed cabinet [2].
NOTE
- **When transporting or moving the main body, assign adequate number of persons.**

8.7.6 Paper feed unit (PC-410)

1. Remove the right door.
G.8.7.1 Right door (PC-410)
2. Remove the rear right cover.
G.8.7.2 Rear right cover (PC-410)
3. Slide out the paper feed tray.



4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from two wire saddles [3].
6. Disconnect two connectors [4].

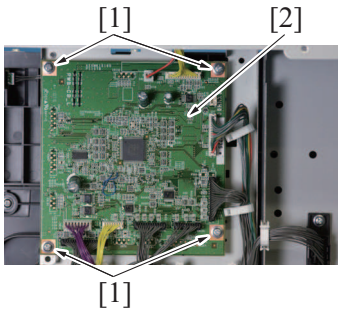


7. Remove three screws [1], and remove the paper feed unit [2].

8. To reinstall, reverse the order of removal.

8.7.7 PC control board (PCCB) (PC-410)

1. Remove the rear cover.
G.8.7.3 Rear cover (PC-410)

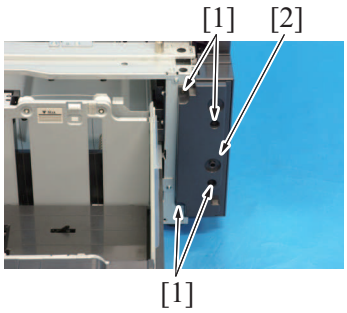


2. Disconnect all connectors on the PC control board.
3. Remove four screws [1], and remove the PC control board [2].

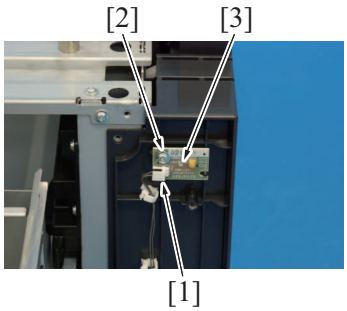
4. To reinstall, reverse the order of removal.

8.7.8 Tray 3 paper empty indicator board (PEIB/3) (PC-410)

1. Slide out the paper feed tray.



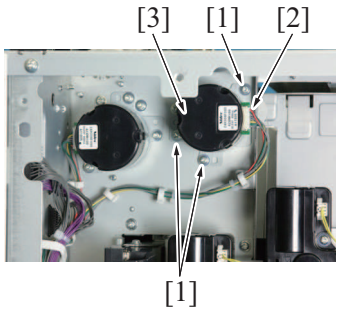
2. Remove four screws [1], and remove the right front cover [2].



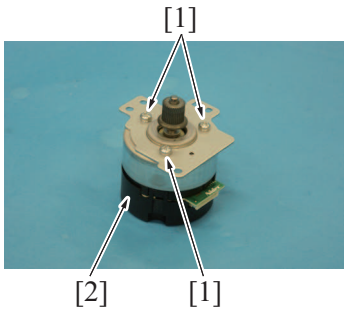
3. Disconnect the connector [1].
4. Remove the screw [2], and remove the tray 3 paper empty indicator board [3].
5. To reinstall, reverse the order of removal.

8.7.9 Paper feed motor (M131) (PC-410)

1. Remove the rear cover.
G.8.7.3 Rear cover (PC-410)



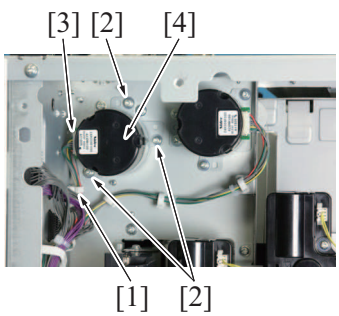
2. Remove three screws [1].
3. Disconnect the connector [2], and remove the paper feed motor assy [3].
NOTE
- **When mounting the paper feed motor assy, use care not to forget to set the belt to the gear.**



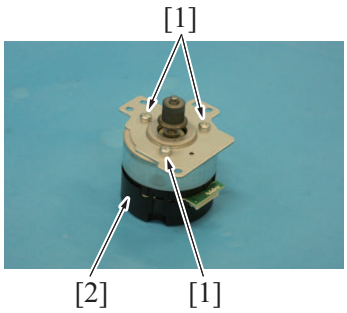
4. Remove three screws [1], and remove the paper feed motor [2].
5. To reinstall, reverse the order of removal.

8.7.10 Vertical transport motor (M132) (PC-410)

1. Remove the rear cover.
G.8.7.3 Rear cover (PC-410)



2. Remove the harness from the wire saddle [1].
3. Remove three screws [2].
4. Disconnect the connector [3], and remove the vertical transport motor assy [4].
NOTE
- **When mounting the vertical transport motor assy, use care not to forget to set the belt to the gear.**

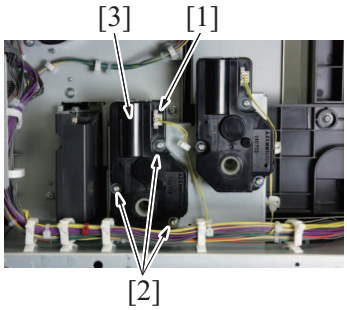


5. Remove three screws [1], and remove the vertical transport motor [2].

6. To reinstall, reverse the order of removal.

8.7.11 Elevator motor (M134) (PC-410)

1. Slide out the paper feed tray.
2. Remove the rear cover.
G.8.7.3 Rear cover (PC-410)

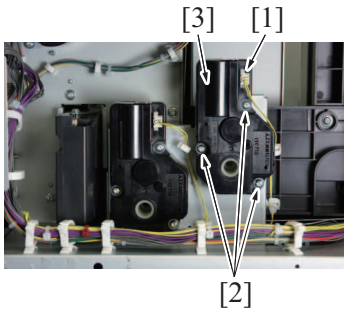


3. Disconnect the connector [1].
4. Remove three screws [2], and remove the elevator motor [3].

5. To reinstall, reverse the order of removal.

8.7.12 Shifter motor (M133) (PC-410)

1. Slide out the paper feed tray.
2. Remove the rear cover.
G.8.7.3 Rear cover (PC-410)

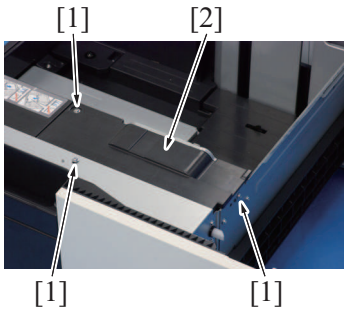


3. Disconnect the connector [1].
4. Remove three screws [2], and remove the shifter motor [3].

5. To reinstall, reverse the order of removal.

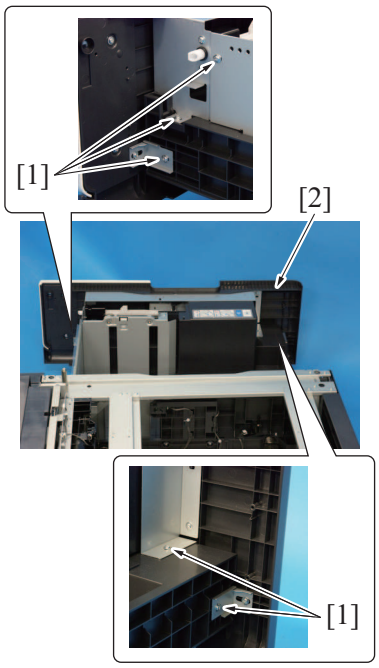
8.7.13 Wire (PC-410)

1. Slide out the paper feed tray.



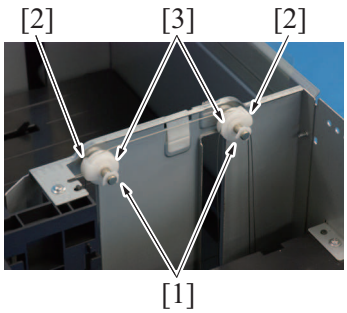
2. Remove three screws [1], and remove the cover [2].

3. Remove five screws [1], and remove the front cover assy [2].

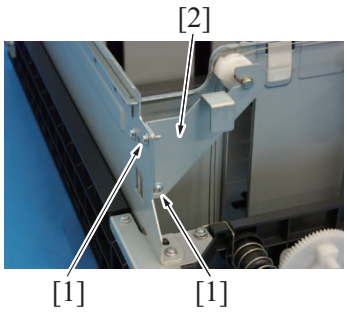


4. Remove the paper feed tray.
G.8.7.4 Paper feed tray (PC-410)

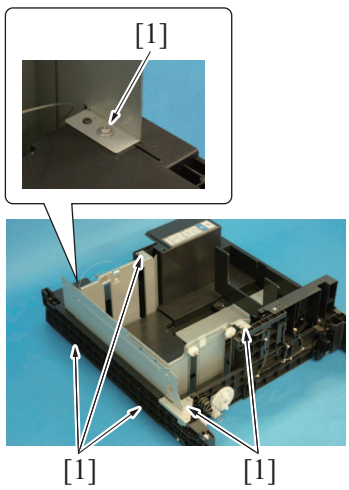
5. Remove two C-rings [1].
6. Remove two pulley covers [2].
7. Remove two pulleys [3].

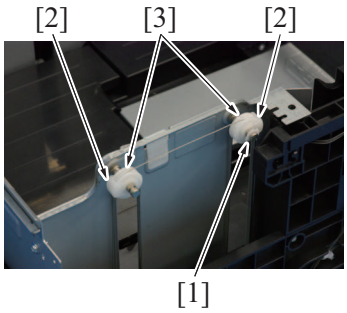


8. Remove two screws [1], and remove the metal plate [2].

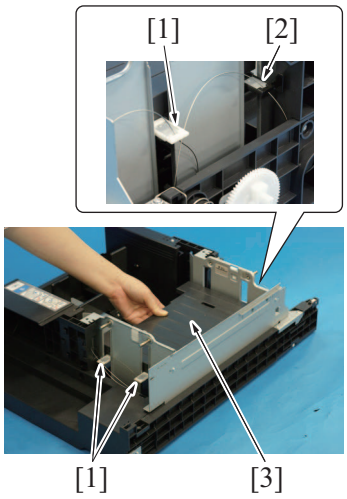


9. Remove six screws [1] of the right paper guide plate.

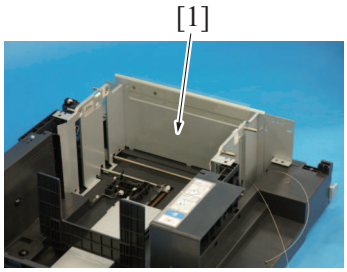




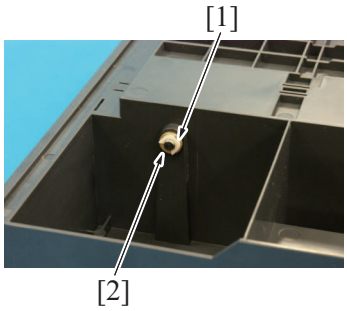
10. Remove the C-ring [1].
11. Remove two pulley covers [2].
12. Remove two pulleys [3].



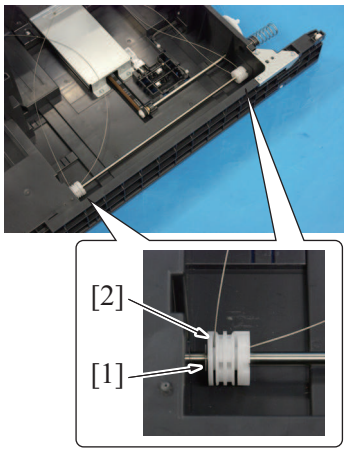
13. Remove three cable holding jigs (white) [1] and the cable holding jig (black) [2], and remove the main tray [3].
NOTE
- **Use care not to bend the wires.**



14. Remove the right paper guide plate assy [1].



15. Turn the tray upside down.
16. Remove the C-ring [1] and the bushing [2].

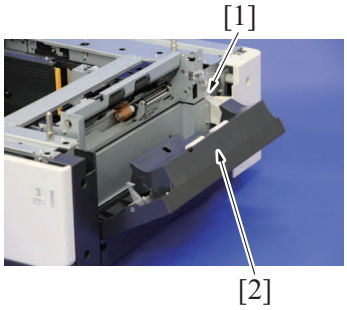


17. Turn the tray back to the original status.
18. Remove two C-rings [1] and two wire pulleys [2].
19. Remove the wire from the wire pulley [2].
    NOTE
    - **Take care not to lose the pin.**
    - **When reinstalling the wire pulley [2], check that the direction of the wire coming from both wire pulleys are the same.**
20. To reinstall, reverse the order of removal.

8.8 Disassembly/reassembly procedure (PC-415)

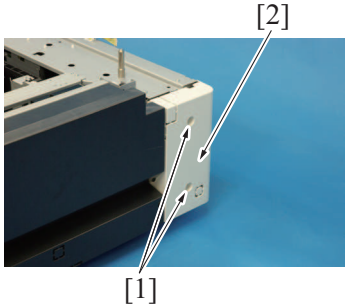
8.8.1 Right door (PC-415)

1. Open the right door.



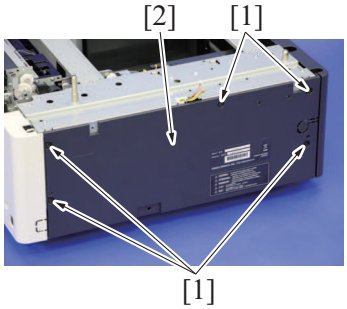
2. Remove the screw [1], and remove the right door [2].
3. To reinstall, reverse the order of removal.

8.8.2 Rear right cover (PC-415)



1. Remove two screws [1], and remove the rear right cover [2].
2. To reinstall, reverse the order of removal.

8.8.3 Rear cover (PC-415)

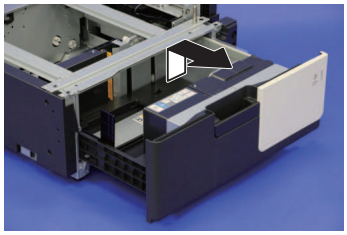


1. Remove five screws [1], and remove the rear cover [2].
2. To reinstall, reverse the order of removal.

8.8.4 Paper feed tray (PC-415)

1. Slide out the paper feed tray, and remove the paper.

2. Hold up the paper feed tray to remove it.

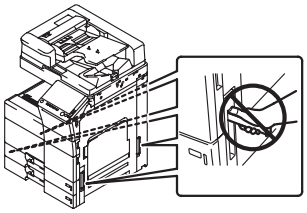


3. To reinstall, reverse the order of removal.

8.8.5 Paper feed cabinet (PC-415)

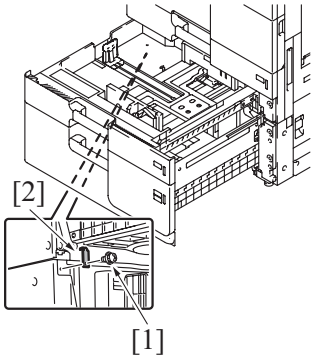
⚠CAUTION

- When holding the transportation handles, be careful not to catch your fingers in the main body.

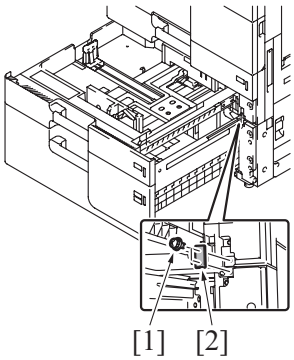


1. Slide out the tray 2 and tray 3.

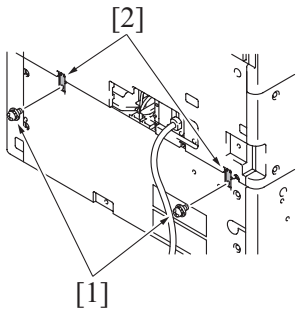
2. Remove the screw [1], and remove the fixing bracket [2].



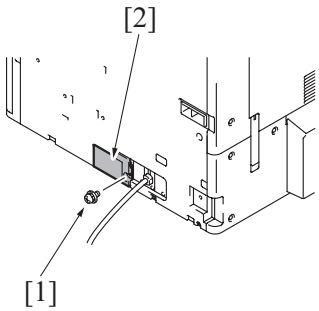
3. Remove two screws [1], and remove the fixing bracket [2].



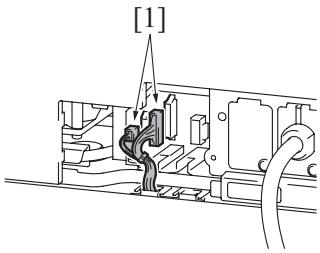
4. Slide the tray 2 and tray 3 back in.



5. Remove two screws [1], and remove two fixing brackets [2].

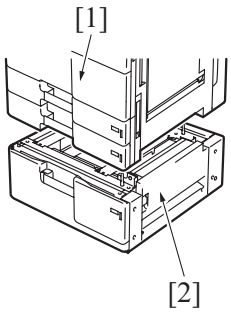


6. Remove the screw [1], and remove the rear under cover [2].



7. Disconnect two connectors [1].

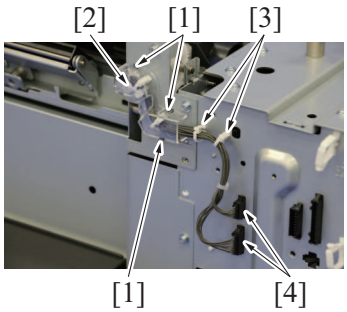
8. Pull out the transportation handles.



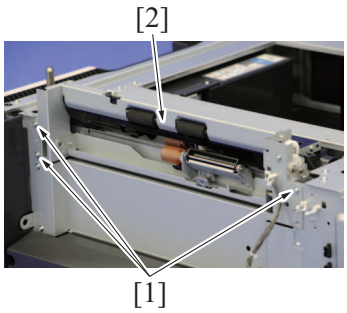
9. Hold the transportation handles at the right and left of the main body, and lift the main body [1] and then remove the paper feed cabinet [2].
NOTE
- **When transporting or moving the main body, assign adequate number of persons.**

8.8.6 Paper feed unit (PC-415)

1. Remove the right door.
   G.8.8.1 Right door (PC-415)
2. Remove the rear right cover.
   G.8.8.2 Rear right cover (PC-415)
3. Slide out the paper feed tray.



4. Remove three tabs [1], and remove the harness cover [2].
5. Remove the harness from two wire saddles [3].
6. Disconnect two connectors [4].

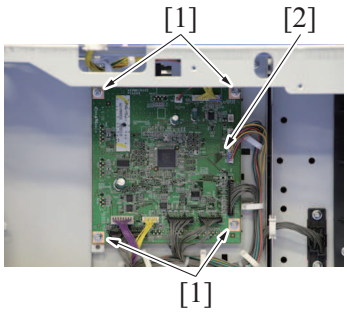


7. Remove three screws [1], and remove the paper feed unit [2].

8. To reinstall, reverse the order of removal.

8.8.7 PC control board (PCCB) (PC-415)

1. Remove the rear cover.
G.8.8.3 Rear cover (PC-415)

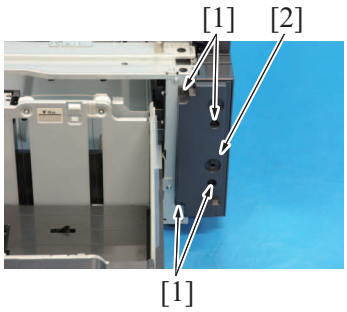


2. Disconnect all connectors on the PC control board.
3. Remove four screws [1], and remove the PC control board [2].

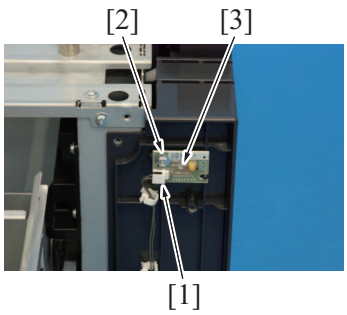
4. To reinstall, reverse the order of removal.

8.8.8 Tray 3 paper empty indicator board (PEIB/3) (PC-415)

1. Slide out the paper feed tray.



2. Remove four screws [1], and remove the right front cover [2].

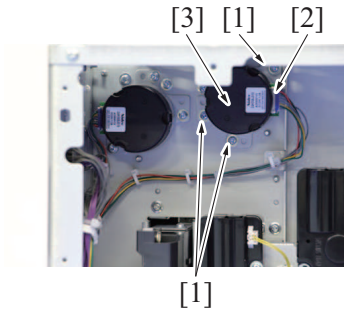


3. Disconnect the connector [1].
4. Remove the screw [2], and remove the tray 3 paper empty indicator board [3].

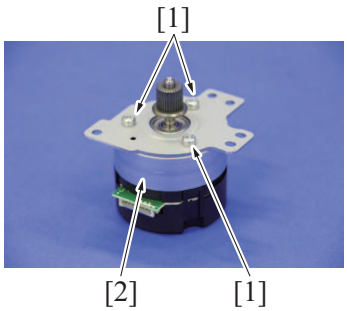
5. To reinstall, reverse the order of removal.

8.8.9 Paper feed motor (M131) (PC-415)

1. Remove the rear cover.
G.8.8.3 Rear cover (PC-415)



2. Remove three screws [1].
3. Disconnect the connector [2], and remove the paper feed motor assy [3].
   NOTE
   - **When mounting the paper feed motor assy, use care not to forget to set the belt to the gear.**

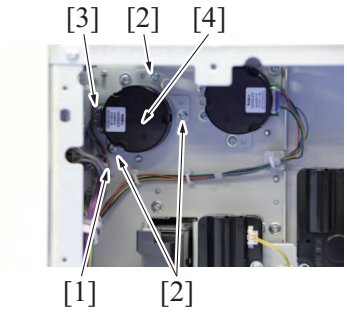


4. Remove three screws [1], and remove the paper feed motor [2].

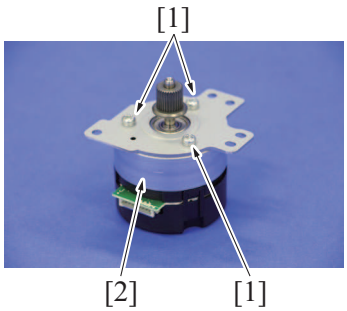
5. To reinstall, reverse the order of removal.

8.8.10 Vertical transport motor (M132) (PC-415)

1. Remove the rear cover.
   G.8.8.3 Rear cover (PC-415)



2. Remove the harness from the wire saddle [1].
3. Remove three screws [2].
4. Disconnect the connector [3], and remove the vertical transport motor assy [4].
   NOTE
   - **When mounting the vertical transport motor assy, use care not to forget to set the belt to the gear.**

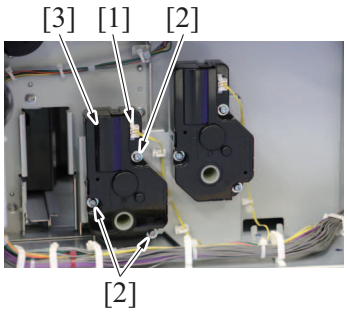


5. Remove three screws [1], and remove the vertical transport motor [2].

6. To reinstall, reverse the order of removal.

8.8.11 Elevator motor (M134) (PC-415)

1. Slide out the paper feed tray.
2. Remove the rear cover.
   G.8.8.3 Rear cover (PC-415)

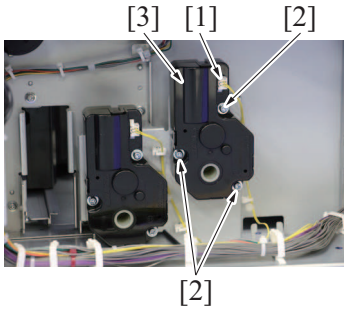


3. Disconnect the connector [1].
4. Remove three screws [2], and remove the elevator motor [3].

5. To reinstall, reverse the order of removal.

8.8.12 Shifter motor (M133) (PC-415)

1. Slide out the paper feed tray.
2. Remove the rear cover.
   G.8.8.3 Rear cover (PC-415)

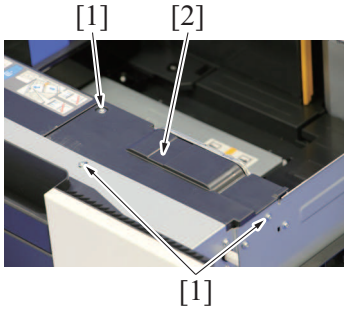


3. Disconnect the connector [1].
4. Remove three screws [2], and remove the shifter motor [3].

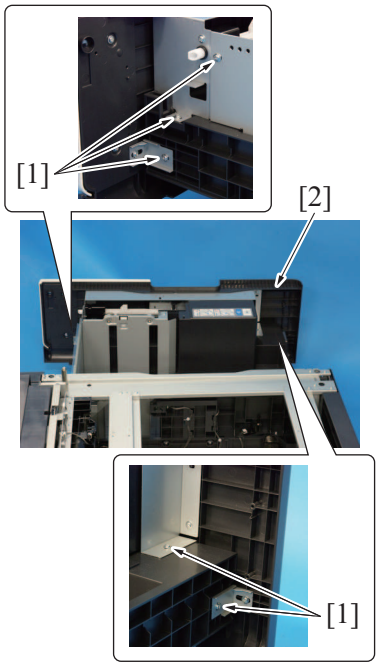
5. To reinstall, reverse the order of removal.

8.8.13 Wire (PC-415)

1. Slide out the paper feed tray.

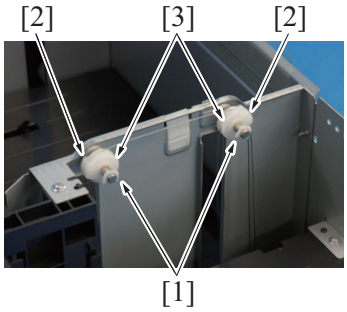


2. Remove three screws [1], and remove the cover [2].

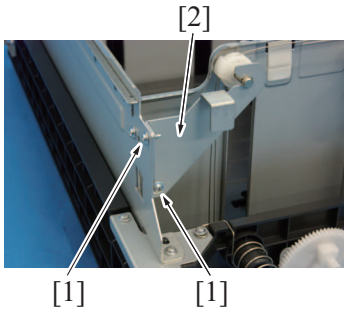


3. Remove five screws [1], and remove the front cover assy [2].

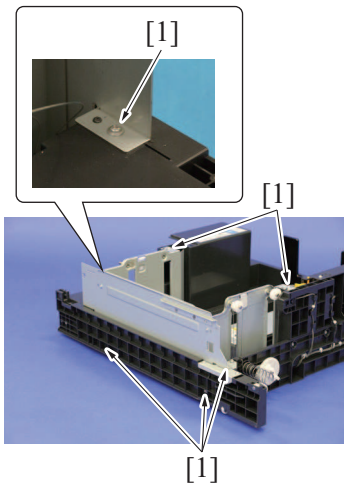
4. Remove the paper feed tray.
G.8.8.4 Paper feed tray (PC-415)



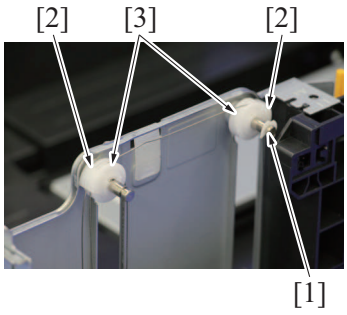
5. Remove two C-rings [1].
6. Remove two pulley covers [2].
7. Remove two pulleys [3].



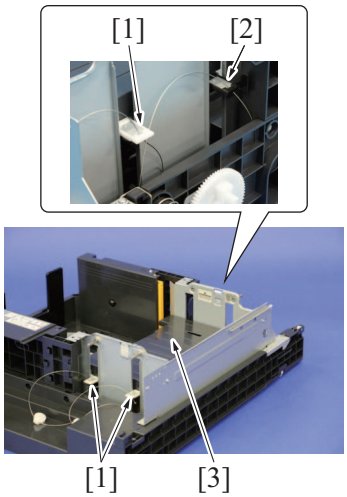
8. Remove two screws [1], and remove the metal plate [2].



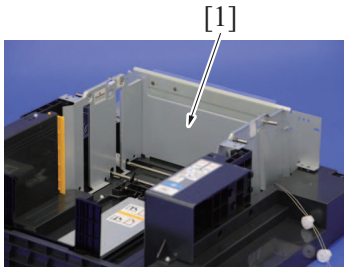
9. Remove six screws [1] of the right paper guide plate.



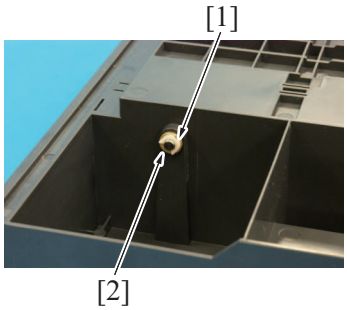
10. Remove the C-ring [1].
11. Remove two pulley covers [2].
12. Remove two pulleys [3].



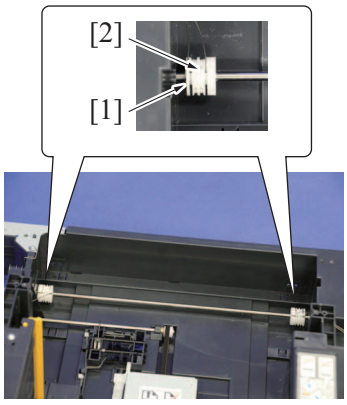
13. Remove three cable holding jigs (white) [1] and the cable holding jig (black) [2], and remove the main tray [3].
NOTE
- **Use care not to bend the wires.**



14. Remove the right paper guide plate assy [1].



15. Turn the tray upside down.
16. Remove the C-ring [1] and the bushing [2].



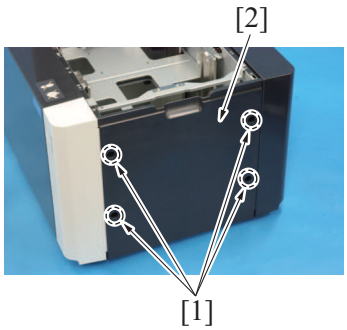
17. Turn the tray back to the original status.
18. Remove two C-rings [1] and two wire pulleys [2].
19. Remove the wire from the wire pulley [2].
NOTE
- **Take care not to lose the pin.**
- **When reinstalling the wire pulley [2], check that the direction of the wire coming from both wire pulleys are the same.**

20. To reinstall, reverse the order of removal.

8.9 Disassembly/reassembly procedure (LU-207)

8.9.1 Right cover (LU-207)

1. Open the upper door.

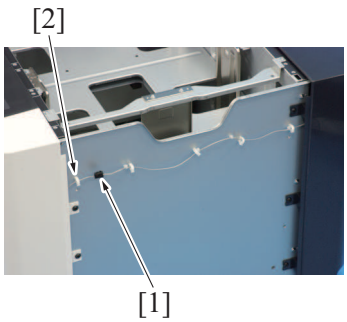


2. Remove four screws [1] and remove the right cover [2].

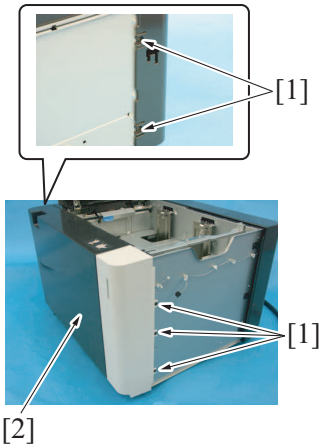
3. To reinstall, reverse the order of removal.

8.9.2 Front cover (LU-207)

1. Remove the right cover.
G.8.9.1 Right cover (LU-207)



2. Disconnect the connector [1], and remove the harness from the wire saddle [2].

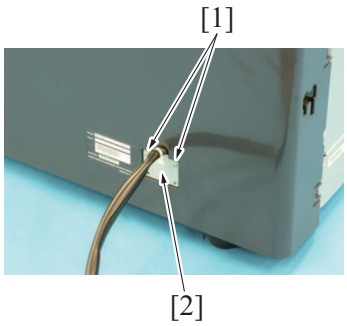


3. Loosen five screws [1] and remove the front cover [2].

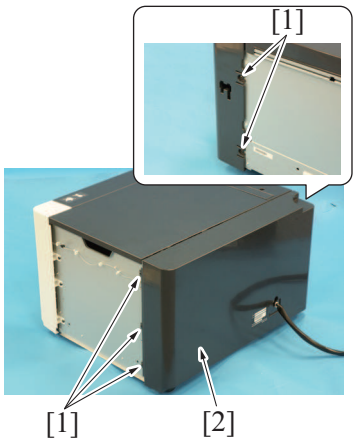
4. To reinstall, reverse the order of removal.

8.9.3 Rear cover (LU-207)

1. Remove the right cover.
G.8.9.1 Right cover (LU-207)



2. Remove two screws [1] and remove the plate [2].

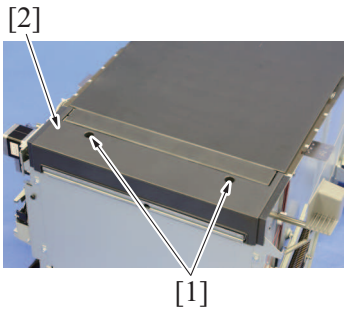


3. Loosen five screws [1] and remove the rear cover [2].

4. To reinstall, reverse the order of removal.

8.9.4 Feed cover (LU-207)

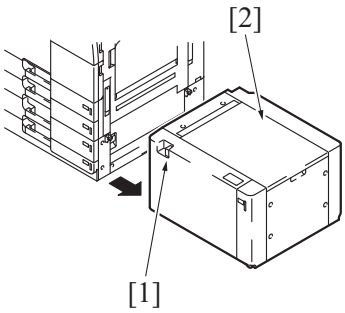
1. Remove the right cover.
   G.8.9.1 Right cover (LU-207)
2. Remove the front cover.
   G.8.9.2 Front cover (LU-207)
3. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)



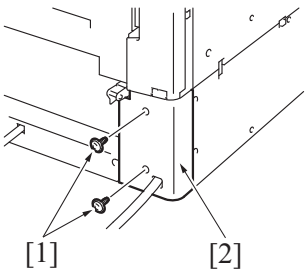
4. Remove two screws [1] and remove the feed cover [2].

5. To reinstall, reverse the order of removal.

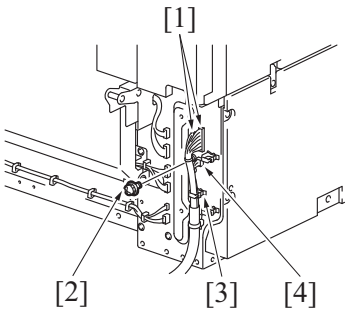
8.9.5 Large capacity unit (LU-207)



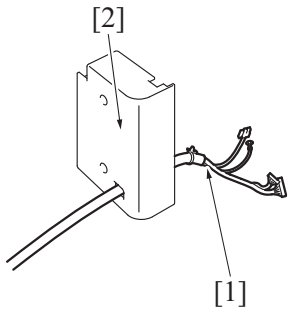
1. Slide the large capacity unit [2] while pressing on the lever [1], and remove from the main body.



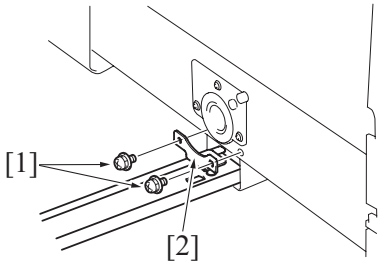
2. Remove two screws [1] and remove the rear right cover [2] of the paper feed cabinet.



3. Disconnect two connectors [1], remove the screw [2] on the earth wire and the cord clamp [3].
   NOTE
   - **When the optional transformer kit TK-101 is installed, disconnect the connector [4].**



4. Remove the harness [1] from the rear right cover [2] of the paper feed cabinet.

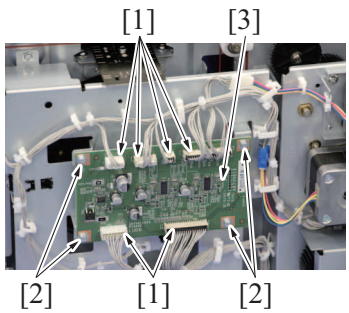


5. Remove two screws [1] and remove the mounting plate [2].

6. To reinstall, reverse the order of removal.

8.9.6 LU drive board (LUDB) (LU-207)

1. Remove the right cover.
   G.8.9.1 Right cover (LU-207)
2. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)

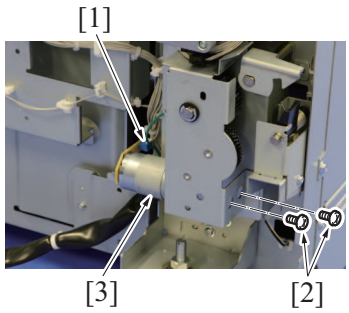


3. Disconnect six connectors [1].
4. Remove four screws [2] and remove the LU drive board [3].

5. To reinstall, reverse the order of removal.

8.9.7 LU lift-up motor (M1) (LU-207)

1. Remove the right cover.
   G.8.9.1 Right cover (LU-207)
2. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)

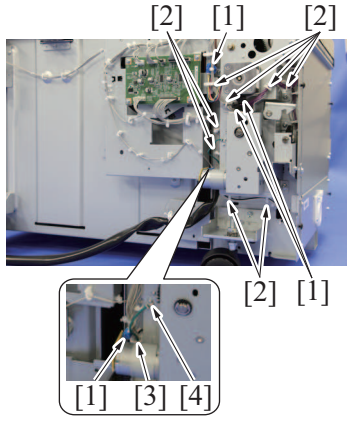


3. Disconnect the connector [1], remove two screws [2] and remove the LU lift-up motor [3].

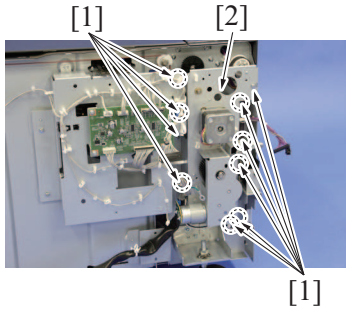
4. To reinstall, reverse the order of removal.

8.9.8 LU paper feed motor (M2) (LU-207)

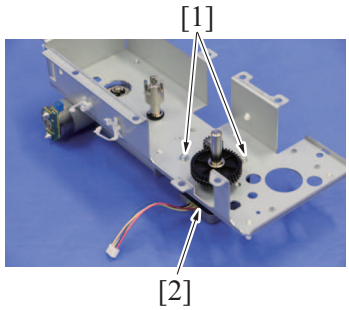
1. Remove the right cover.
   G.8.9.1 Right cover (LU-207)
2. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)
3. Remove the LU transport motor.
   G.8.9.9 LU transport motor (M3) (LU-207)



4. Disconnect four connectors [1].
5. Remove the harness from eight harness guides [2], and remove the cord clamp [3].
6. Remove the screw [4] and disconnect the ground wire.



7. Remove 10 screws [1] and remove the drive assy [2].

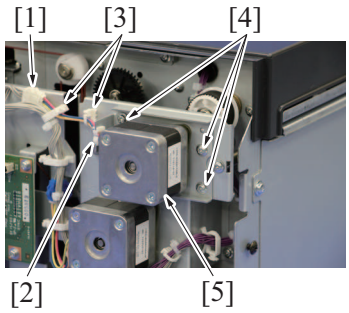


8. Remove two screws [1] and remove the LU paper feed motor [2].

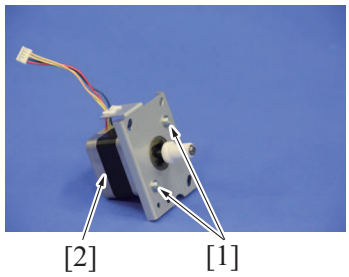
9. To reinstall, reverse the order of removal.

8.9.9 LU transport motor (M3) (LU-207)

1. Remove the right cover.
   G.8.9.1 Right cover (LU-207)
2. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)



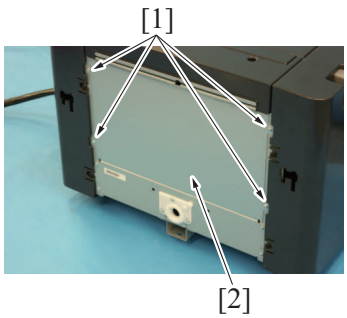
3. Disconnect the connector [1] and remove the harness from the edge cover [2] and two wire saddles [3].
4. Remove three screws [4] and remove the LU transport motor assy [5].



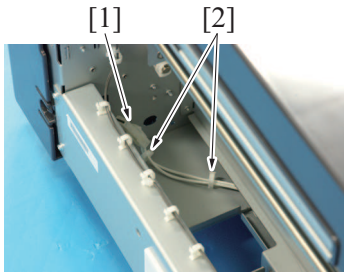
5. Remove two screws [1], and remove the LU transport motor [2].

6. To reinstall, reverse the order of removal.

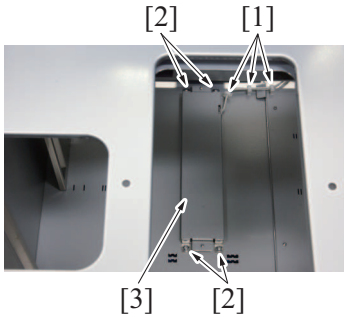
8.9.10 Dehumidification heater (DH) (LU-207)



1. Remove four screws [1] and remove the left cover [2].



2. Disconnect the connector [1].
3. Remove the harness from two wire saddles [2].



4. Remove the harness from three wire saddles [1].
5. Remove four screws [2] and remove the dehumidification heater [3].

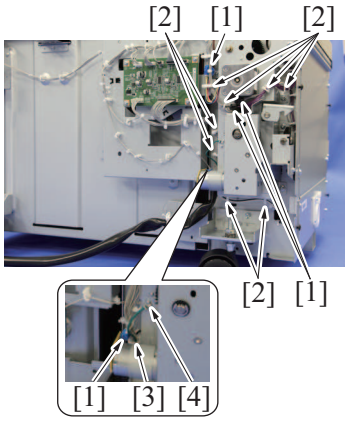
6. To reinstall, reverse the order of removal.

8.9.11 Lift wire (LU-207)

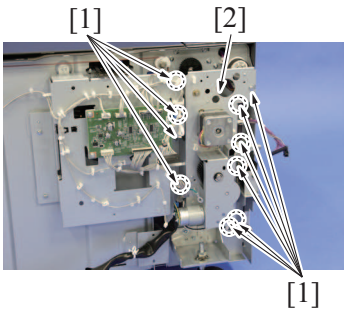
(1) Removal

1. Remove the right cover.
G.8.9.1 Right cover (LU-207)

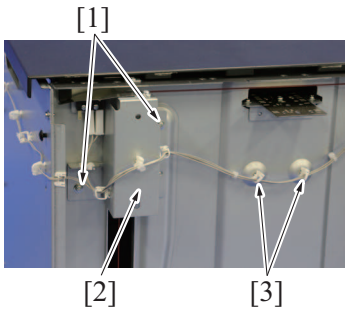
2. Remove the front cover.
   G.8.9.2 Front cover (LU-207)
3. Remove the rear cover.
   G.8.9.3 Rear cover (LU-207)
4. Remove the LU transport motor.
   G.8.9.9 LU transport motor (M3) (LU-207)



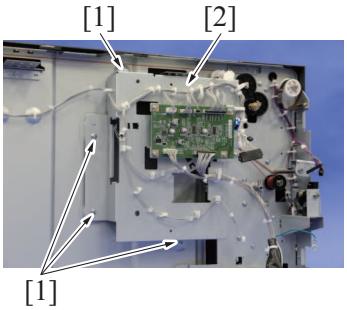
5. Disconnect four connectors [1].
6. Remove the harness from eight wire saddles [2], and remove the cord clamp [3].
7. Remove the screw [4] and disconnect the ground wire.



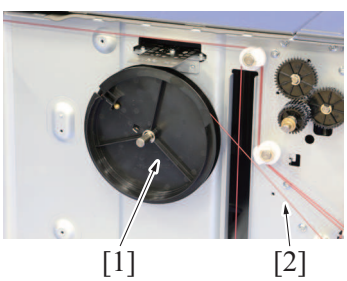
8. Remove 10 screws [1] and remove the drive assy [2].



9. Remove two screws [1], and remove the metal plate [2].
10. Remove the harness from two wire saddles [3].

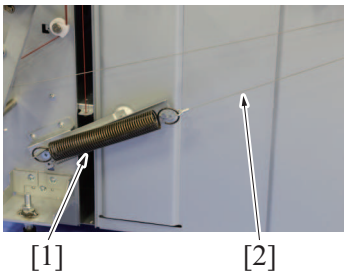


11. Remove four screws [1], and remove the LU drive board assy [2].

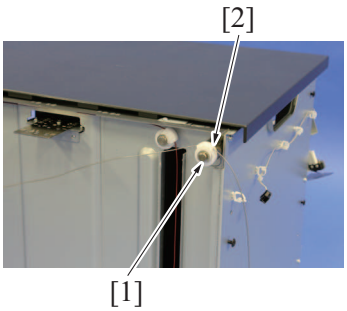


12. Remove the lift wire/L [2] from the rotation plate [1].

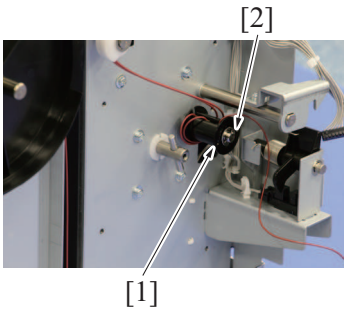
13. Remove the auxiliary wire [2] from the spring [1] on the front side.



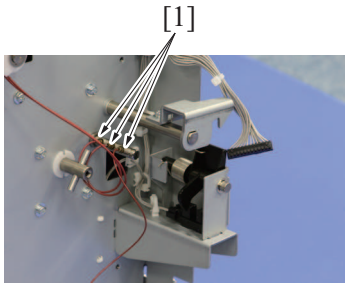
14. Remove the E-ring [1] on the front side to remove the wire holding jig [2].



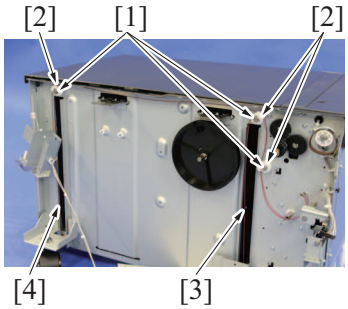
15. Remove the E-ring [2] on the rear side to remove the driving pulley [1].



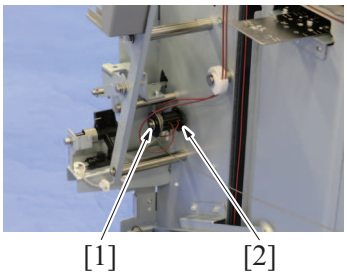
16. Pull out three lift wires [1].



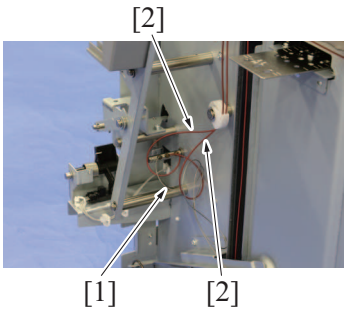
17. Remove three E-rings [1] and three wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].



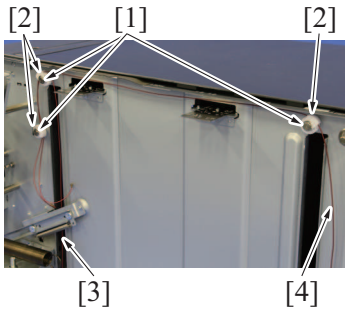
18. Remove the E-ring [1] on the front side to remove the driving pulley [2].



19. Pull out the auxiliary wire [1] and two lift wires [2].

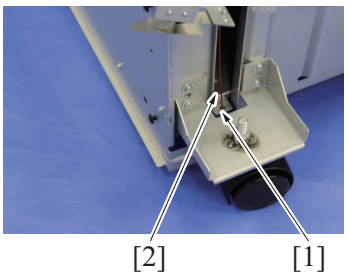


20. Remove three E-rings [1] and three wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].

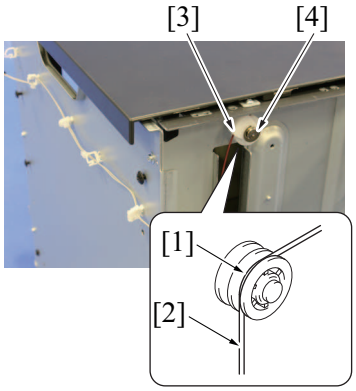


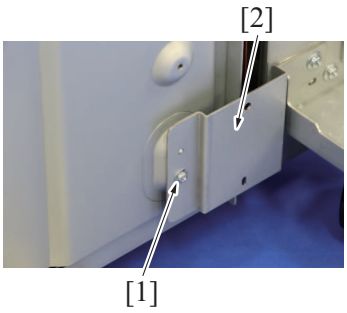
(2) Mounting

1. Insert the lift wire/L [2] to the left hole [1] on the rear face.

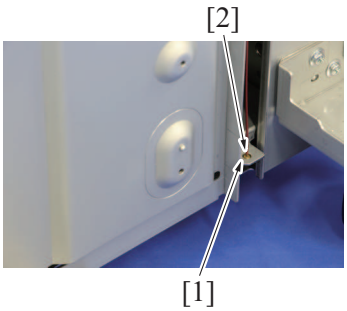


2. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and fix it with the wire holding jig [3] and the E-ring [4].

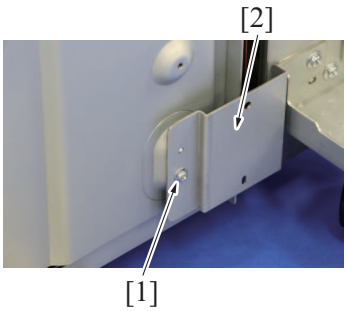




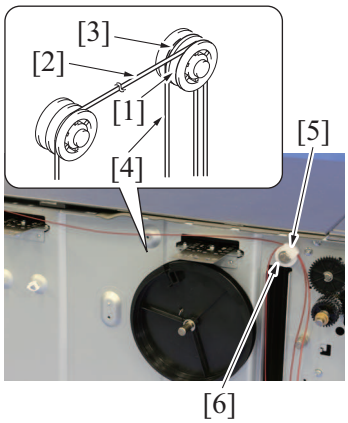
3. Remove the screw [1], and remove the plate [2].



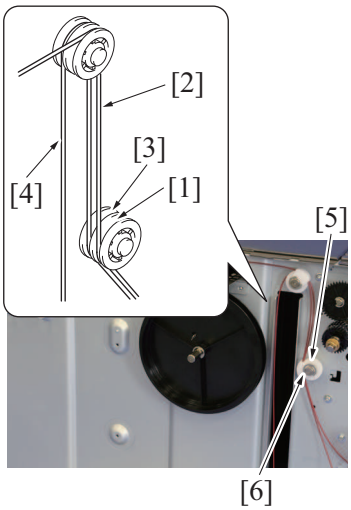
4. Insert the lift wire/S [2] to the right hole [1] on the rear face.



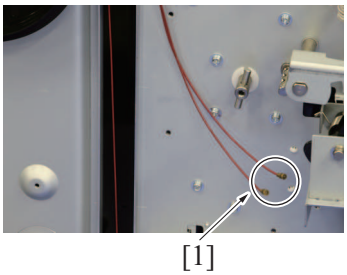
5. Install the board [2] with the screw [1].



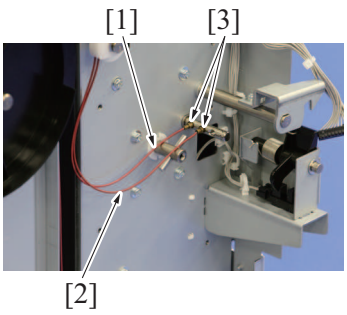
6. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].



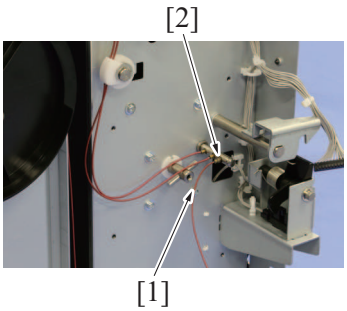
7. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].



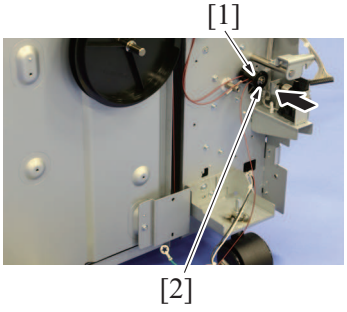
8. **NOTE**
   - **It is correct when the tip of the wire [1] is the same length.**



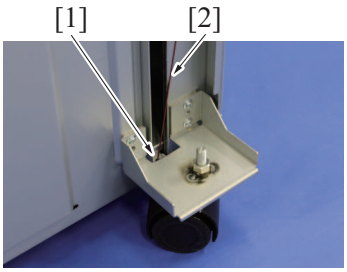
9. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].



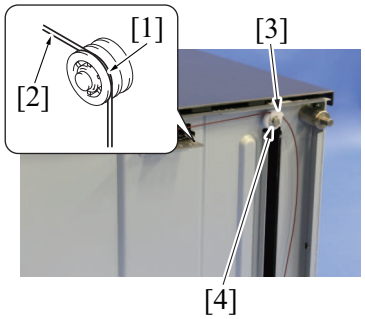
10. Lift the edge of the lift wire/L [1] and set it in the hole on the shaft [2].



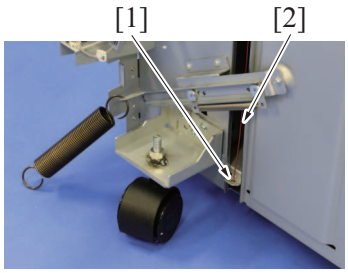
11. Mount the driving pulley [1] and secure it with the E-ring [2].



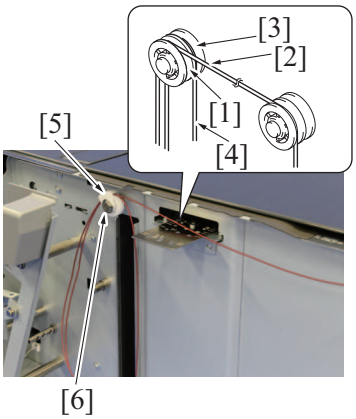
12. Insert the lift wire/L [2] to the right hole [1] on the front face.



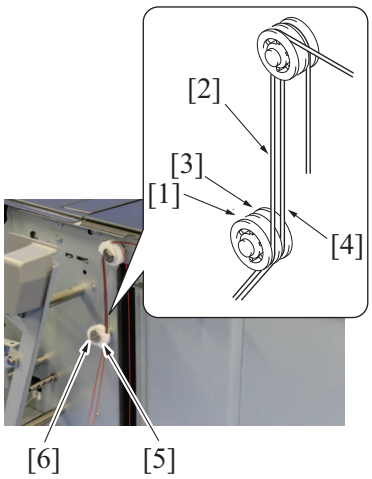
13. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and fix it with the wire holding jig [3] and the E-ring [4].



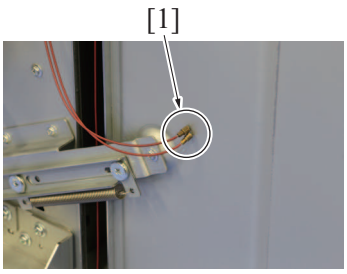
14. Insert the lift wire/S [2] to the left hole [1] on the front face.



15. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].

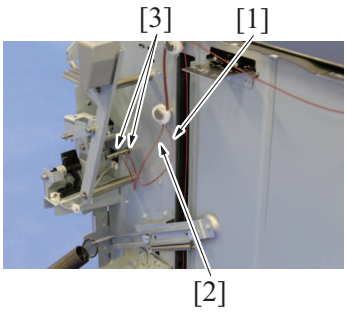


16. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].

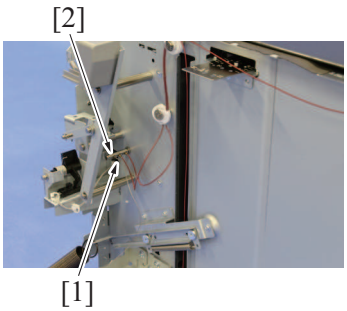


17. **NOTE**

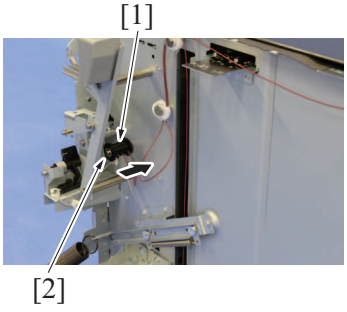
- **It is correct when the tip of the wire [1] is the same length.**



18. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].

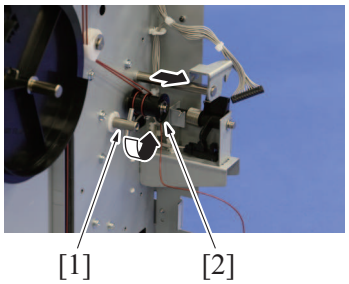


19. Take the end of the auxiliary wire [1] and set it in the hole in the shaft [2].

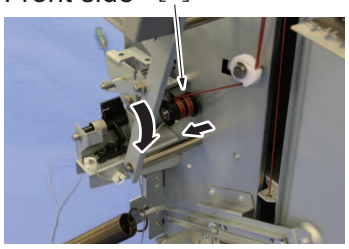


20. Mount the driving pulley [1] and secure it with the E-ring [2].

Rear side



Front side [2]

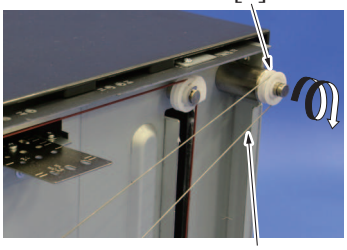


21. Wind the wire to the driving pulley [2] by rotating the lift up shaft [1] (counterclockwise when seen from rear) until the tray assy has risen to the upper end.

NOTE

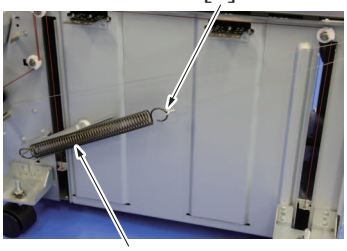
- **Wind the wire to the direction shown by the arrow.**

[2]



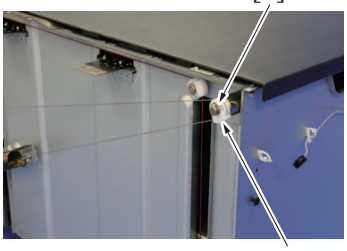
22. Once the wire is wound until the tray assy is at the upper end, wind the auxiliary wire [2] once in a clockwise direction to the wire pulley [1] in front.

[2]

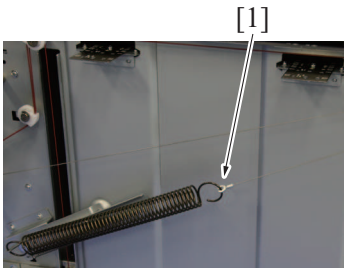


23. Set the auxiliary wire [1] in the front to the hook of the slide spring [2].

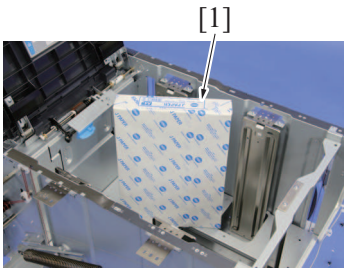
[2]



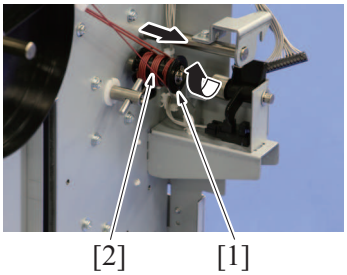
24. Mount the wire holding jig [1] and secure it with the E-ring [2].



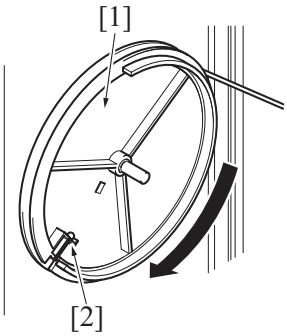
25. **NOTE**
    - **Check to make sure that the wire hook [1] is at the position shown on the picture when the tray assy is at the lower end.**



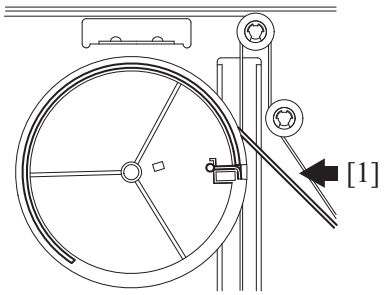
26. Place a weight such as a package of paper, etc. [1] to move the tray assy down to the lower end.



27. Wrap the lift wire/L [2] six times clockwise on the driving pulley [1] at the rear.



28. Turn the rotation plate [1] one and a half times clockwise from the position where the plate holds the tension, to set the lift wire/L [2].

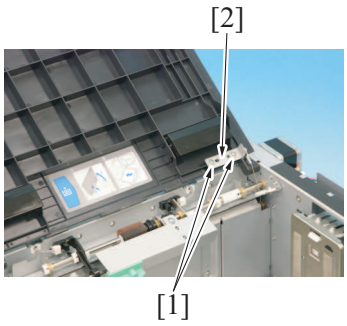


29. **NOTE**
    - **Make sure that the tray assy is at the lower limit and the hire hook section of the rotation plate [1] is near the position indicated by the arrow in the figure.**

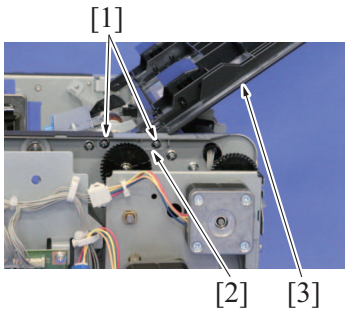
8.10 Disassembly/reassembly procedure (LU-302)

8.10.1 Upper door (LU-302)

1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)
2. Remove the front cover.
   G.8.10.3 Front cover (LU-302)
3. Remove the rear cover.
   G.8.10.4 Rear cover (LU-302)
4. Remove the feed cover.
   G.8.10.5 Feed cover (LU-302)
5. Open the upper door.



6. Remove two screws [1] and remove the fixed sheet metal [2].

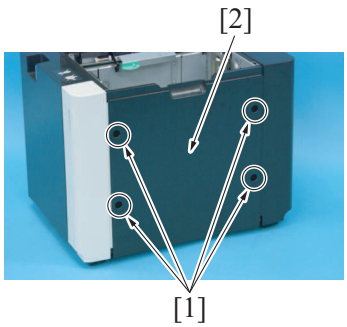


7. Remove two screws [1], the sheet metal [2] and remove the upper door [3].

8. To reinstall, reverse the order of removal.

8.10.2 Right cover (LU-302)

1. Open the upper door.

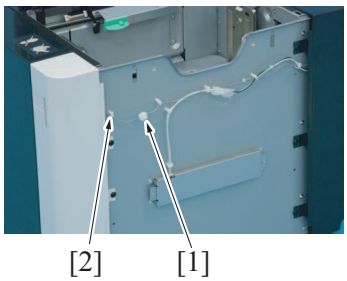


2. Remove four screws [1] and remove the right cover [2].

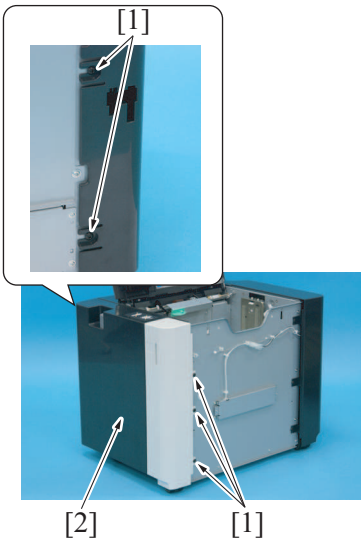
3. To reinstall, reverse the order of removal.

8.10.3 Front cover (LU-302)

1. Remove the right cover.
G.8.10.2 Right cover (LU-302)



2. Disconnect the connector [1], and remove the harness from the wire saddle [2].

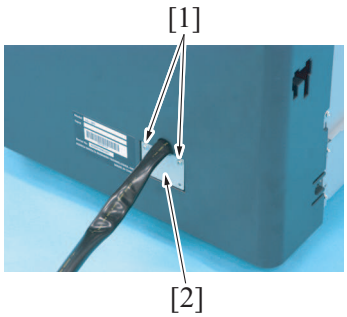


3. Loosen five screws [1] and remove the front cover [2].

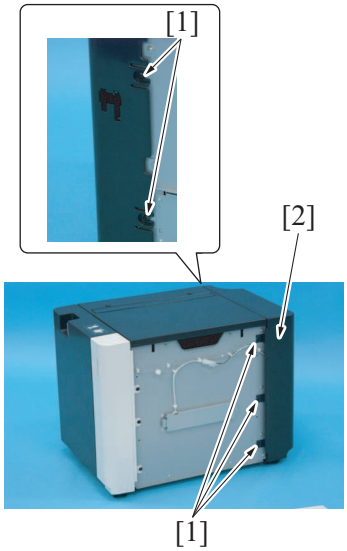
4. To reinstall, reverse the order of removal.

8.10.4 Rear cover (LU-302)

1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)



2. Remove two screws [1] and remove the plate [2].

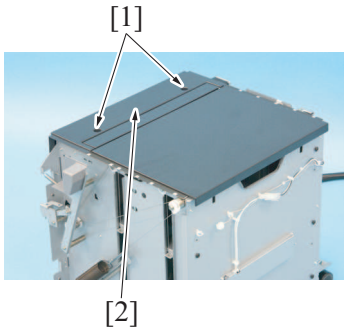


3. Loosen five screws [1] and remove the rear cover [2].

4. To reinstall, reverse the order of removal.

8.10.5 Feed cover (LU-302)

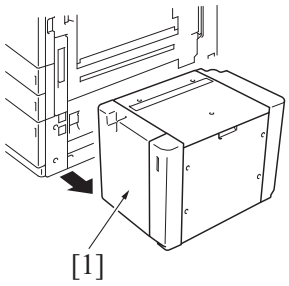
1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)
2. Remove the front cover.
   G.8.10.3 Front cover (LU-302)
3. Remove the rear cover.
   G.8.10.4 Rear cover (LU-302)



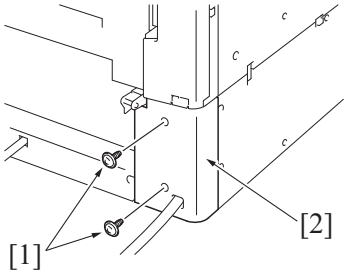
4. Remove two screws [1] and remove the feed cover [2].

5. To reinstall, reverse the order of removal.

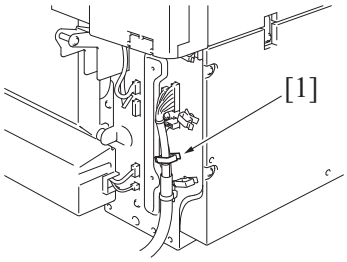
8.10.6 Large capacity unit (LU-302)



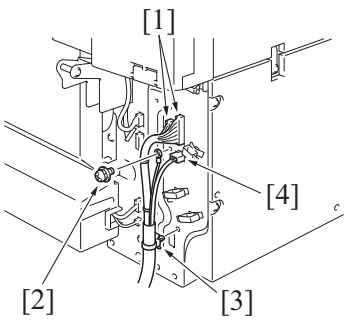
1. Remove the large capacity unit [1] from the main body.



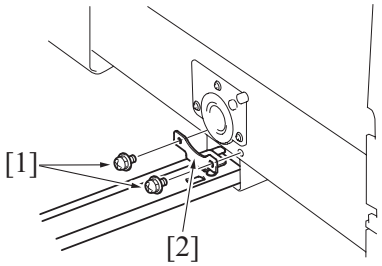
2. Remove the two screws [1], and remove the cover [2].



3. Remove the harness from the wire saddle [1].



4. Disconnect two connector [1], the screw on the earth wire [2], and the cord clamp [3].
NOTE
- **When the optional transformer kit TK-101 is installed, disconnect the connector [4].**

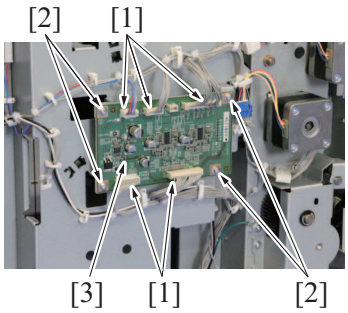


5. Remove two screws [1] and remove the mounting plate [2].

6. To reinstall, reverse the order of removal.

8.10.7 LU drive board (LUDB) (LU-302)

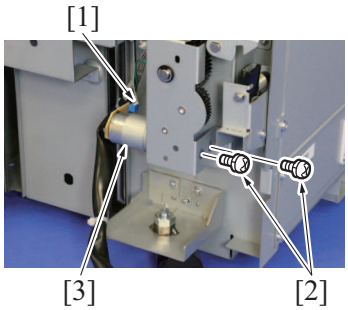
1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)
2. Remove the rear cover.
   G.8.10.4 Rear cover (LU-302)



3. Disconnect five connectors [1], remove four screws [2] and remove the LU drive board [3].

8.10.8 LU lift-up motor (M1) (LU-302)

1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)
2. Remove the rear cover.
   G.8.10.4 Rear cover (LU-302)

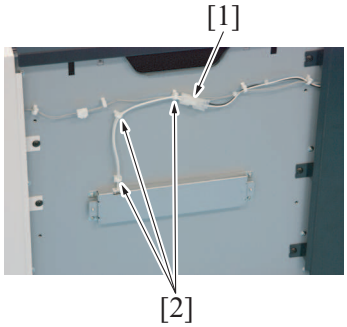


3. Disconnect the connector [1], remove two screws [2] and remove the LU lift-up motor [3].

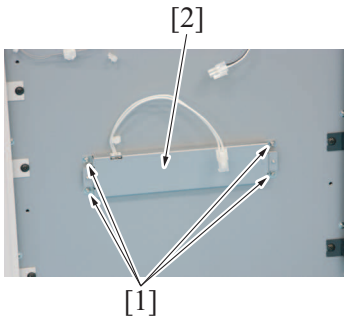
4. To reinstall, reverse the order of removal.

8.10.9 Dehumidification heater (DH) (LU-302)

1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)



2. Remove the harness from the connector [1] and three wire saddles [2].

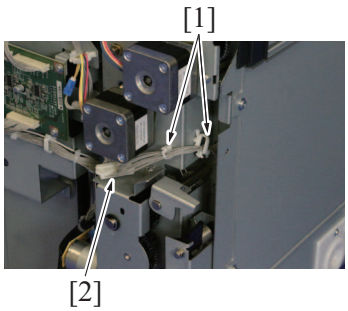


3. Remove four screws [1] and remove the dehumidification heater [2].

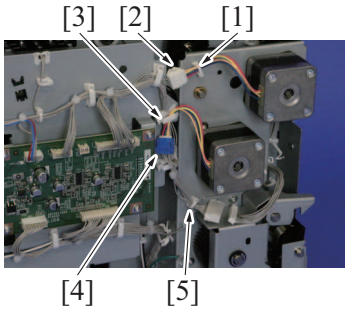
8.10.10 Lift wire (LU-302)

(1) Removal

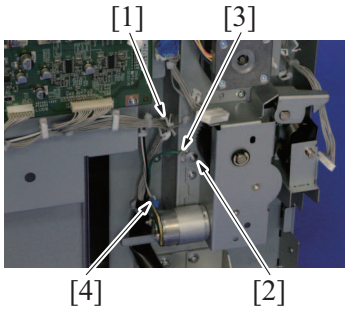
1. Remove the right cover.
   G.8.10.2 Right cover (LU-302)
2. Remove the front cover.
   G.8.10.3 Front cover (LU-302)
3. Remove the rear cover.
   G.8.10.4 Rear cover (LU-302)



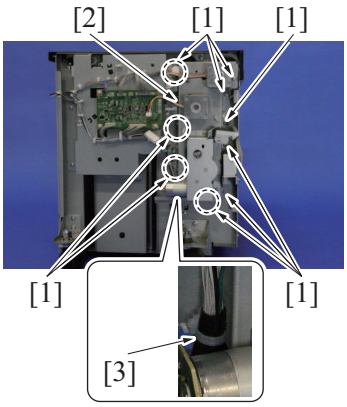
4. Remove the harness from two wire saddles [1], and disconnect the connector [2].



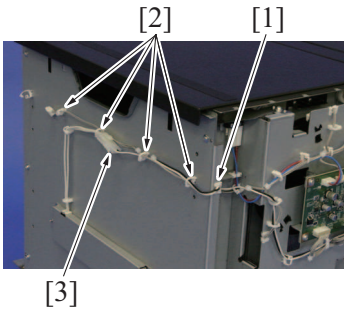
5. Remove the harness from the wire saddle [1], and disconnect the connector [2].
6. Remove the harness from the wire saddle [3], and disconnect the connector [4].
7. Remove the harness from the wire saddle [5].



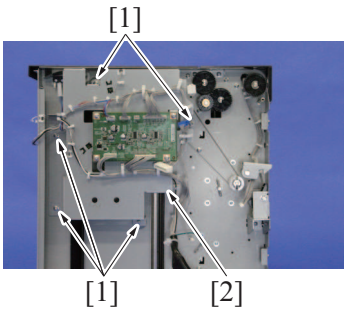
8. Remove the harness from the wire saddle [1].
9. Remove the screw [2], and remove the ground terminal [3].
10. Disconnect the connector [4].



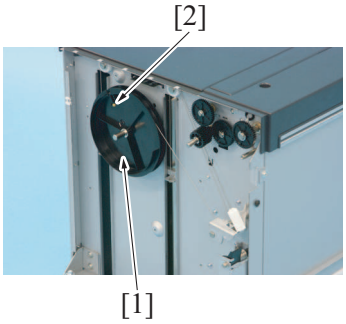
11. Remove nine screws [1], and remove the motor assy [2].
12. Remove the cable tie [3] from the motor assy [2].



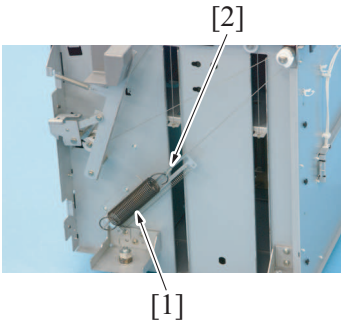
13. Remove the harness from the edge cover [1] and four wire saddles [2].
14. Disconnect the connector [3].



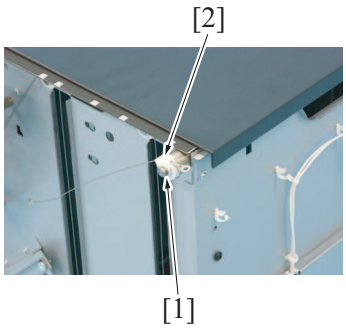
15. Remove five screws [1], and remove the drive board assy [2].



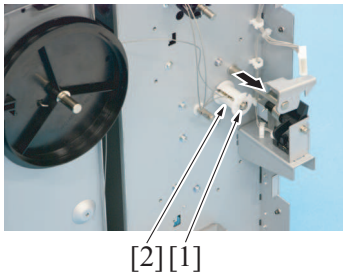
16. Remove the lift wire/L [2] from the rotation plate [1].



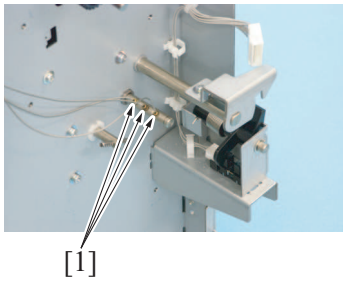
17. Remove the auxiliary wire [2] from the spring [1] on the front side.



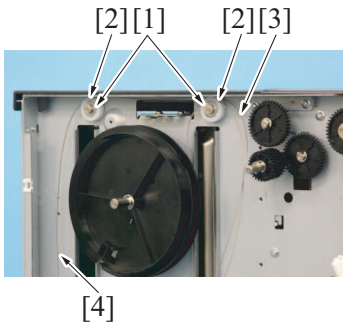
18. Remove the E-ring [1] on the front side to remove the wire holding jig [2].



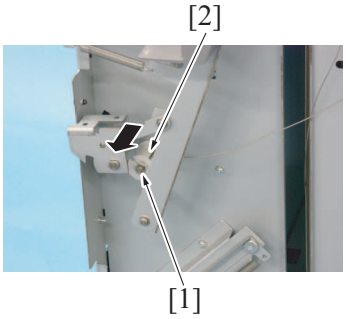
19. Remove the E-ring [1] on the rear side to remove the driving pulley [2].



20. Pull out three lift wires [1].

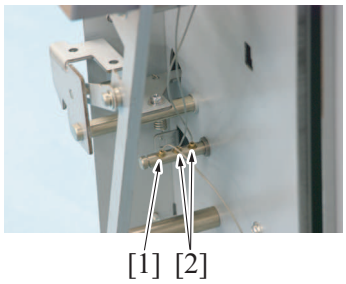


21. Remove two E-rings [1] and two wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].

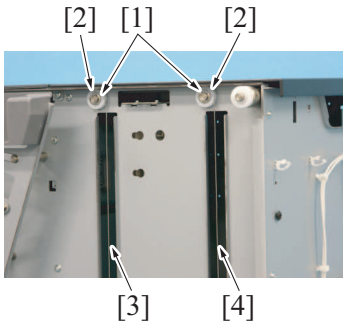


22. Remove the E-ring [1] on the front side to remove the driving pulley [2].

23. Pull out the auxiliary wire [1] and two lift wires [2].

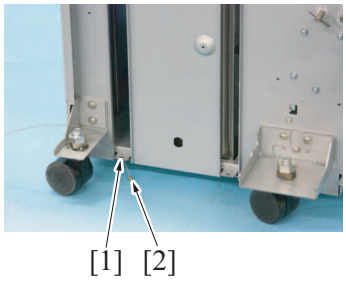


24. Remove two E-rings [1] and two wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].

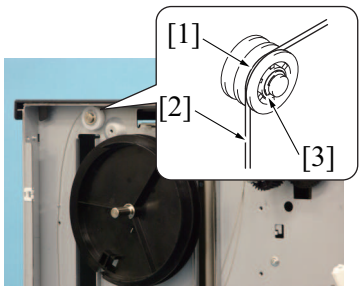


(2) Mounting

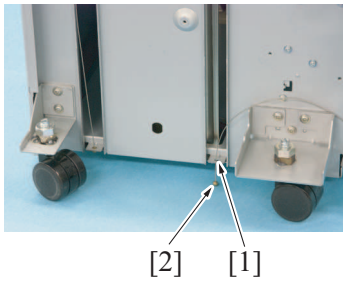
1. Insert the lift wire/L [2] to the left hole [1] on the rear face.

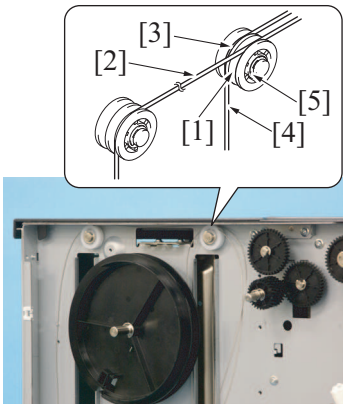


2. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and secure it with the E-ring [3].

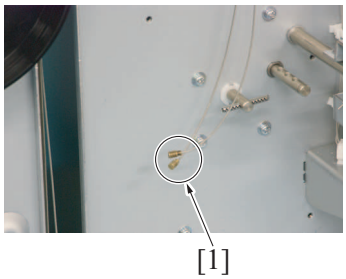


3. Insert the lift wire/S [2] to the right hole [1] on the rear face.

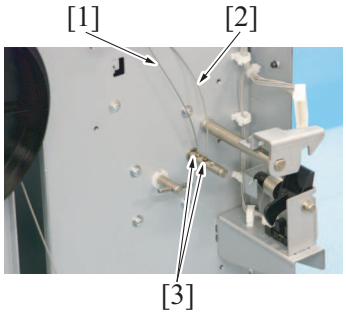




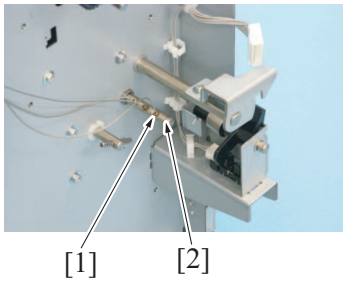
4. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and set the lift wire/S [4] to the far side groove [3] and secure them with the E-ring [5].



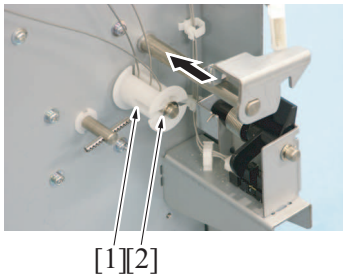
5. **NOTE**
   - **They are properly fixed if both edges of the wire [1] are at the same position.**



6. Take the edges of the lift wire/S [1] and the lift wire/L [2] and set them to the holes on the shaft [3].

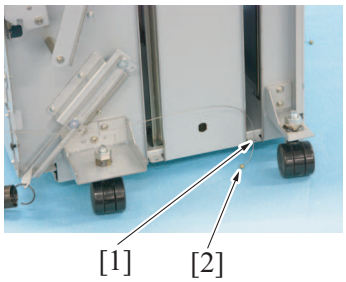


7. Take the edge of the lift wire/L [1] and set it to the hole on the shaft [2].

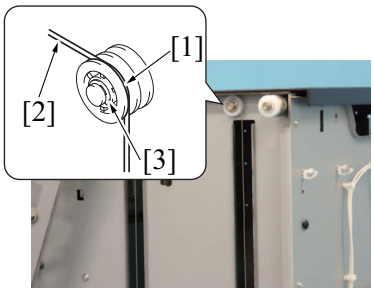


8. Mount the driving pulley [1] and secure it with the E-ring [2].

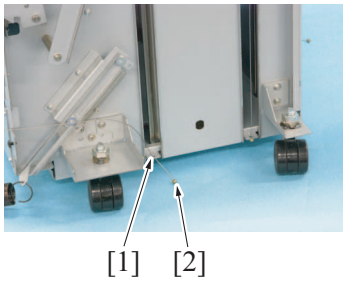
9. Insert the lift wire/L [2] to the right hole [1] on the front face.



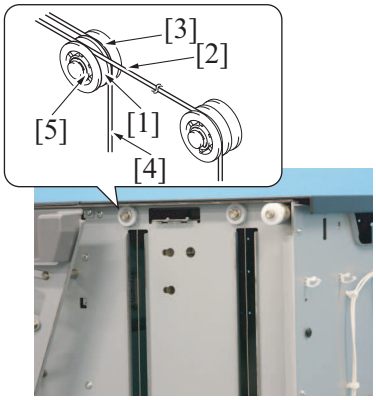
10. Set the lift wire/L [2] to the near side groove [1] on the wire pulley and secure it with the E-ring [3].



11. Insert the lift wire/S [2] to the left hole [1] on the front face.

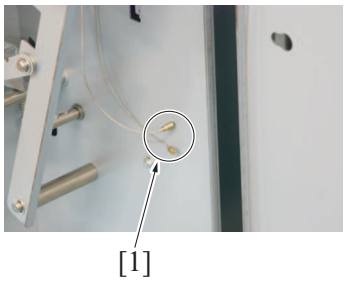


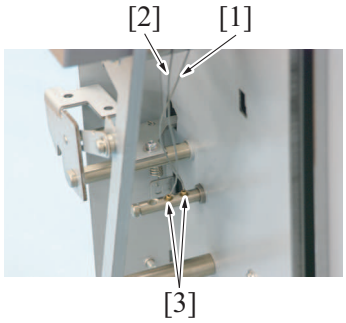
12. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and set the lift wire/S [4] to the far side groove [3] and secure them with the E-ring [5].



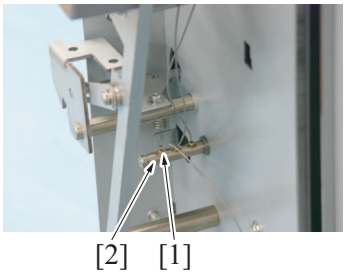
13. **NOTE**

- **They are properly fixed if both edges of the wire [1] are placed at the same position.**

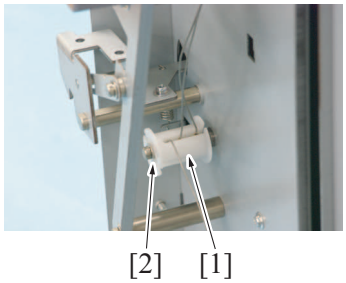




14. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].

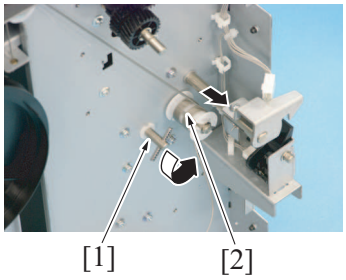


15. Take the edge of the auxiliary wire [1] and set it to the hole on the shaft [2].

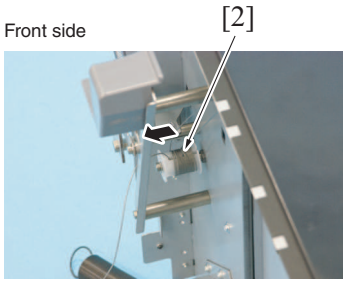


16. Mount the driving pulley [1] and secure it with the E-ring [2].

Rear side



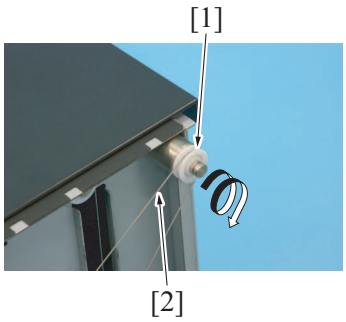
Front side



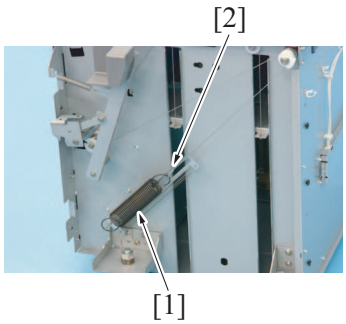
17. Wind the wire to the pulley [2] as rotating the lift up shaft [1] on the rear face counterclockwise and moving the tray assy to the upper end.

NOTE

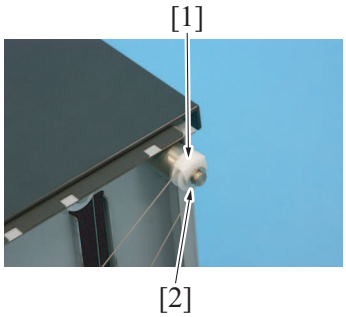
- **Wind the wire to the direction shown by the arrow.**



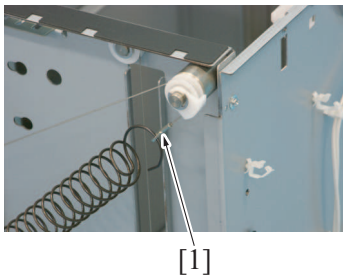
18. When the wire is wound with the tray assy being at the up end, wind the auxiliary wire [2] to the wire pulley [1] clockwise once.



19. Set the auxiliary wire [1] on the front face to the hook of the slide spring [2].

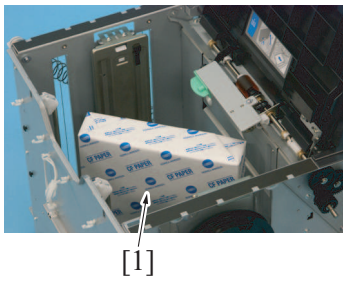


20. Mount the wire holding jig [1] and secure it with the E-ring [2].



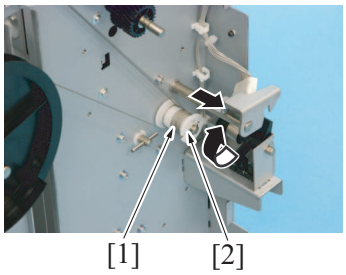
21. **NOTE**

- **Check to make sure that the wire hook [1] is at the position shown on the picture when the tray assy is at the lower end.**

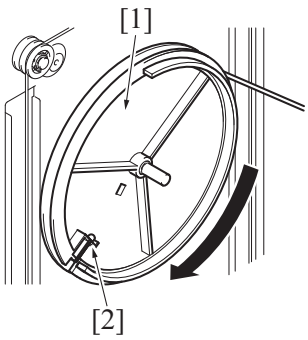


22. Place a weight such as a package of paper, etc. [1] to move the tray assy down to the lower end.

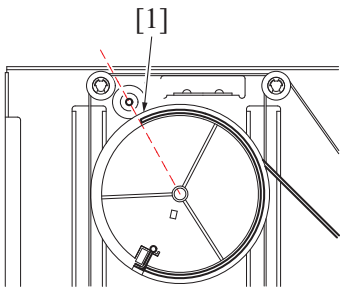
23. Wrap the lift wire/L [2] on the driving pulley [1] on the rear face clockwise seven times.



24. Turn the rotation plate [1] one and a half times clockwise from the position where the plate holds the tension, to set the lift wire/L [2].



25. **NOTE**
    - **The rib edge [1] of the rotation plate must be around the dotted lines as shown in the picture when the tray assy is at the lowest level.**

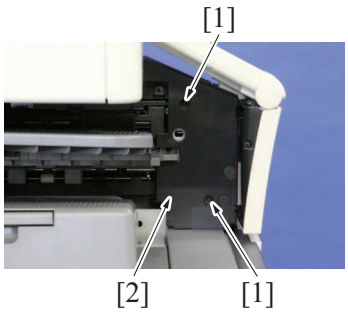


26. For the rest of the procedure for mounting, take the reverse steps from disassembling.

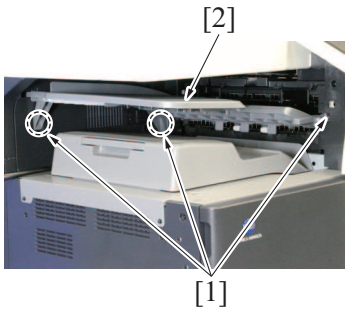
8.11 Disassembly/reassembly procedure (JS-506)

8.11.1 Exit tray 1 (JS-506)

1. Remove two screws [1], and remove the control panel left cover/1 [2].



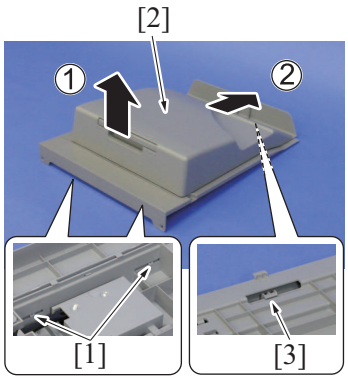
2. Remove three screws [1], and remove the exit tray [2].



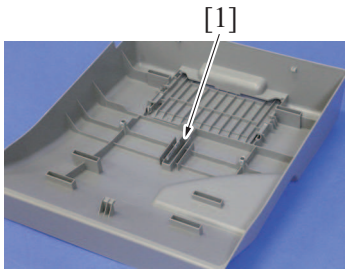
3. To reinstall, reverse the order of removal.

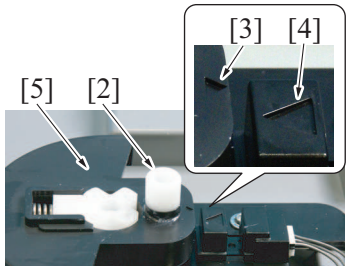
8.11.2 Exit tray 2 (JS-506)

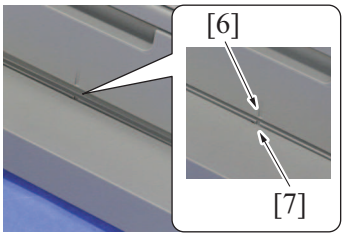
1. Remove the job separator.
   G.8.11.3 Job separator (JS-506)



2. Remove two claws [1] and move the exit tray 2 [2] upward.
3. Slide the exit tray 2 [2] to unlock the claws [3], and remove the exit tray 2 [2].



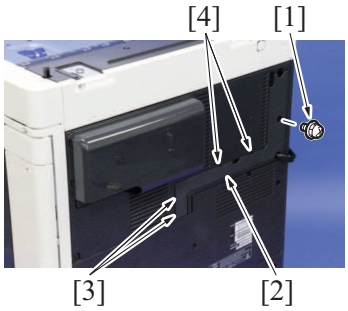




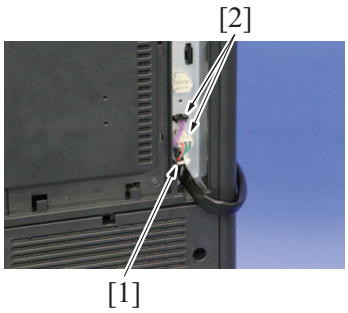
4. **NOTE**
   - **When mounting the exit tray 2, mount the exit tray 2 in the following step so that the shaft [2] of the actuator can be set to the groove [1] of the exit tray 2.**
   - **Adjust the actuator [5] so that the positioning marks [3] and [4] will be aligned.**
   - **Press the exit tray 2 down with the positioning mark [6] for the exit tray 2 and the positioning mark [7] for the shift unit being aligned.**

5. To reinstall, reverse the order of removal.

8.11.3 Job separator (JS-506)

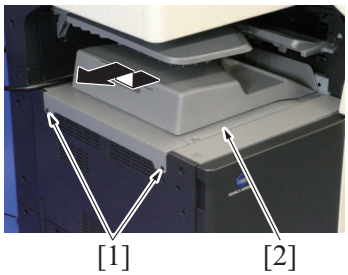


1. Remove the screw [1], and remove the cover [2].
   NOTE
   - **When mounting the cover, insert two claws [3] into the holes on the main unit cover first. Then fit two claws [4] into the holes. Be careful not to pinch the harness.**



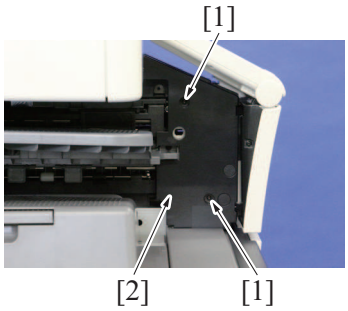
2. Remove the cable tie [1], and disconnect two connectors [2].

3. Remove two screws [1], and remove the job separator [2].

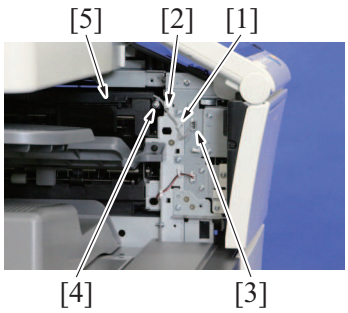


4. To reinstall, reverse the order of removal.

8.11.4 Sensor unit (JS-506)



1. Remove two screws [1], and remove the control panel left cover/1 [2].

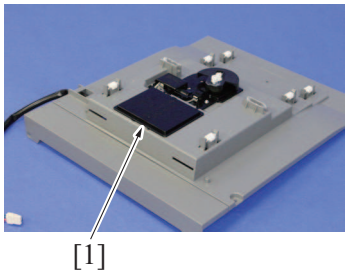


2. Remove the harness from the wire saddle [1] and the edge cover [2].
3. Disconnect the connector [3].
4. Remove the screw [4], and remove the sensor unit [5].

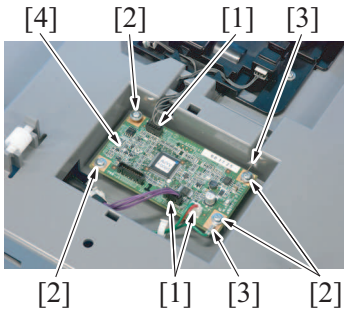
5. To reinstall, reverse the order of removal.

8.11.5 JS control board (JSCB) (JS-506)

1. Remove the job separator.
G.8.11.3 Job separator (JS-506)
2. Remove the exit tray 2.
G.8.11.2 Exit tray 2 (JS-506)



3. Remove the cover [1].

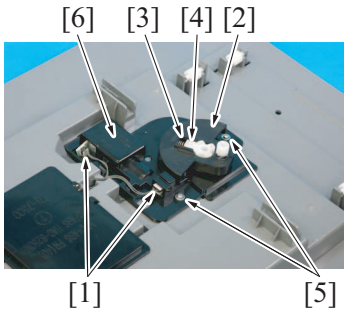


4. Disconnect three connectors [1].
5. Remove four screws [2], and remove two ground terminals [3].
6. Remove the JS control board [4].

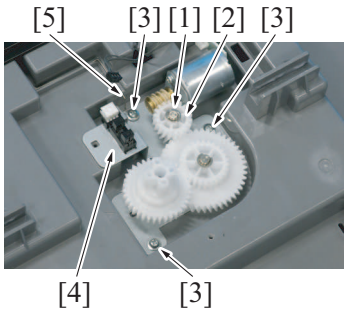
7. To reinstall, reverse the order of removal.

8.11.6 Tray shift motor (M1) (JS-506)

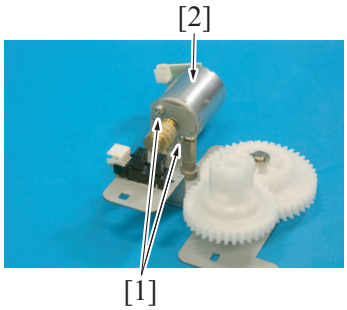
1. Remove the job separator.
G.8.11.3 Job separator (JS-506)
2. Remove the exit tray 2.
G.8.11.2 Exit tray 2 (JS-506)



3. Disconnect two connectors [1].
4. Remove the actuator [2].
NOTE
- **Be careful not to lose the spring [3] and stopper [4].**
5. Remove two screws [5], and remove the cover [6].



6. Remove the E-ring [1], and remove the gear [2].
7. Remove three screws [3], and remove the tray shift motor drive assy [4].
NOTE
- **When mounting the tray shift motor drive assy, place the earth terminal [5] on the plate for the tray shift motor drive assy and tighten the screw.**

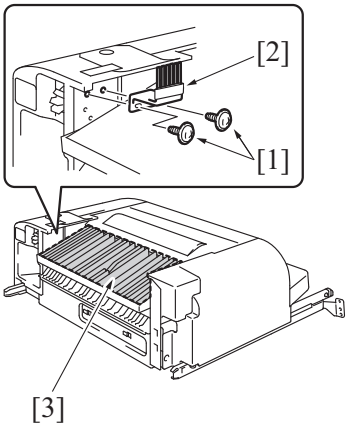


8. Remove two screws [1], and remove the tray shift motor [2].

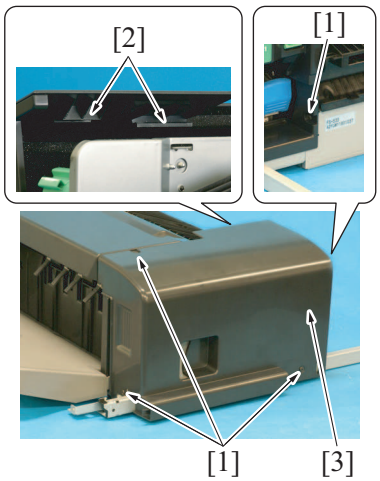
9. To reinstall, reverse the order of removal.

8.12 Disassembly/reassembly procedure (FS-533)

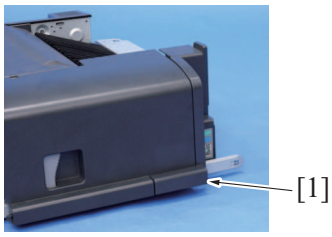
8.12.1 Front cover (FS-533)



1. Remove two screws [1] and remove the antistatic brush [2].
   NOTE
   - **Make sure not to deform the brush by touching it.**
   - **Make sure not to touch the upper surface of the transport unit [3] as it damages the guide plates.**



2. Remove four screws [1] and two tabs [2], and remove the front cover [3].

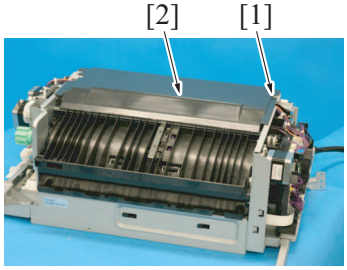


3. **NOTE**
   - **When the punch kit (PK-519) is installed, the cover [1] should be removed.**

4. To reinstall, reverse the order of removal.

8.12.2 Upper cover (FS-533)

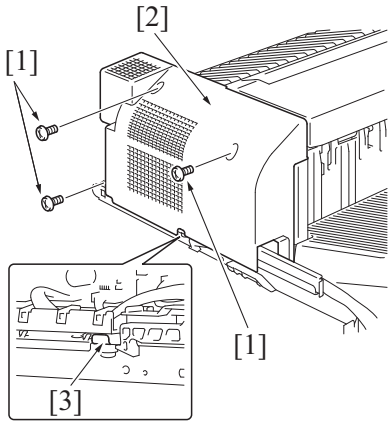
1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)
2. Remove the rear cover.
   G.8.12.3 Rear cover (FS-533)



3. Remove the screw [1], and remove the cover [2].

4. To reinstall, reverse the order of removal.

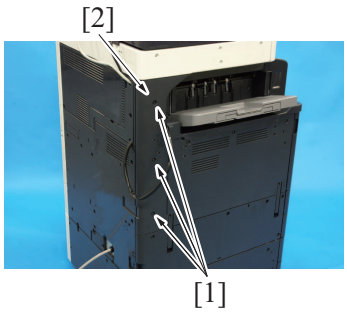
8.12.3 Rear cover (FS-533)



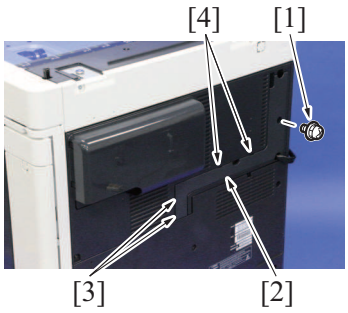
1. Remove three screws [1], and remove the rear cover [2].
NOTE
- **When mounting the rear cover, hook the tab [3] on the plate to the rear cover.**

2. To reinstall, reverse the order of removal.

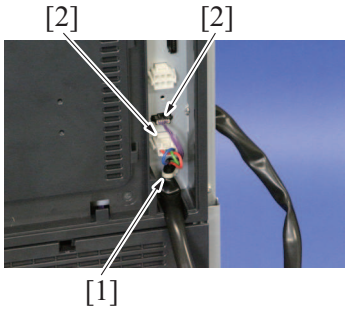
8.12.4 Finisher (FS-533)



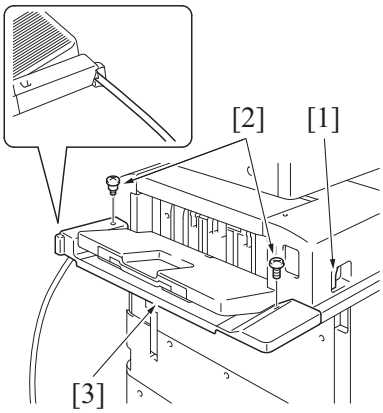
1. Remove three screws [1], and remove the rear left cover [2] of the main body.



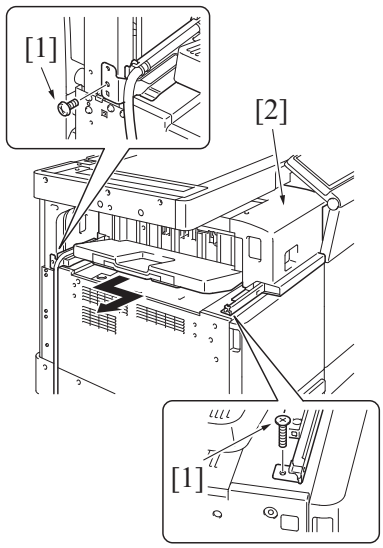
2. Remove the screw [1], and remove the cover [2].
NOTE
- **When mounting the cover, insert two claws [3] into the holes on the main unit cover first. Then fit two claws [4] into the holes.**
- **Be careful not to pinch the harness.**



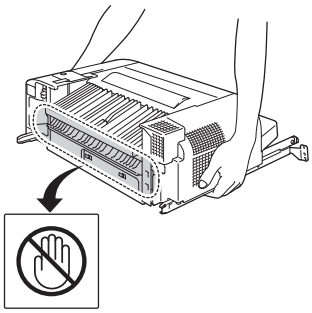
3. Remove the cable tie [1], and disconnect two connectors [2].



4. Slide the finisher by pulling the lever [1].
5. Remove two screws [2], and remove the cover [3].
NOTE
- **When mounting the cover, make the finisher's cable come out from the cover at the position shown in the illustration.**

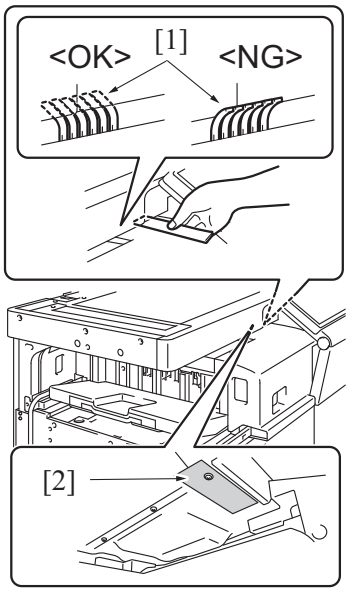


6. Remove two screws [1], and remove the finisher [2] from the main body.



7. **NOTE**
- **When carrying the finisher, be sure to hold the finisher by the sides as shown in the illustration.**

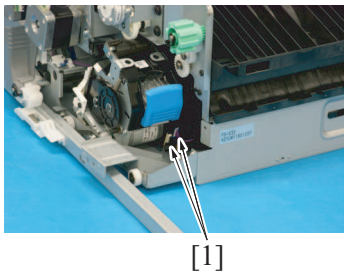
8. To reinstall, reverse the order of removal.



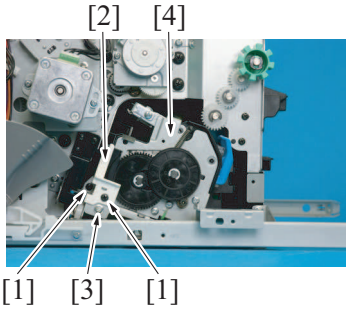
9. **NOTE**
   - **After mounting the finisher to the main body, press the antistatic brush [1] toward the rear using a rule or the like.**
   - **Make sure that brush [1] touches the aluminum sheet [2] affixed to the bottom of the scanner unit.**

8.12.5 Stapler unit (FS-533)

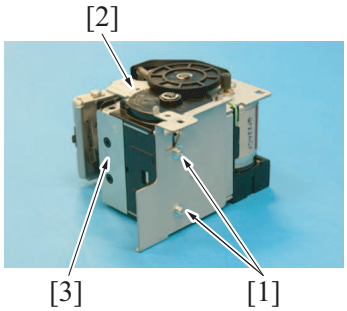
1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)



2. Disconnect two connectors [1].



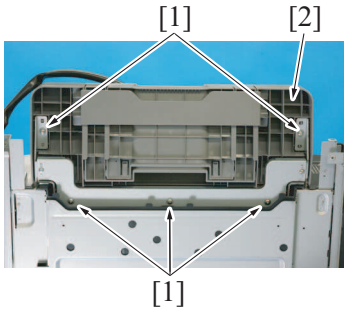
3. Remove two screws [1], and remove the cover [2].
4. Remove the screw [3], and remove the stapler unit assy [4].



5. Remove two screws [1], and remove the stapler unit [2].
   NOTE
   - **When replacing the stapler unit, attach the guide [3] (Parts No.: A2YU PPE9 ##) to the stapler unit.**

6. To reinstall, reverse the order of removal.

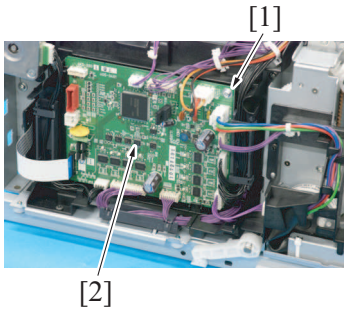
8.12.6 Paper exit tray unit (FS-533)



1. Remove five screws [1], and remove the paper exit tray unit [2].
2. To reinstall, reverse the order of removal.

8.12.7 FS control board (FSCB) (FS-533)

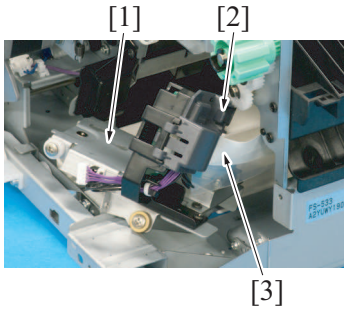
1. Remove the rear cover.
   G.8.12.3 Rear cover (FS-533)



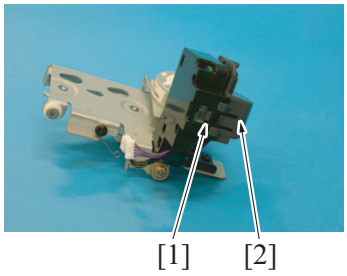
2. Remove all connectors from the board.
3. Remove the screw [1], and remove the FS control board [2].
4. To reinstall, reverse the order of removal.
5. Install the firmware.

8.12.8 Stapler relay board (STREYB) (FS-533)

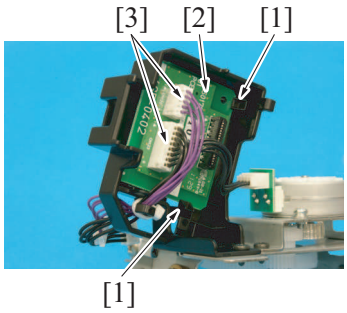
1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)
2. Remove the stapler unit.
   G.8.12.5 Stapler unit (FS-533)



3. Pull out the stapler drive assy [1].
4. Release the lock [2] of the board cover, and remove the flat cable [3].



5. Unhook the tab [1], and remove the board cover [2].

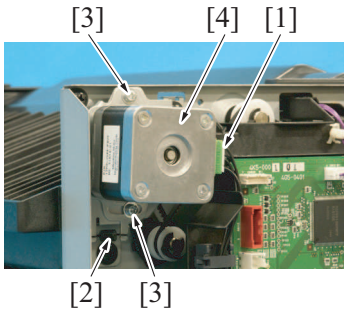


6. Unhook two tabs [1], and remove the stapler relay board [2].
7. Disconnect two connectors [3].

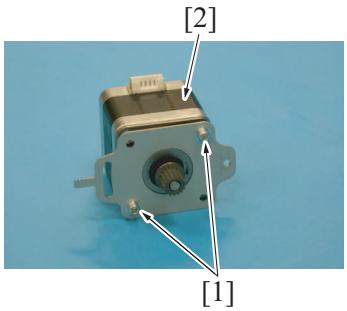
8. To reinstall, reverse the order of removal.

8.12.9 Paper conveyance motor (M101) (FS-533)

1. Remove the rear cover.
G.8.12.3 Rear cover (FS-533)



2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove two screws [3], and remove the paper conveyance motor assy [4].

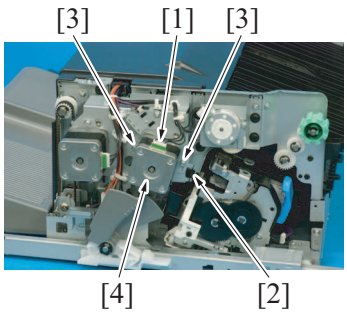


5. Remove two screws [1], and remove the paper conveyance motor [2].

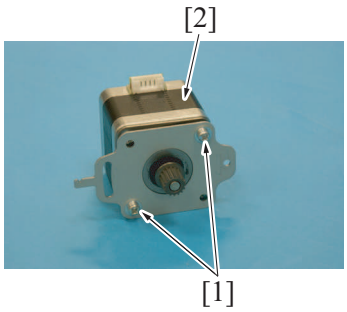
6. To reinstall, reverse the order of removal.

8.12.10 Paper exit motor (M102) (FS-533)

1. Remove the front cover.
G.8.12.1 Front cover (FS-533)



2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove two screws [3], and remove the paper exit motor assy [4].

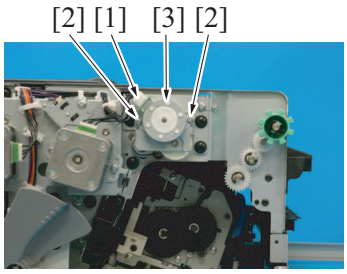


5. Remove two screws [1], and remove the paper exit motor [2].

6. To reinstall, reverse the order of removal.

8.12.11 Alignment roller motor (M103) (FS-533)

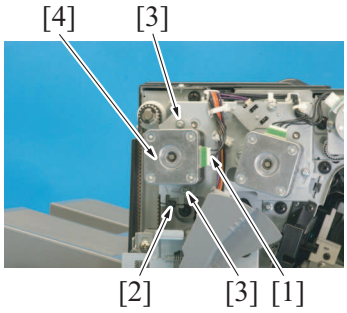
1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)



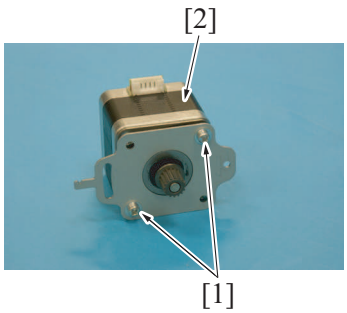
2. Disconnect the connector [1].
3. Remove two screws [2], and remove the alignment roller motor [3].
4. To reinstall, reverse the order of removal.

8.12.12 Exit roller lift up motor (M104) (FS-533)

1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)



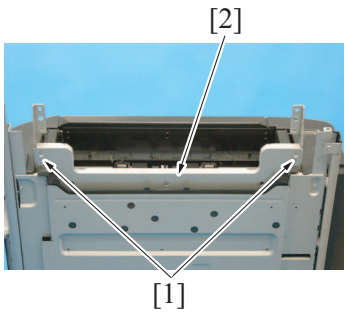
2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove two screws [3], and remove the exit roller lift up motor assy [4].



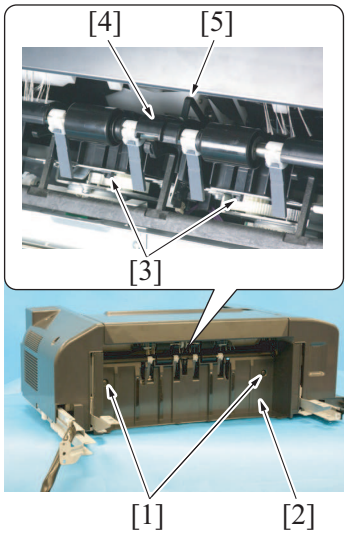
5. Remove two screws [1], and remove the exit roller lift up motor [2].
6. To reinstall, reverse the order of removal.

8.12.13 Alignment motor/F (M105), Alignment motor/R (M106) (FS-533)

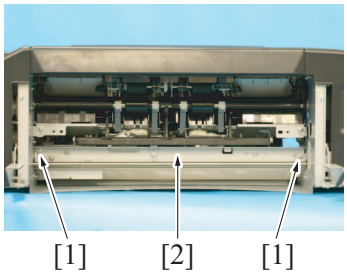
1. Remove the paper exit tray unit.
   G.8.12.6 Paper exit tray unit (FS-533)



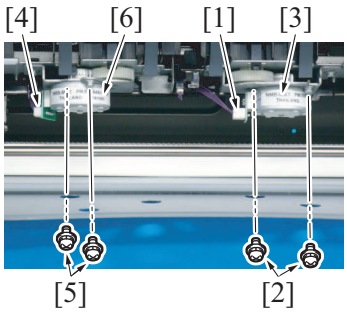
2. Remove two screws [1], and remove the plate [2].



3. Remove two screws [1], and remove the cover [2].
NOTE
- **When removing the cover [2], two claws [3] may come off and the alignment tray [4] may come up. This may cause the alignment tray to contact the actuator [5] and cause malfunction of the actuator.**
- **When mounting the cover [2], make sure two claws [3] are attached to the plate.**



4. Remove two screws [1], and pull out the paper surface detect solenoid assy [2].

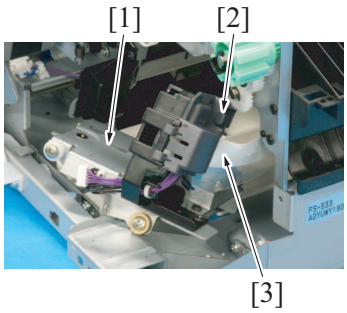


5. Disconnect the connector [1], remove two screws [2], and remove the alignment motor/F [3].
6. Disconnect the connector [4], remove two screws [5], and remove the alignment motor/R [6].

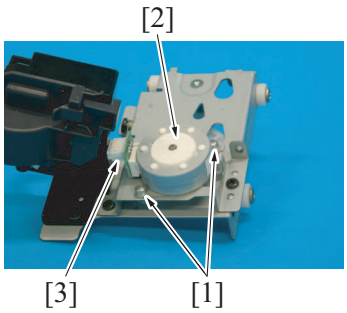
7. To reinstall, reverse the order of removal.

8.12.14 Stapler movement motor (M107) (FS-533)

1. Remove the front cover.
G.8.12.1 Front cover (FS-533)
2. Remove the stapler unit.
G.8.12.5 Stapler unit (FS-533)



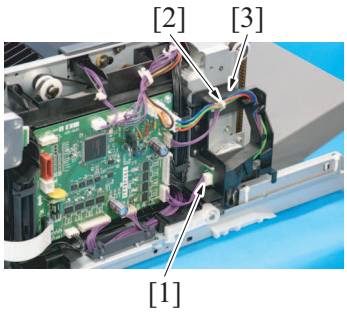
3. Pull out the stapler drive assy [1].
4. Release the lock [2] of the board cover, and remove the flat cable [3].



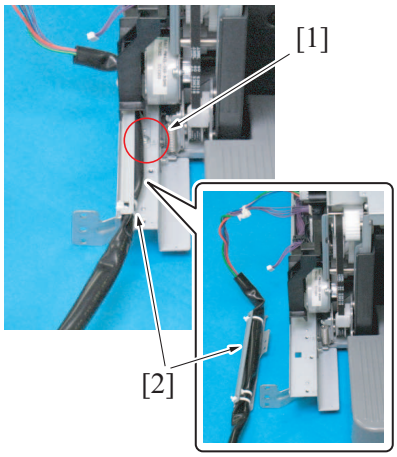
5. Remove two screws [1], and remove the stapler movement motor [2].
6. Disconnect the connector [3].
7. To reinstall, reverse the order of removal.

8.12.15 Tray lift up motor (M109) (FS-533)

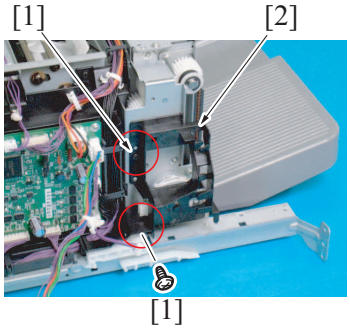
1. Remove the rear cover.
G.8.12.3 Rear cover (FS-533)



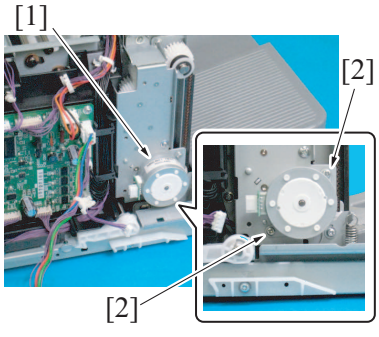
2. Disconnect the connector [1].
3. Remove the harness tie [2] and harness from the harness guide [3].



4. Remove the screw [1], and remove the finisher's cable [2].



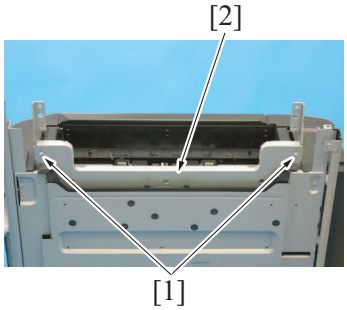
5. Remove two screws [1], and remove the harness guide [2].



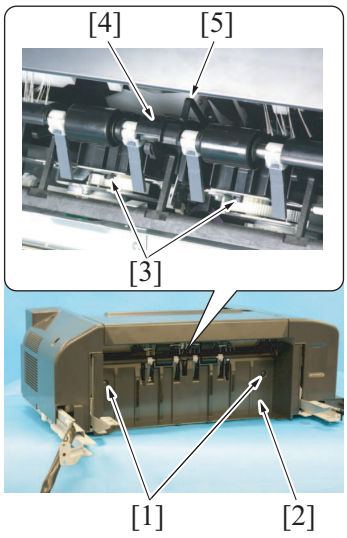
6. Remove two screws [2], and remove the tray lift up motor [1].
7. To reinstall, reverse the order of removal.

8.12.16 Paper surface detect solenoid (SD101) (FS-533)

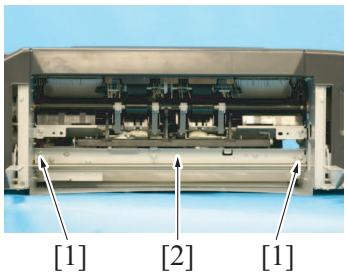
1. Remove the paper exit tray unit.
G.8.12.6 Paper exit tray unit (FS-533)



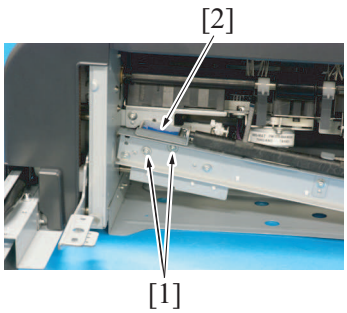
2. Remove two screws [1], and remove the plate [2].



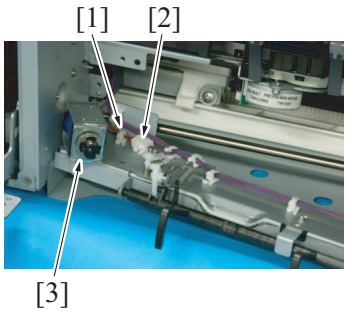
3. Remove two screws [1], and remove the cover [2].
NOTE
- **When removing the cover [2], two claws [3] may come off and the alignment tray [4] may come up. This may cause the alignment tray to contact the actuator [5] and cause malfunction of the actuator.**
- **When mounting the cover [2], make sure two claws [3] are attached to the plate.**



4. Remove two screws [1], and pull out the paper surface detect solenoid assy [2].



5. Remove two screws [1], and pull out the paper surface detect solenoid [2].

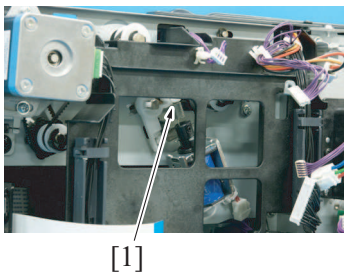


6. Remove the harness from wire saddle [1], and disconnect the connector [2] and remove the paper surface detect solenoid [3].

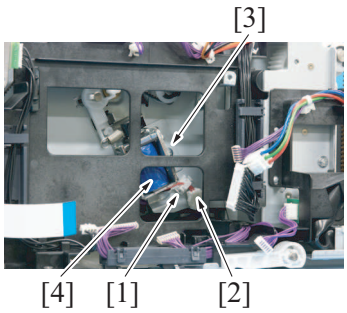
7. To reinstall, reverse the order of removal.

8.12.17 Batch solenoid (SD102) (FS-533)

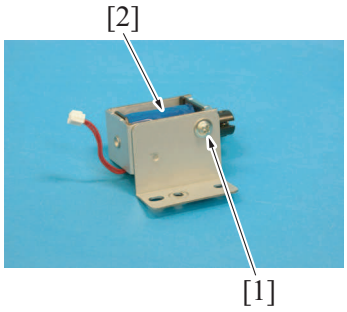
1. Remove the rear cover.
   G.8.12.3 Rear cover (FS-533)
2. Remove the FS control board.
   G.8.12.7 FS control board (FSCB) (FS-533)



3. Remove the spring [1].



4. Remove the harness from the wire saddle [1].
5. Disconnect the connector [2].
6. Remove the screw [3], and remove the batch solenoid assy [4].



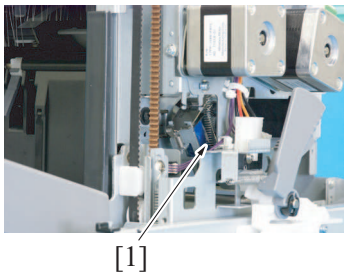
7. Remove the screw [1], and remove the batch solenoid [2].

8. To reinstall, reverse the order of removal.

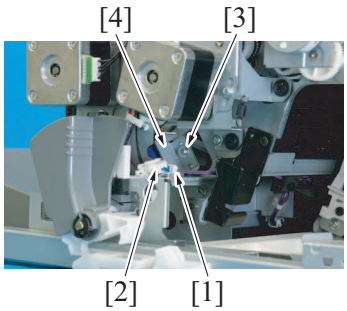
8.12.18 Paper exit roller solenoid (SD103) (FS-533)

1. Remove the front cover.
   G.8.12.1 Front cover (FS-533)

2. Remove the spring [1].



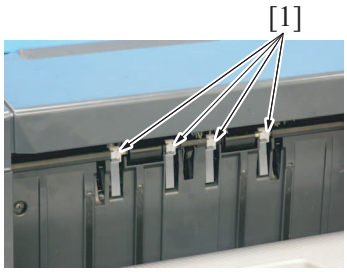
3. Remove the harness from the wire saddle [1].
4. Disconnect the connector [2].
5. Remove the screw [3], and remove the paper exit roller solenoid [4].



6. To reinstall, reverse the order of removal.

8.12.19 Paper exit paddle (FS-533)

1. Pull the knobs [1] to remove the exit paddle.

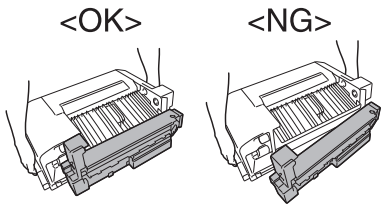


2. To reinstall, reverse the order of removal.

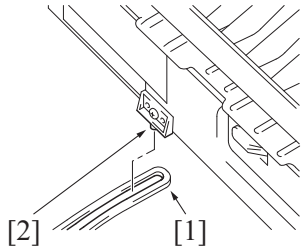
8.13 Disassembly/reassembly procedure (PK-519)

8.13.1 Punch kit (PK-519)

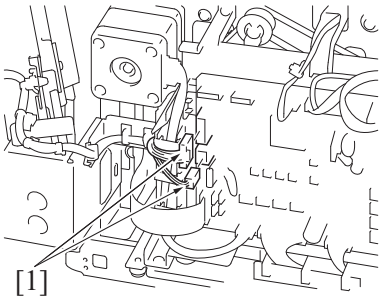
1. Remove the finisher from the main body.
G.8.12.4 Finisher (FS-533)
NOTE
- **Make sure that the punch unit is locked to the finisher before removing it.**



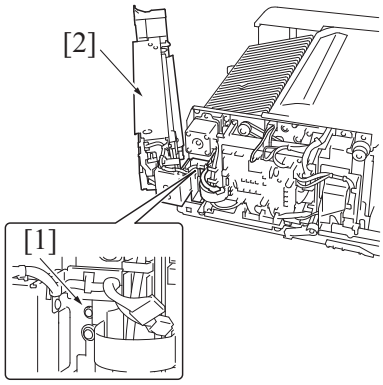
2. Remove the rear cover.
G.8.12.3 Rear cover (FS-533)



3. Open the punch unit.
4. Remove the stopper arm [1] from the stopper pin [2].



5. Disconnect two connectors [1].

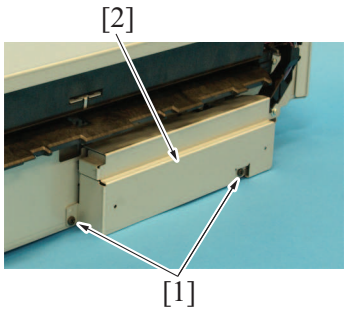


6. Remove the screw [1], and remove the punch unit [2].

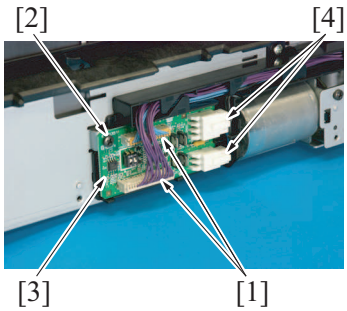
7. To reinstall, reverse the order of removal.

8.13.2 PK control board (PKCB) (PK-519)

1. Remove the finisher.
G.8.12.4 Finisher (FS-533)



2. Remove two screws [1], and remove the plate [2].

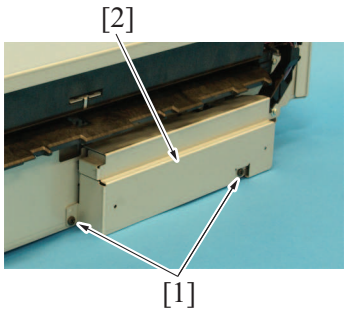


3. Disconnect two connectors [1].
4. Remove the screw [2], and pull out the PK control board [3].
5. Disconnect two connectors [4], and remove the PK control board [3].

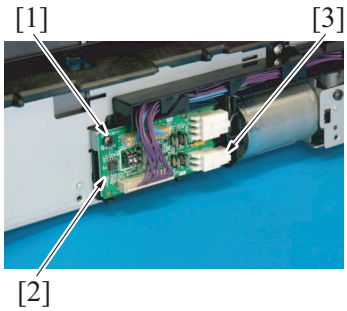
6. To reinstall, reverse the order of removal.

8.13.3 Punch motor (M201) (PK-519)

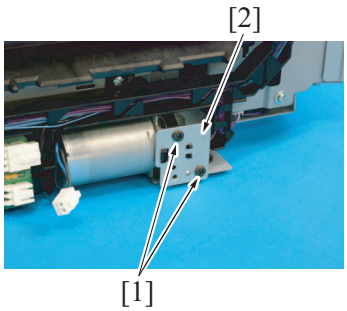
1. Remove the finisher.
G.8.12.4 Finisher (FS-533)



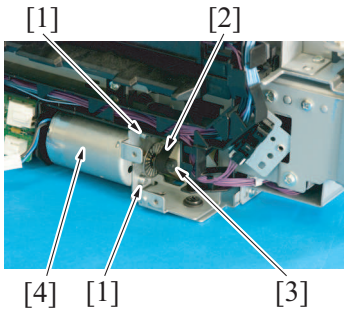
2. Remove two screws [1], and remove the plate [2].



3. Remove the screw [1], and pull out the PK control board [2].
4. Disconnect the connector [3].



5. Remove two screws [1], and remove the plate [2].

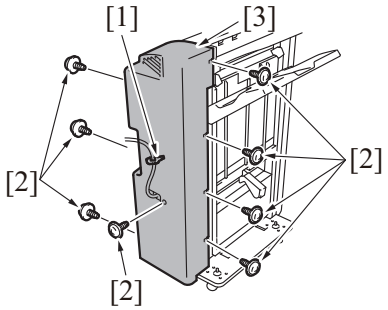


6. Remove two screws [1], and remove the drive belt [2] from the gear [3].
7. Remove the punch motor [4].

8. To reinstall, reverse the order of removal.

8.14 Disassembly/reassembly procedure (FS-534/FS-534SD/RU-513)

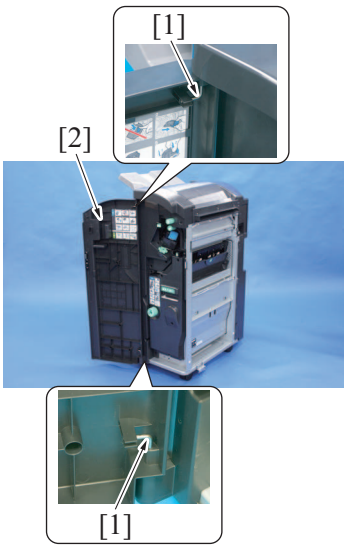
8.14.1 Rear cover (FS-534/FS-534SD)



1. Remove the harness from the wire saddle [1].
2. Remove eight screws [2], and remove the rear cover [3].

3. To reinstall, reverse the order of removal.

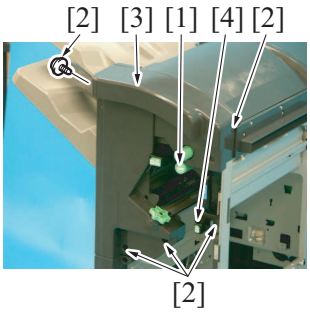
8.14.2 Front door (FS-534/FS-534SD)



1. Remove the upper and lower stoppers [1], and remove the front door [2].
2. To reinstall, reverse the order of removal.

8.14.3 Front upper cover (FS-534/FS-534SD)

1. Remove the front door.
   G.8.14.2 Front door (FS-534/FS-534SD)



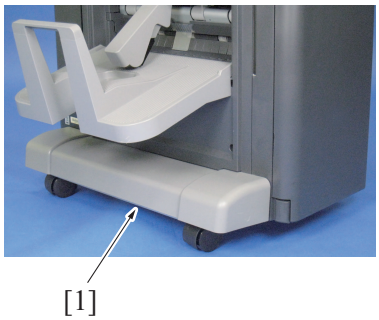
2. Remove the dial (FS5) [1].
3. Remove five screws [2], and remove the front upper cover [3].
   NOTE
   - **When the saddle unit is attached, move the guide plate [4] and then remove the front upper cover.**
4. To reinstall, reverse the order of removal.

8.14.4 Left lower cover (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)



2. Remove two screws [1].
   NOTE
   - **If the saddle unit is installed, pull out the saddle unit, and then remove two screws [1].**



3. Remove the left lower cover [1].
4. To reinstall, reverse the order of removal.

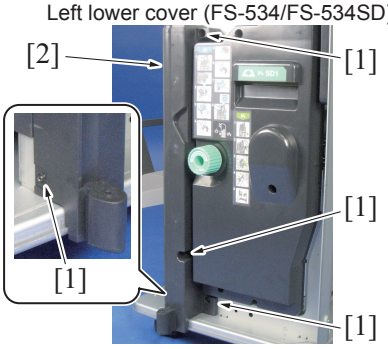
8.14.5 Front lower cover (FS-534/FS-534SD)

1. Remove the front door.

G.8.14.2 Front door (FS-534/FS-534SD)

2. Remove the front upper cover.
G.8.14.3 Front upper cover (FS-534/FS-534SD)

3. Remove the left lower cover.
Left lower cover (FS-534/FS-534SD)



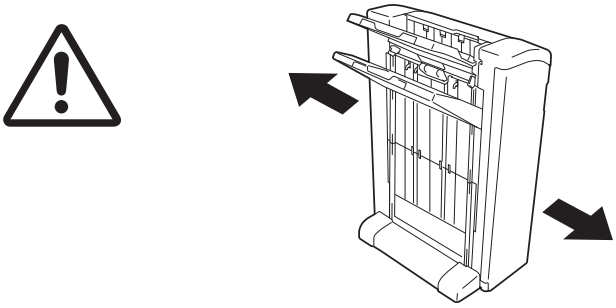
4. Remove four screws [1], and remove the front lower cover [2].

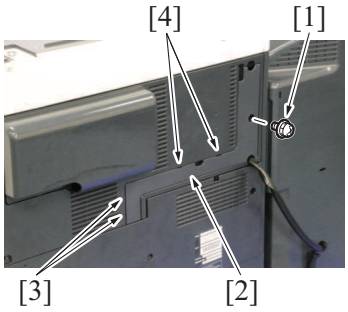
5. To reinstall, reverse the order of removal.

8.14.6 Finisher (FS-534/FS-534SD)

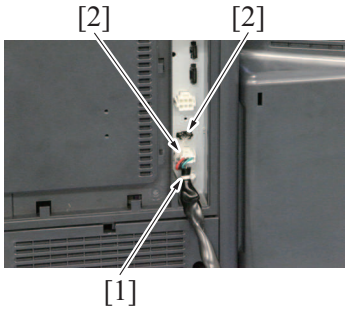
⚠CAUTION

- When transporting the finisher, make sure to push it to the direction as shown in the illustration. (to prevent turnover during transportation)



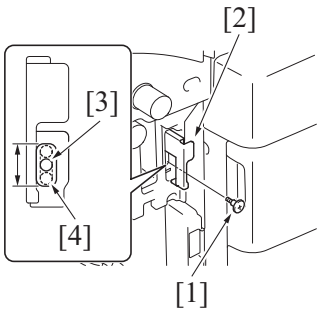


1. Remove the screw [1], and remove the cover [2].
NOTE
- **When mounting the cover, insert two claws [3] into the holes on the main unit cover first. Then fit two claws [4] into the holes.**
- **Be careful not to pinch the harness.**

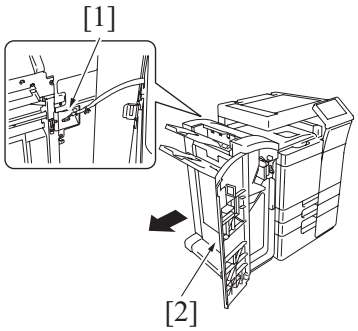


2. Remove the cable tie [1], and disconnect two connectors [2].

3. Open the front door.



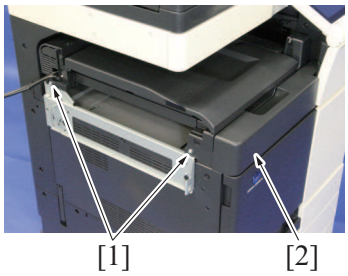
4. Remove the screw [1], and pull out the lever [2].
NOTE
- **At the time of the finisher installation, make sure that the screw hole [3] locates within the scope of the mounting hole of the lever [4].**



5. Disconnect the connector [1].
6. Remove the finisher [2] from the main body.
7. To reinstall, reverse the order of removal.

8.14.7 Relay unit (RU-513)

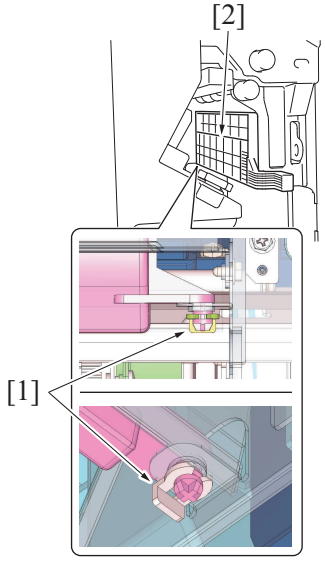
1. Remove the finisher from the main body.
G.8.14.6 Finisher (FS-534/FS-534SD)



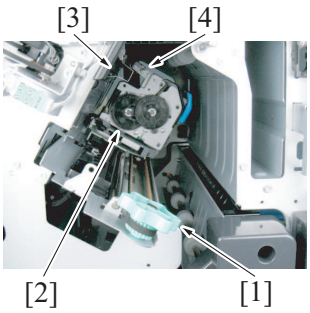
2. Remove two screws [1], and remove the RU transport unit [2].
3. To reinstall, reverse the order of removal.

8.14.8 Stapler unit (FS-534/FS-534SD)

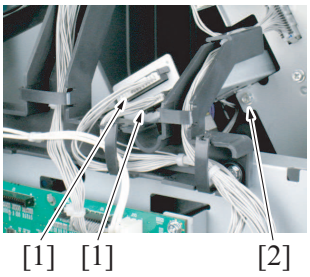
1. Open the front door.
2. Remove the rear cover.
G.8.14.1 Rear cover (FS-534/FS-534SD)



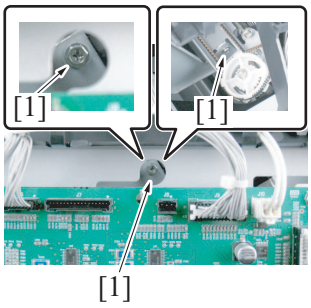
3. When the saddle unit is attached, remove the C-clip [1], and remove the guide plate [2].



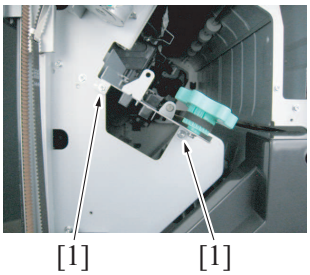
4. Rotate the stapler transfer dial [1] until the stapler [2] has been moved to the location shown in the figure (the location where the back-end stopper [3] does not interact with the clincher staple arm [4]).



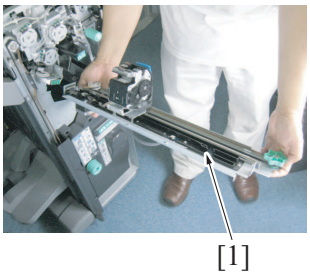
5. Disconnect two connectors [1] from the back of the finisher.
6. Remove the screw [2].



7. Remove the screw [1].

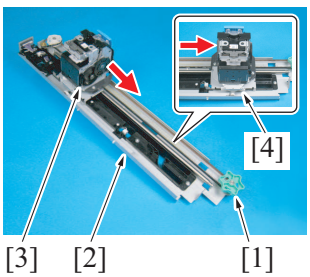


8. Remove two screws [1] from the front of the finisher.

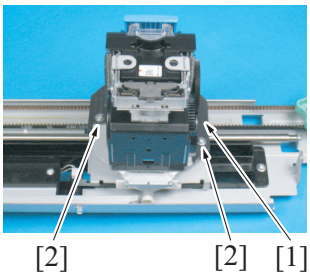


9. Remove the stapler assy [1] from the finisher.
NOTE
- **While removing the stapler assy [1], be careful not to hit the stapler against the finisher frame.**

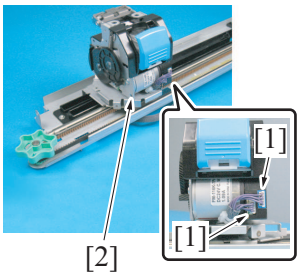
10. Put the stapler assy [2] on a stable workbench.
11. Rotate the stapler transfer dial [1] until the stapler unit [3] has been moved to the near side [4].



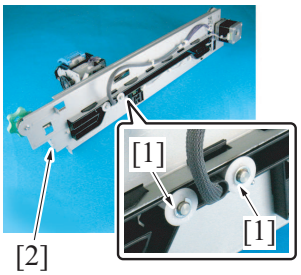
12. Remove two screws [2], and remove the cover [1].



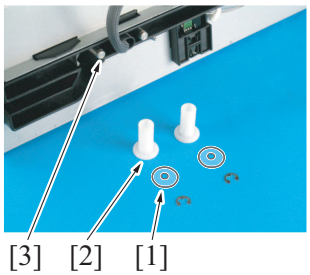
13. Disconnect two connectors [1] of the stapler unit [2].



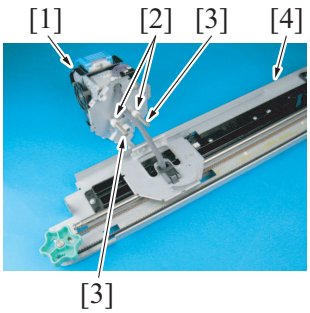
14. Flip the stapler assy [2] over.
15. Remove two E-rings [1] from the guide shafts.



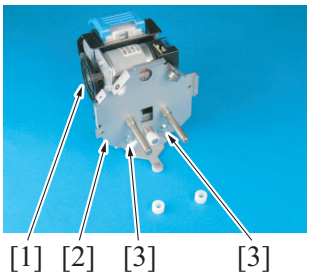
16. Remove the clear spacers [1] and white rollers [2] on both shafts [3].
NOTE
- **Be careful not to lose the clear spacers.**



17. Slowly remove the stapler unit [1] from the stapler assy [4].
18. Remove the white rollers [2] on both shafts [3].
NOTE
- **Ensure that the harness does not get damaged in the process.**
- **Be careful not to lose the white rollers.**



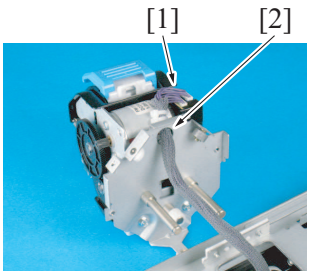
19. Remove two screws [3] of the stapler unit, and remove the stapler base plate [2] from the stapler unit [1].



20. To reinstall, reverse the order of removal.

NOTE

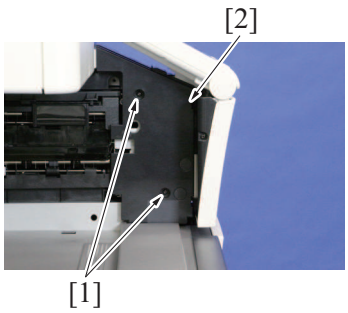
- **When installing the stapler unit, ensure that the two connectors [1] removed in the process 13 are put through the hole in the base plate [2] and connected to the stapler unit before attaching the base plate.**



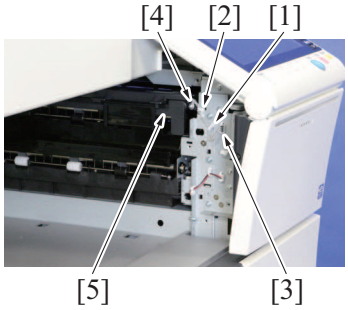
8.14.9 Sensor unit (FS-534/FS-534SD)

1. Remove the horizontal transport unit.
G.8.14.7 Relay unit (RU-513)

2. Remove two screws [1], and remove the control panel left cover/1 [2].



3. Remove the harness from the wire saddle [1] and the edge cover [2].
4. Disconnect the connector [3].
5. Remove the screw [4], and remove the sensor unit [5].

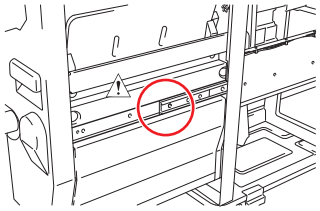


6. To reinstall, reverse the order of removal.

8.14.10 Saddle unit (FS-534SD)

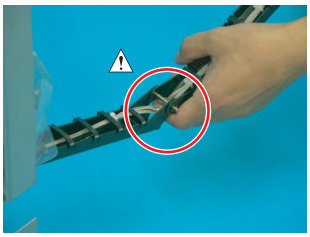
⚠CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.

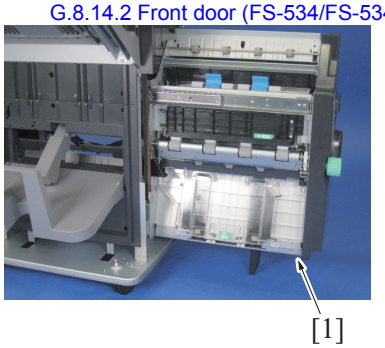


⚠CAUTION

- Be careful not to jam your finger in the connecting section of the pantograph

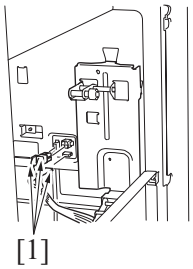


1. Remove the finisher.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door of the finisher.
   G.8.14.2 Front door (FS-534/FS-534SD)

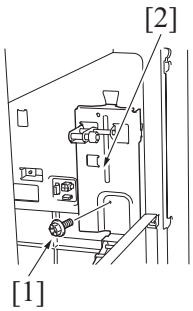


3. Pull out the saddle unit [1].
4. Remove the left lower cover.
   Left lower cover (FS-534/FS-534SD)
5. Remove the front upper cover.
   G.8.14.3 Front upper cover (FS-534/FS-534SD)
6. Remove the front lower cover.
   G.8.14.5 Front lower cover (FS-534/FS-534SD)

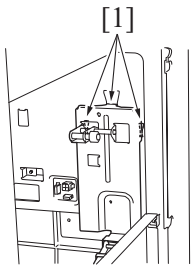
7. Disconnect three connectors [1].



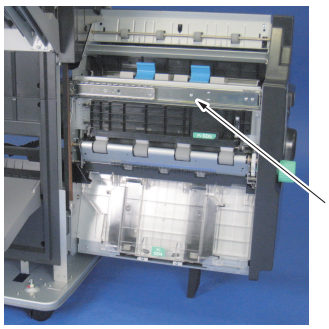
8. Remove the screw [1], and remove the pantograph [2].



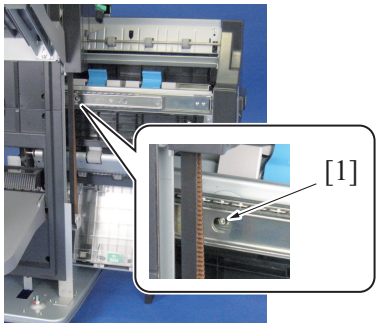
9. **NOTE**
   - **For installation of the pantograph, insert three hooks [1] on the pantograph of the saddle unit into the back holes inside the finisher.**



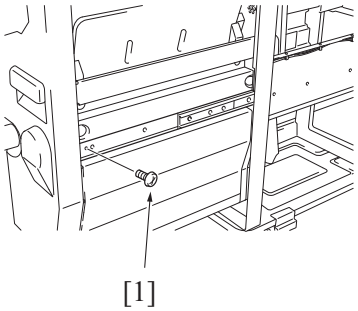
10. Remove the screw [1].



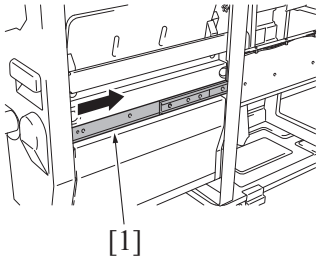
11. Push back the saddle unit into the position of the illustration, and then remove the screw [1].



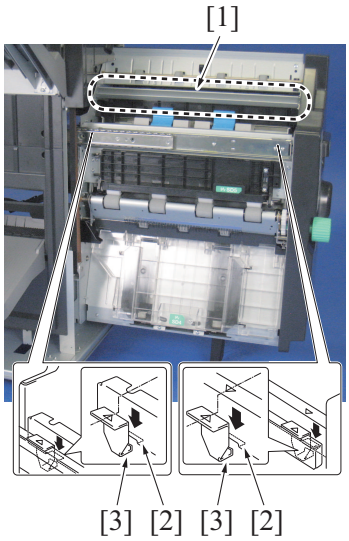
12. Pull out the saddle unit, and then remove the screw [1].



13. Insert the rail [1] on the right side into the finisher.



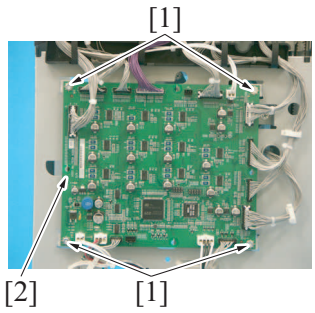
14. Grip the portion as shown in the illustration [1] to raise the saddle unit and take it out.
NOTE
- **For installation of the saddle unit, insert two hooks on the left rail [3] into the two holes of the saddle unit [2].**



15. To reinstall, reverse the order of removal.

8.14.11 FS control board (FSCB) (FS-534/FS-534SD)

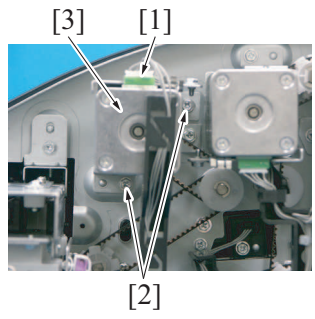
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. Remove all connectors from the board.
4. Remove four screws [1], and remove the FS control board [2].

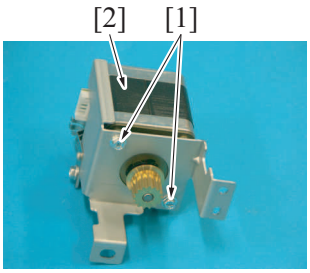


5. To reinstall, reverse the order of removal.

8.14.12 FNS entry transport motor (M2) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the FNS entry transport motor assy [3].



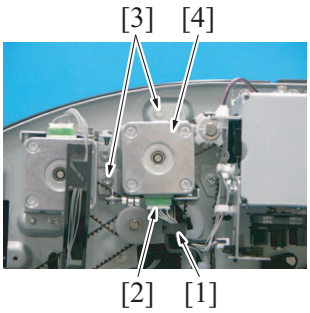


5. Remove two screws [1], and remove the FNS entry transport motor [2].

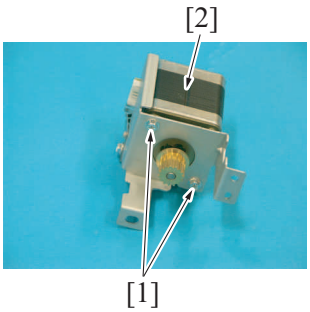
6. To reinstall, reverse the order of removal.

8.14.13 FNS discharge motor (M3) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)



3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the FNS discharge motor assy [4].

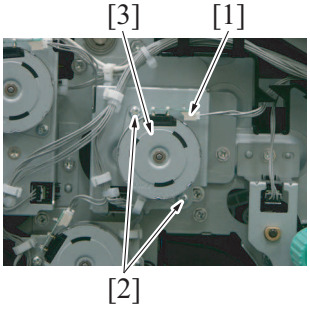


5. Remove two screws [1], and remove the FNS discharge motor [2].

6. To reinstall, reverse the order of removal.

8.14.14 Receiving roller retraction motor (M4) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door.
   G.8.14.2 Front door (FS-534/FS-534SD)
3. Remove the front upper cover.
   G.8.14.3 Front upper cover (FS-534/FS-534SD)



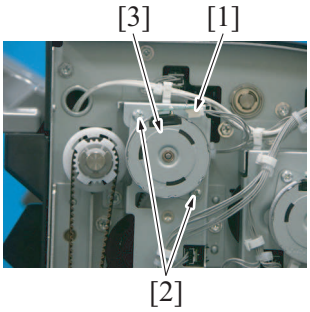
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the receiving roller retraction motor [3].

6. To reinstall, reverse the order of removal.

8.14.15 FNS paddle motor (M5) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door.
   G.8.14.2 Front door (FS-534/FS-534SD)

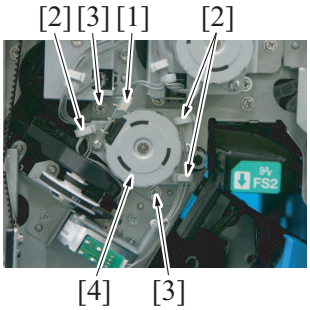
3. Remove the front upper cover.
G.8.14.3 Front upper cover (FS-534/FS-534SD)



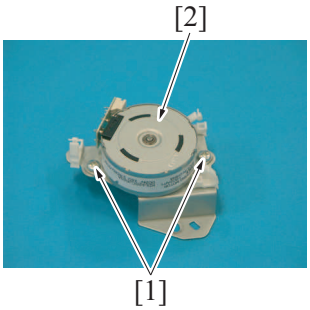
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the FNS paddle motor [3].
6. To reinstall, reverse the order of removal.

8.14.16 Trailing edge stopper motor (M6) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door.
G.8.14.2 Front door (FS-534/FS-534SD)
3. Remove the front upper cover.
G.8.14.3 Front upper cover (FS-534/FS-534SD)



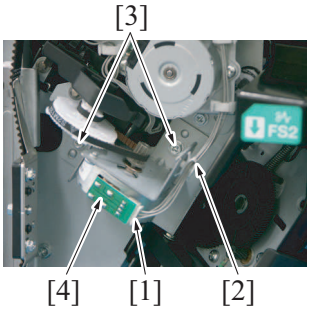
4. Disconnect the connector [1].
5. Remove the harness from three wire saddles [2].
6. Remove two screws [3], and remove the trailing edge stopper motor assy [4].



7. Remove two screws [1], and remove the trailing edge stopper motor [2].
8. To reinstall, reverse the order of removal.

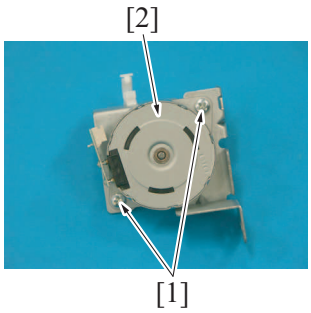
8.14.17 Alignment motor/front (M7) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the front door.
G.8.14.2 Front door (FS-534/FS-534SD)
3. Remove the front upper cover.
G.8.14.3 Front upper cover (FS-534/FS-534SD)



4. Disconnect the connector [1].
5. Remove the harness from the wire saddle [2].
6. Remove two screws [3], and remove the alignment motor/front assy [4].

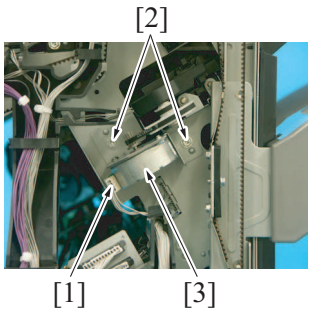
7. Remove two screws [1], and remove the alignment motor/front [2].



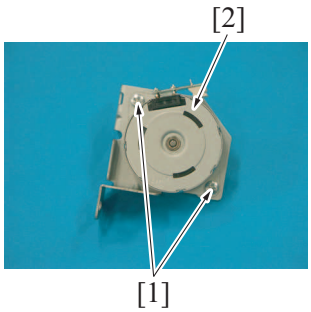
8. To reinstall, reverse the order of removal.

8.14.18 Alignment motor/rear (M8) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the alignment motor/rear assy [3].



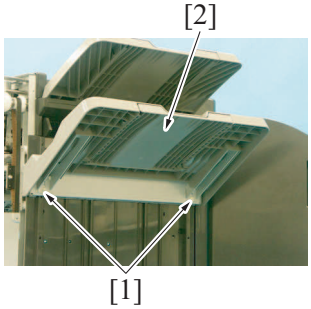
5. Remove two screws [1], and remove the alignment motor/rear [2].

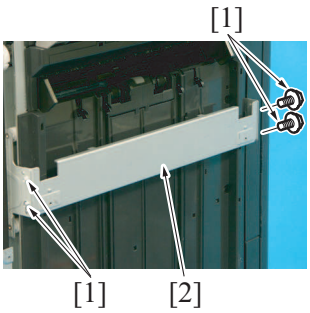


6. To reinstall, reverse the order of removal.

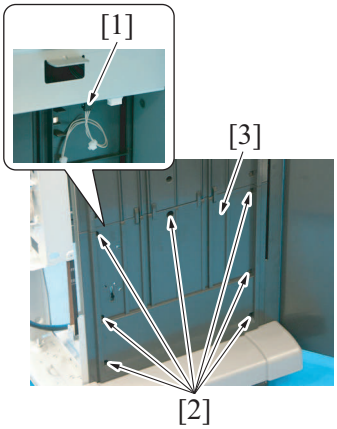
8.14.19 Pre-eject drive motor (M9) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.
4. Remove two screws [1], and remove the exit tray [2].

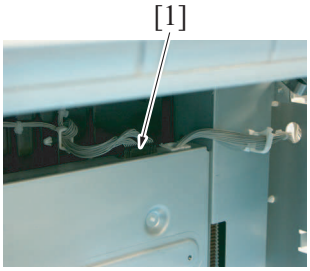




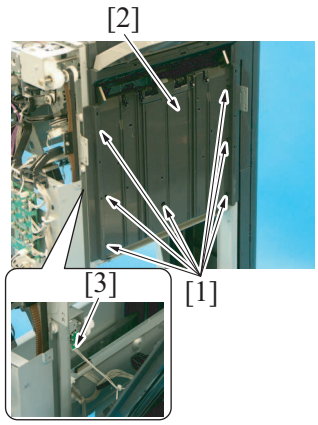
5. Remove four screws [1], and remove the plate [2].



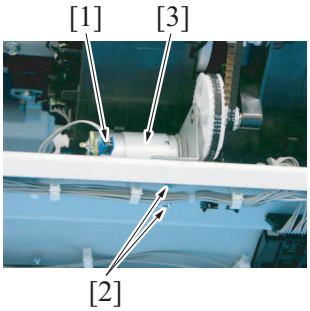
6. Disconnect the connector [1].
7. Remove seven screws [2], and remove the left lower cover [3].
NOTE
- **When the saddle unit is attached, disconnect two connectors.**



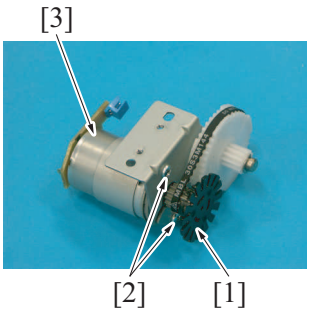
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



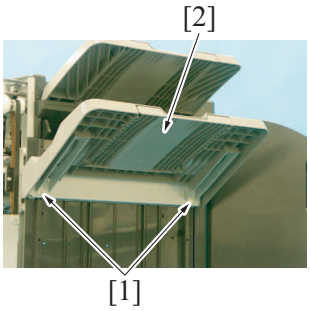
11. Disconnect the connector [1].
12. Remove two screws [2], and remove the pre-eject drive motor assy [3].



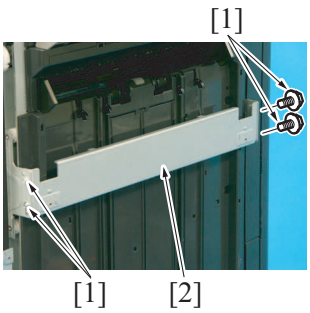
13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the pre-eject drive motor [3].
15. To reinstall, reverse the order of removal.

8.14.20 Bundle eject motor (M10) (FS-534/FS-534SD)

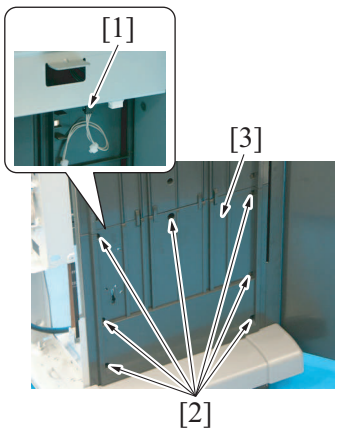
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



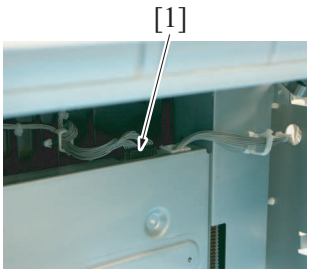
4. Remove two screws [1], and remove the exit tray [2].



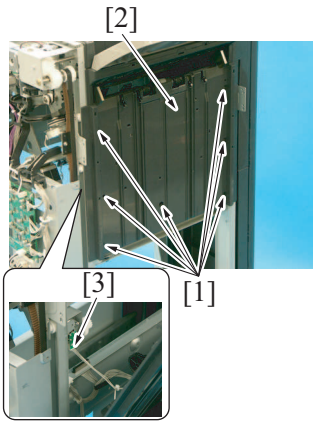
5. Remove four screws [1], and remove the plate [2].



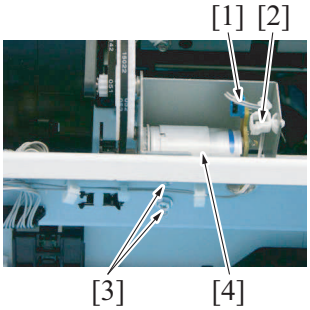
6. Disconnect the connector [1].
7. Remove seven screws [2], and remove the left lower cover [3].
   NOTE
   - **When the saddle unit is attached, disconnect two connectors.**



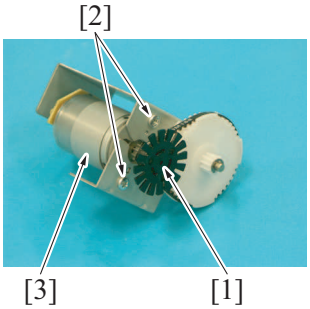
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



11. Disconnect the connector [1], and remove the harness from the wire saddle [2].
12. Remove two screws [3], and remove the bundle eject motor assy [4].

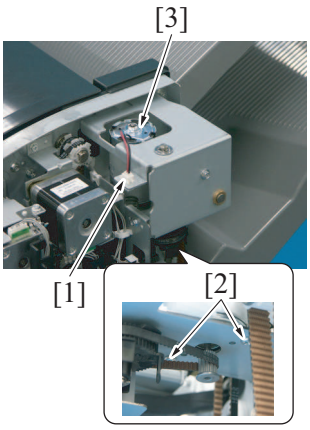


13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the bundle eject motor [3].

15. To reinstall, reverse the order of removal.

8.14.21 Main tray up/down motor (M11) (FS-534/FS-534SD)

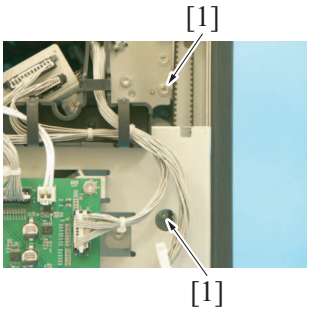
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)



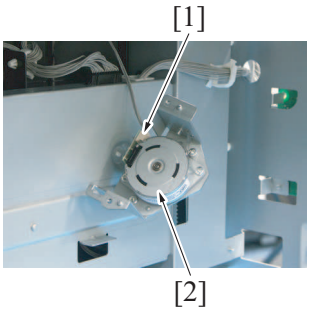
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the main tray up/down motor [3].
5. To reinstall, reverse the order of removal.

8.14.22 Paper receiving control motor (M12) (FS-534/FS-534SD)

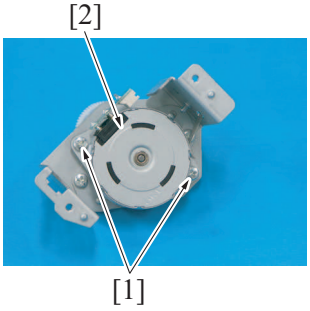
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



4. Remove two screws [1].



5. Disconnect the connector [1], and remove the paper receiving control motor assy [2].

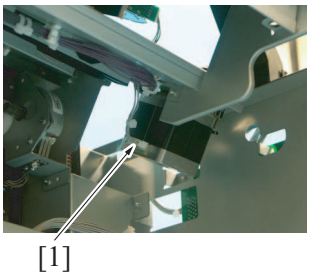


6. Remove two screws [1], and remove the paper receiving control motor [2].
7. To reinstall, reverse the order of removal.

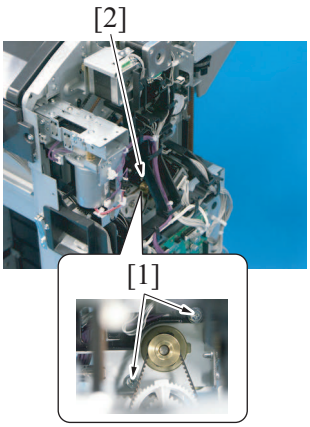
8.14.23 Side stapler movement motor (M13) (FS-534/FS-534SD)

1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
2. Remove the rear cover.
   G.8.14.1 Rear cover (FS-534/FS-534SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.

4. Disconnect the connector [1].



5. Remove two screws [1], and remove the side stapler movement motor [2].

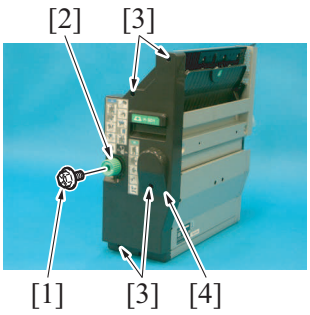


6. To reinstall, reverse the order of removal.

8.15 Disassembly/reassembly procedure (SD-511)

8.15.1 Front cover (SD-511)

1. Remove the screw [1], and remove the jam clearing dial [2].
2. Remove four screws [3], and remove the front cover [4].



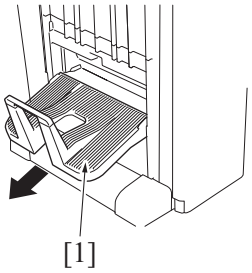
3. To reinstall, reverse the order of removal.

8.15.2 Paper exit tray (SD-511)

1. Remove the pin [1], and remove the exit lever [2].



2. Remove the paper exit tray [1].

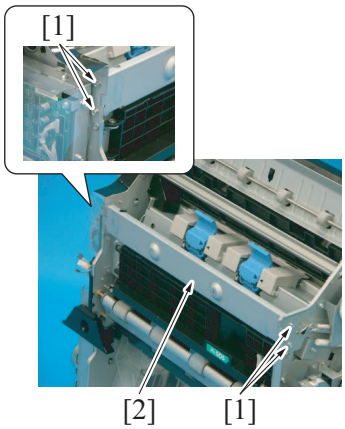


3. To reinstall, reverse the order of removal.

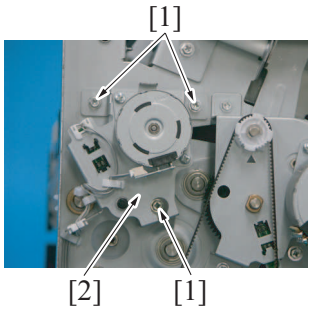
8.15.3 Staple unit (SD-511)

1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)

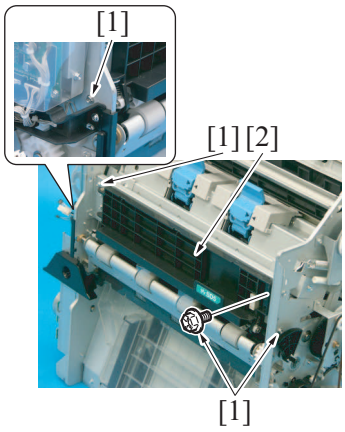
3. Remove four screws [1], and remove the plate [2].

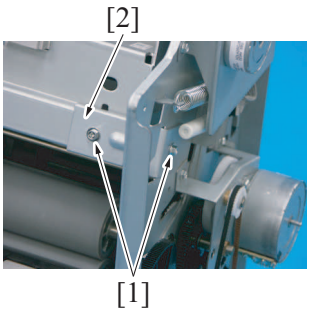


4. Remove three screws [1], and remove the tri-folding guide motor assy [2].

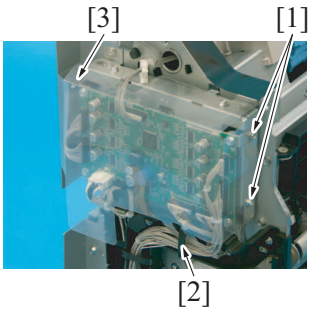


5. Remove four screws [1], and remove the conveyance assy [2].

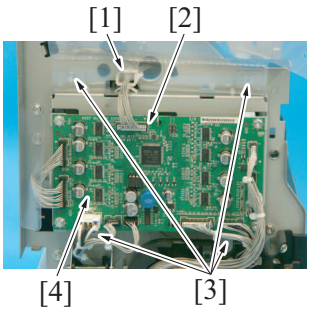




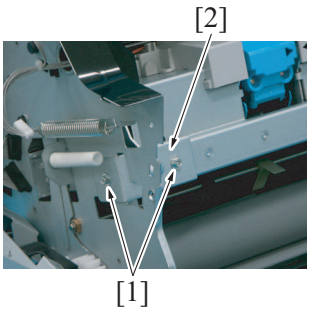
6. Remove two screws [1], and remove the plate [2].



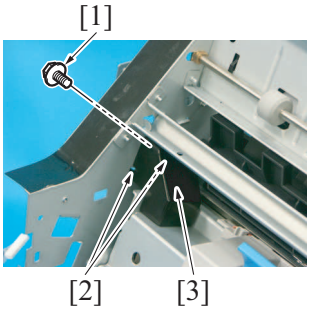
7. Remove two screws [1].
8. Detach the board support film [3] from the harness guide tabs [2].



9. Remove the harness from the wire saddle [1].
10. Disconnect the connector [2].
11. Remove four screws [3], and remove the SD drive board assy [4].

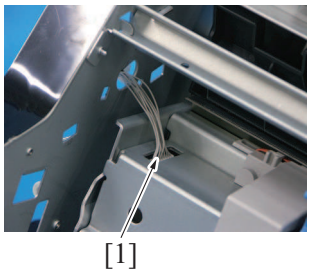


12. Remove two screws [1], and remove the plate [2].

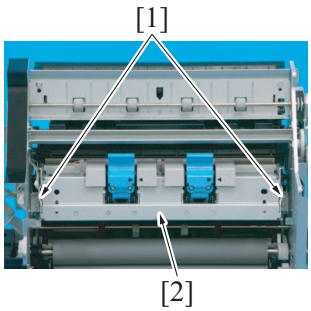


13. Remove the screw [1].
14. Release two tabs [2], and remove the cover [3].

15. Disconnect the connector [1].



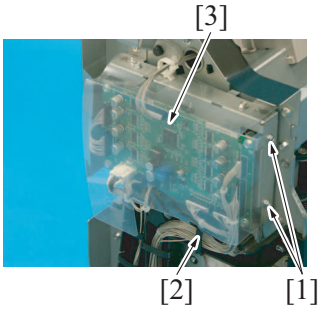
16. Remove two screws [1], and remove the staple unit [2].



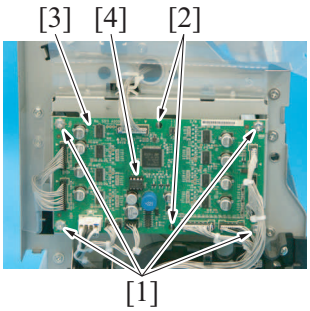
17. To reinstall, reverse the order of removal.

8.15.4 SD drive board (SDDB) (SD-511)

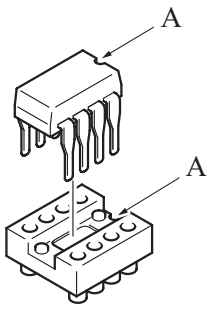
1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)



2. Remove two screws [1].
3. Remove the board support film [3] from the harness guide [2].



4. Disconnect all the connectors from the board.
5. Remove four screws [1].
6. Detach the SD drive board [3] from the two tabs [2].
NOTE
- **When the SD drive board (SDDB) has been replaced, be sure to remount EEPROM (U3) [4].**
Remove EEPROM (U3) [4] from the old SD drive board and mount it on the new SD drive board.



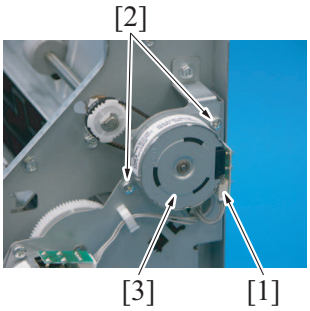
7. **NOTE**
- **When mounting EEPROM (U3), align the notches (indicated by "A" in the illustration).**

8. To reinstall, reverse the order of removal.

NOTE
- **After replacing the SD drive board, be sure to install the latest firmware.**

8.15.5 SD transport motor (M1) (SD-511)

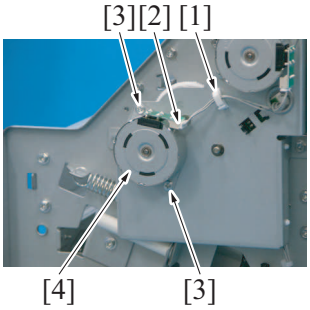
1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD transport motor [3].
5. To reinstall, reverse the order of removal.

8.15.6 Paper discharge control motor (M2) (SD-511)

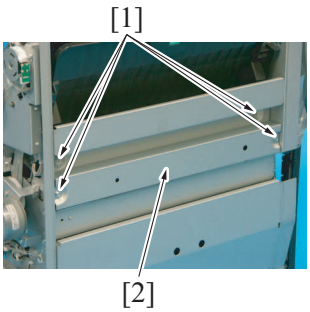
1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)



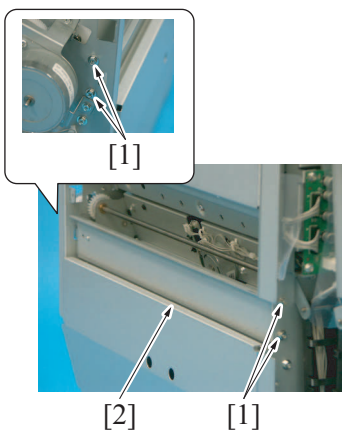
3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the paper discharge control motor [4].
5. To reinstall, reverse the order of removal.

8.15.7 Alignment motor (M3) (SD-511)

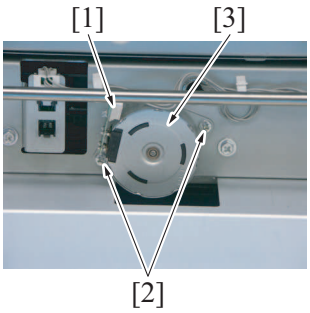
1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)



3. Remove four screws [1], and remove the plate [2].



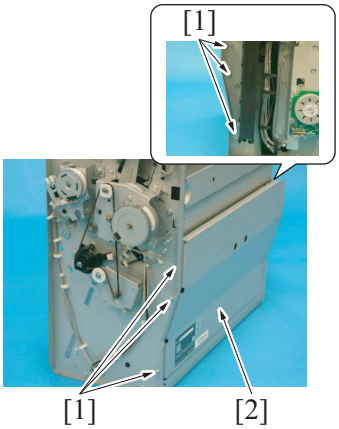
4. Remove four screws [1], and remove the plate [2].



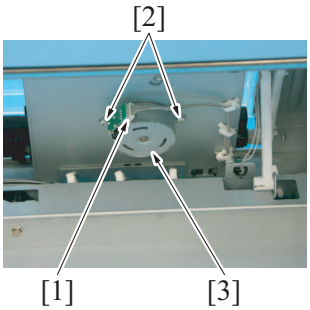
5. Disconnect the connector [1].
6. Remove two screws [2], and remove the alignment motor [3].
7. To reinstall, reverse the order of removal.

8.15.8 Stopper drive motor (M4) (SD-511)

1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
G.8.15.1 Front cover (SD-511)



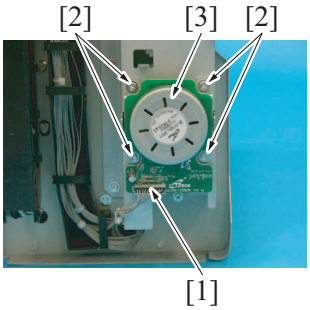
3. Remove six screws [1], and remove the plate [2].



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the stopper drive motor [3].
6. To reinstall, reverse the order of removal.

8.15.9 Center fold roller motor (M5) (SD-511)

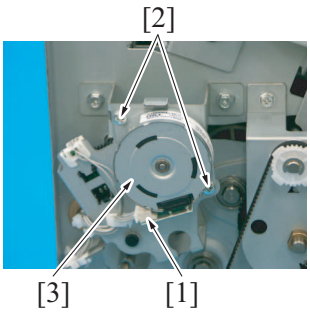
1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)



2. Disconnect the connector [1].
3. Remove four screws [2], and remove the center fold roller motor [3].
4. To reinstall, reverse the order of removal.

8.15.10 Tri-folding guide motor (M6) (SD-511)

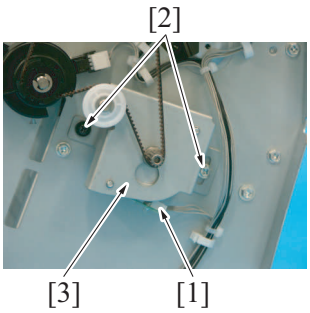
1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
G.8.15.1 Front cover (SD-511)



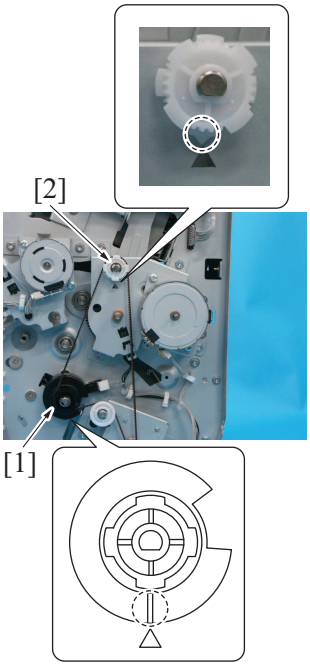
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the tri-folding guide motor [3].
5. To reinstall, reverse the order of removal.

8.15.11 SD paddle motor (M7) (SD-511)

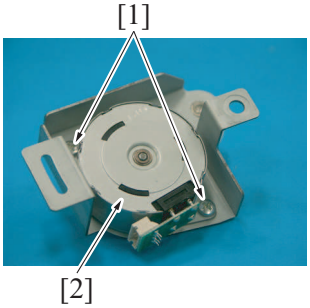
1. Remove the saddle unit.
   G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
   G.8.15.1 Front cover (SD-511)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD paddle motor assy [3].



5. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

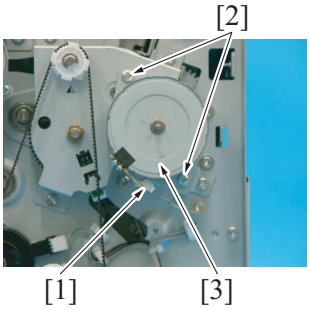


6. Remove two screws [1], and remove the SD paddle motor [2].
7. To reinstall, reverse the order of removal.

8.15.12 Center fold guide motor (M8) (SD-511)

1. Remove the saddle unit.

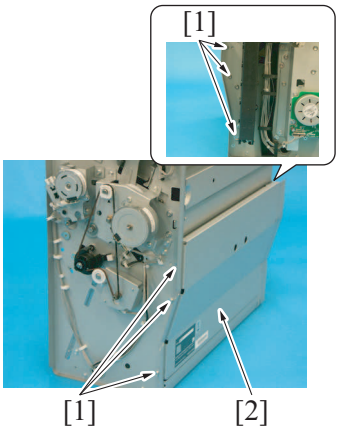
G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
G.8.15.1 Front cover (SD-511)



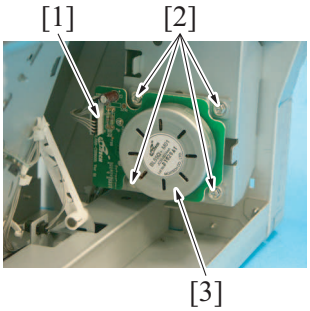
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the center fold guide motor [3].
5. To reinstall, reverse the order of removal.

8.15.13 Center fold knife motor (M9) (SD-511)

1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
G.8.15.1 Front cover (SD-511)



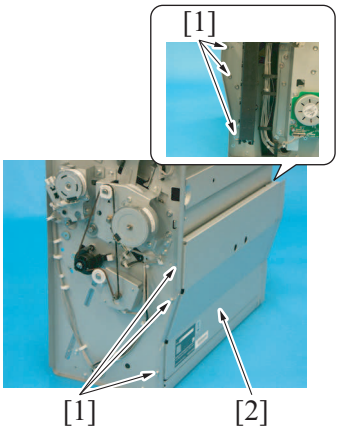
3. Remove six screws [1], and remove the plate [2].



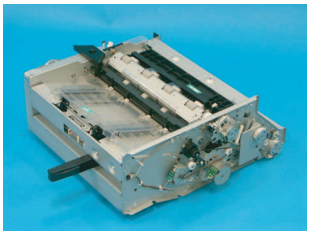
4. Disconnect the connector [1].
5. Remove four screws [2], and remove the center fold knife motor [3].
6. To reinstall, reverse the order of removal.

8.15.14 Stopper solenoid (SD1) (SD-511)

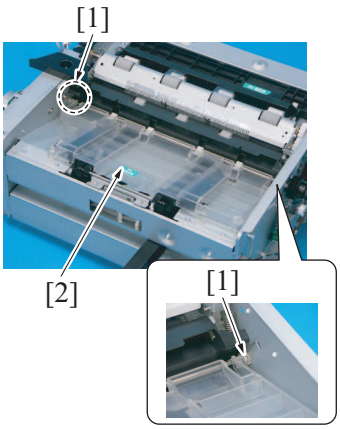
1. Remove the saddle unit.
G.8.14.10 Saddle unit (FS-534SD)
2. Remove the front cover.
G.8.15.1 Front cover (SD-511)



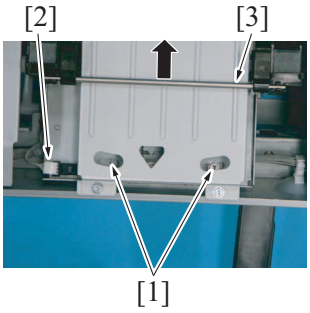
3. Remove six screws [1], and remove the plate [2].



4. Place the saddle unit as shown in the illustration.

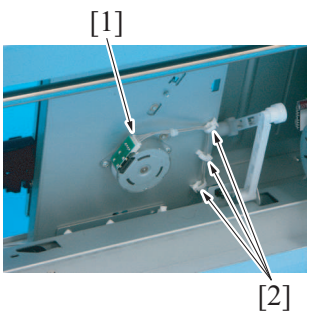


5. Remove two stoppers [1], and remove the guide plate [2].

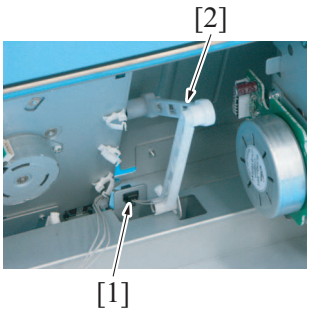


6. Slide the lever unit [3] upward.
7. Remove two screws [1], and disconnect the connector [2].

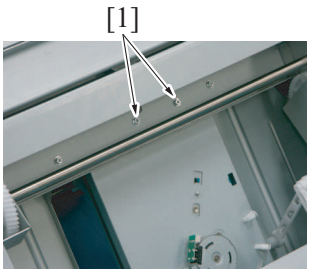
8. Raise the saddle unit.



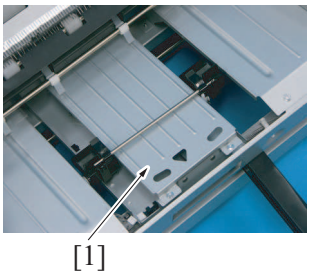
9. Disconnect the connector [1], and remove the harness from three wire saddles [2].



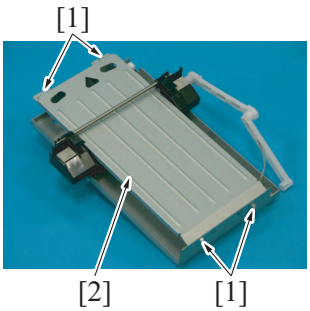
10. Disconnect the connector [1], and remove the drive lever [2].



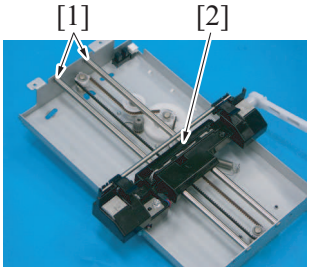
11. Remove two screws [1].



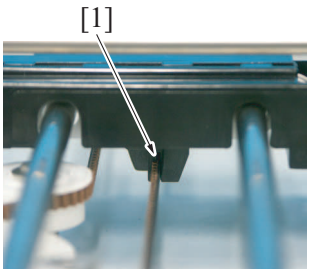
12. Remove the guide plate assy [1].
NOTE
- **When reinstalling the guide plate assy, perform mechanical adjustment.**
  I.25.1.1 Half-fold skew adjustment



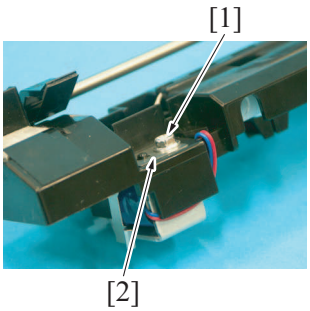
13. Remove four screws [1], and remove the plate [2].



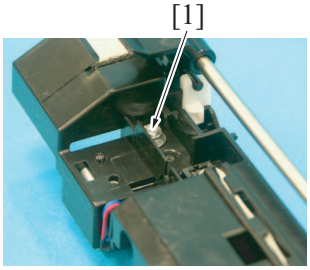
14. Remove two E-rings [1], and remove the stopper guide [2].



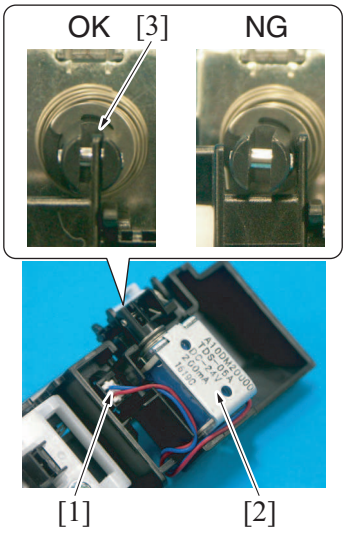
15. **NOTE**
- **When reinstalling the stopper guide, fit the belt into the stopper guide groove [1].**



16. Remove the screw [1], and remove the plate [2].



17. Remove the screw [1].

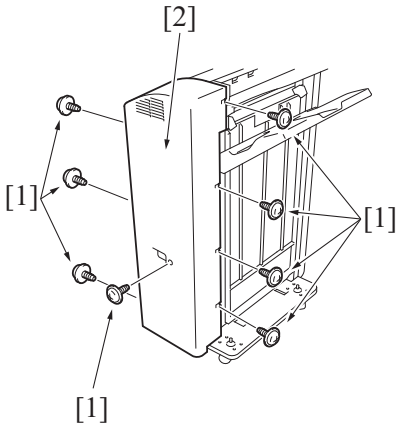


18. Disconnect the connector [1], and remove the stopper solenoid [2].
NOTE
- **When reinstalling the stopper solenoid, fit its tip into the place [3] shown in the illustration.**

19. To reinstall, reverse the order of removal.

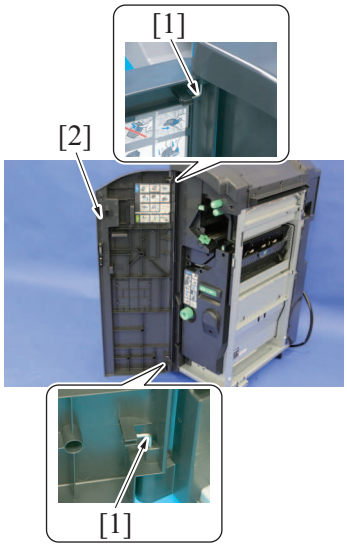
8.16 Disassembly/reassembly procedure (FS-536/FS-536SD)

8.16.1 Rear cover (FS-536/FS-536SD)



1. Remove eight screws [1], and remove the rear cover [2].
2. To reinstall, reverse the order of removal.

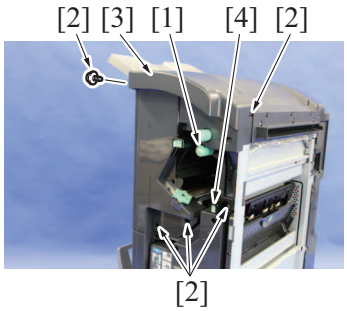
8.16.2 Front door (FS-536/FS-536SD)



1. Remove the upper and lower stoppers [1], and remove the front door [2].
2. To reinstall, reverse the order of removal.

8.16.3 Front upper cover (FS-536/FS-536SD)

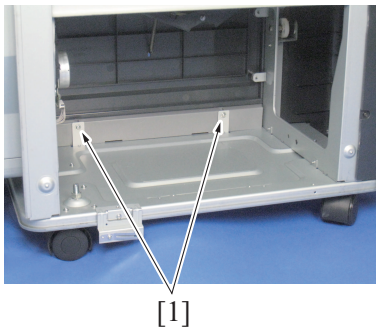
1. Remove the front door.
   G.8.16.2 Front door (FS-536/FS-536SD)



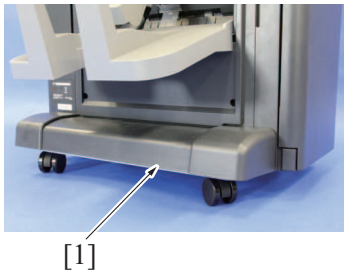
2. Remove the dial (FS5) [1].
3. Remove five screws [2], and remove the front upper cover [3].
   NOTE
   - **When the saddle unit is attached, move the guide plate [4] and then remove the front upper cover.**
4. To reinstall, reverse the order of removal.

8.16.4 Left lower cover (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)



2. Remove two screws [1].
NOTE
- **If the saddle unit is installed, pull out the saddle unit, and then remove two screws [1].**

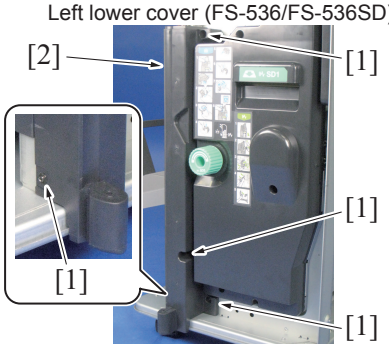


3. Remove the left lower cover [1].

4. To reinstall, reverse the order of removal.

8.16.5 Front lower cover (FS-536/FS-536SD)

1. Remove the front door.
G.8.16.2 Front door (FS-536/FS-536SD)
2. Remove the front upper cover.
G.8.16.3 Front upper cover (FS-536/FS-536SD)
3. Remove the left lower cover.
Left lower cover (FS-536/FS-536SD)



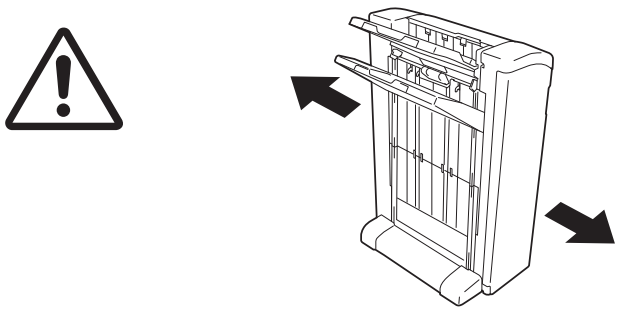
4. Remove four screws [1], and remove the front lower cover [2].

5. To reinstall, reverse the order of removal.

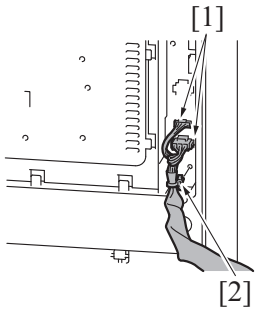
8.16.6 Finisher (FS-536/FS-536SD)

⚠CAUTION

- When transporting the finisher, make sure to push it to the direction as shown in the illustration. (to prevent turnover during transportation)

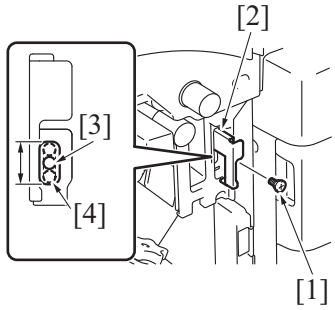


1. Remove the DF cable cover.
G.6.2.22 DF cable cover

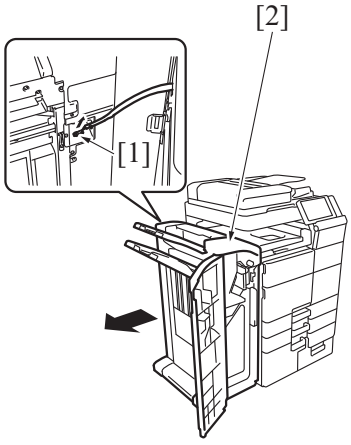


2. Remove the cable tie [2], and disconnect two connectors [1].

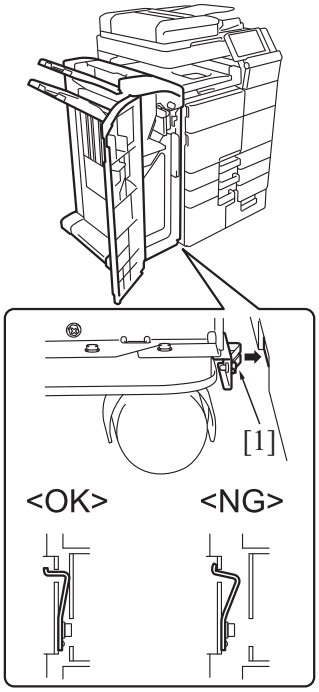
3. Open the front door.



4. Remove the screw [1], and pull out the lever [2].
NOTE
- **At the time of the finisher installation, make sure that the screw hole [3] locates within the scope of the mounting hole of the lever [4].**



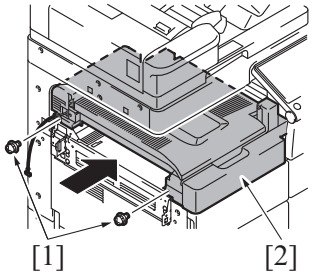
5. Disconnect the connector [1].
6. Remove the finisher [2] from the main body.
7. To reinstall, reverse the order of removal.



8. **NOTE**
   - **The blade spring [1] of the installed plate should be in contact with the main body.**

8.16.7 Relay unit (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)

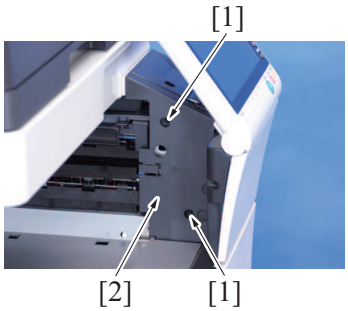


2. Remove two screws [1], and remove the RU transport unit [2].

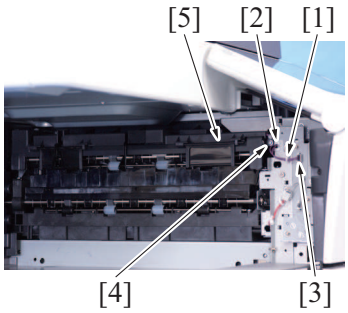
3. To reinstall, reverse the order of removal.

8.16.8 Sensor unit (FS-536/FS-536SD)

1. Remove the RU transport unit.
   G.8.16.7 Relay unit (FS-536/FS-536SD)



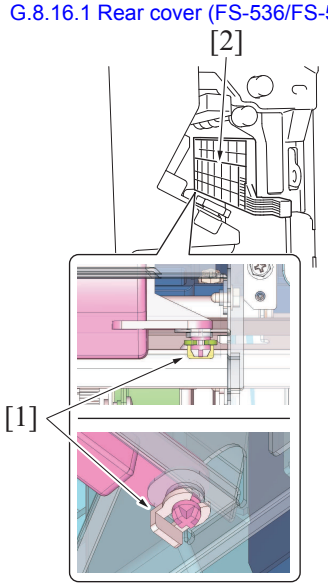
2. Remove two screws [1], and remove the control panel left cover/1 [2].



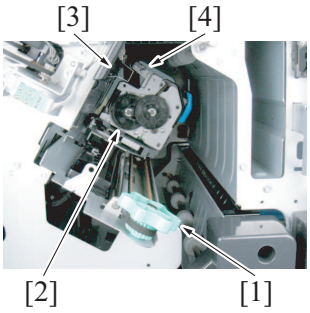
3. Remove the harness from the wire saddle [1] and the edge cover [2].
4. Disconnect the connector [3].
5. Remove the screw [4], and remove the sensor unit [5].
6. To reinstall, reverse the order of removal.

8.16.9 Stapler unit (FS-536/FS-536SD)

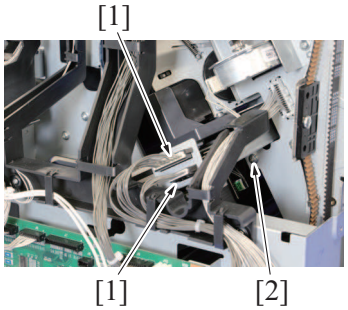
1. Open the front door.
2. Remove the rear cover.
G.8.16.1 Rear cover (FS-536/FS-536SD)



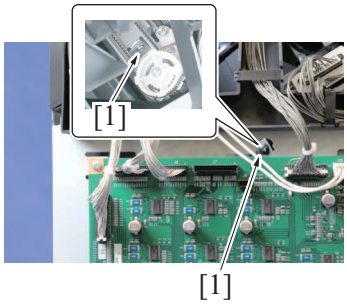
3. When the saddle unit is attached, remove the C-clip [1], and remove the guide plate [2].



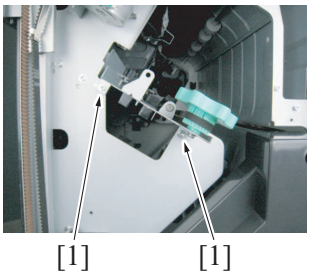
4. Turn the stapler transfer dial [1] to move the stapler [2] to the position shown in the figure (the position where the back-end stopper [3] does not interfere with the clincher staple arm [4]).



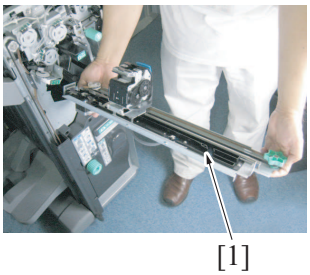
5. Disconnect two connectors [1] from the back of the finisher.
6. Remove the screw [2].



7. Remove the screw [1].

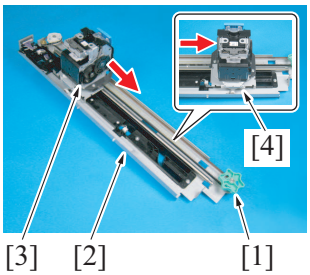


8. Remove two screws [1] from the front of the finisher.

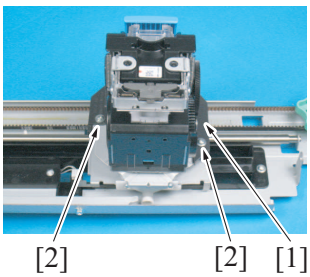


9. Remove the stapler assy [1] from the finisher.
NOTE
- **While removing the stapler assy [1], be careful not to hit the stapler against the finisher frame.**

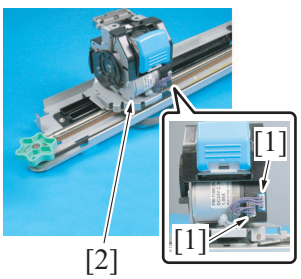
10. Put the stapler assy [2] on a stable workbench.
11. Rotate the stapler transfer dial [1] until the stapler unit [3] has been moved to the near side [4].



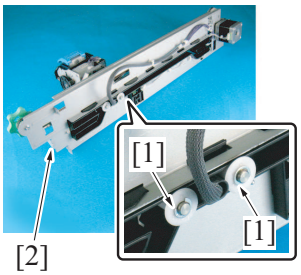
12. Remove two screws [2], and remove the cover [1].



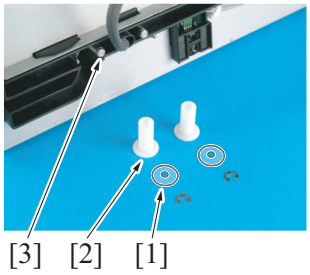
13. Disconnect two connectors [1] of the stapler unit [2].



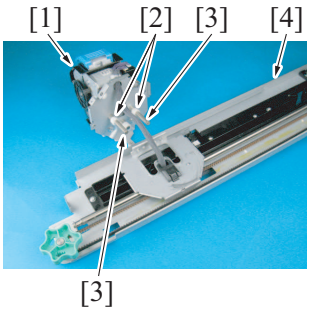
14. Flip the stapler assy [2] over.
15. Remove two E-rings [1] from the guide shafts.



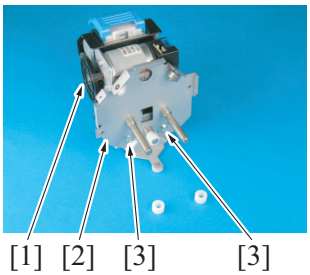
16. Remove the clear spacers [1] and white rolls [2] on both shafts [3].
NOTE
- **Be careful not to lose the clear spacers.**



17. Slowly remove the stapler unit [1] from the stapler assy [4].
18. Remove the white rolls [2] on both shafts [3].
NOTE
- **Ensure that the harness does not get damaged in the process.**
- **Be careful not to lose the white rolls.**

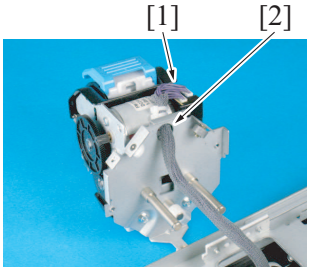


19. Remove two screws [3] of the stapler unit and remove the base plate [2] of the stapler unit from the stapler unit [1].



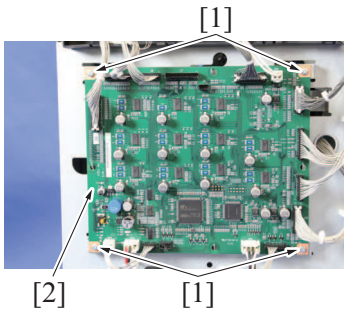
20. To reinstall, reverse the order of removal.

NOTE
- **When installing the stapler unit, ensure that two connectors [1] removed in the process 13 are put through the hole in the base plate [2] and connected to the stapler unit before attaching the base plate.**



8.16.10 FS control board (FSCB) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
G.8.16.1 Rear cover (FS-536/FS-536SD)

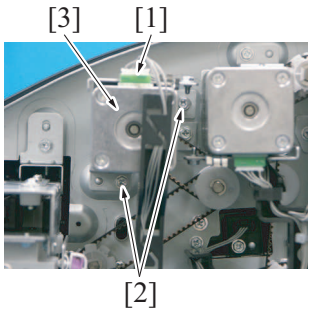


3. Disconnect all connectors from the board.
4. Remove four screws [1], and remove the FS control board [2].

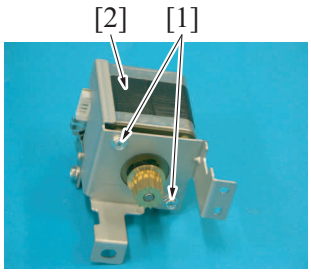
5. To reinstall, reverse the order of removal.

8.16.11 FNS entry transport motor (M2) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the FNS entry transport motor assy [3].

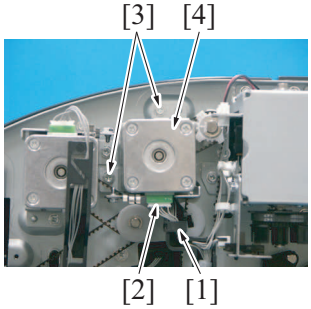


5. Remove two screws [1], and remove the FNS entry transport motor [2].

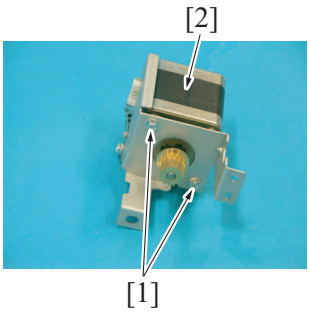
6. To reinstall, reverse the order of removal.

8.16.12 FNS discharge motor (M3) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)



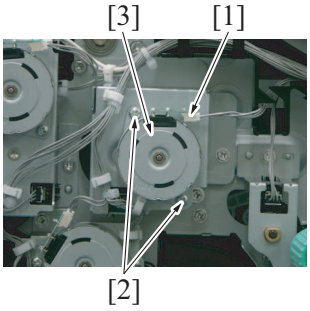
3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the FNS discharge motor assy [4].



5. Remove two screws [1], and remove the FNS discharge motor [2].
6. To reinstall, reverse the order of removal.

8.16.13 Receiving roller retraction motor (M4) (FS-536/FS-536SD)

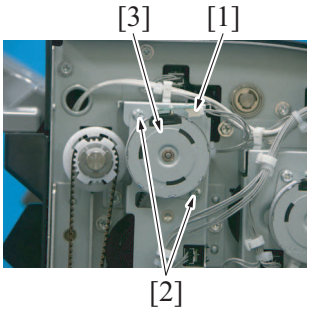
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the receiving roller retraction motor [3].
6. To reinstall, reverse the order of removal.

8.16.14 FNS paddle motor (M5) (FS-536/FS-536SD)

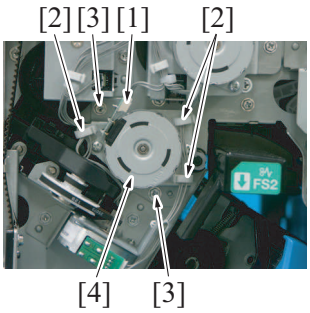
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)



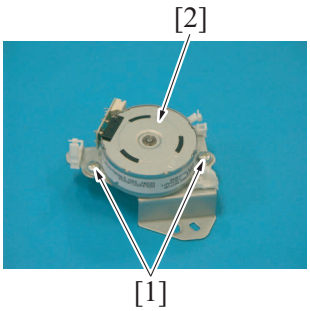
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the FNS paddle motor [3].
6. To reinstall, reverse the order of removal.

8.16.15 Trailing edge stopper motor (M6) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)



4. Disconnect the connector [1].
5. Remove the harness from three wire saddles [2].
6. Remove two screws [3], and remove the trailing edge stopper motor assy [4].

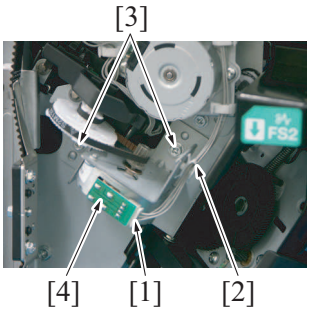


7. Remove two screws [1], and remove the trailing edge stopper motor [2].

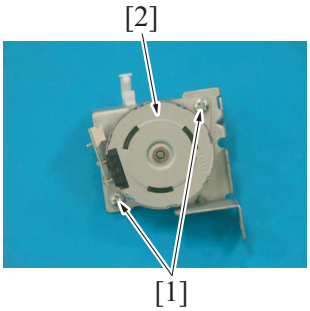
8. To reinstall, reverse the order of removal.

8.16.16 Alignment motor/front (M7) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.8.16.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)



4. Disconnect the connector [1].
5. Remove the harness from the wire saddle [2].
6. Remove two screws [3] and remove the alignment motor/front assy [4].

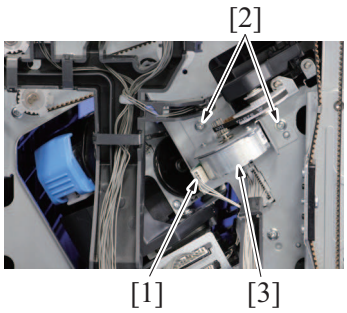


7. Remove two screws [1] and remove the alignment motor/front [2].

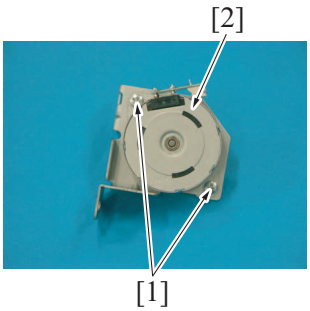
8. To reinstall, reverse the order of removal.

8.16.17 Alignment motor/rear (M8) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)



3. Disconnect the connector [1].
4. Remove two screws [2] and remove the alignment motor/rear assy [3].

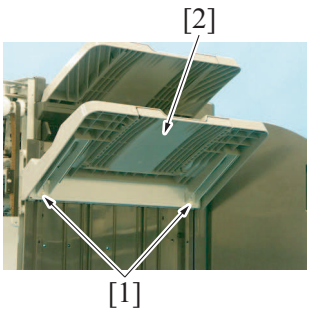


5. Remove two screws [1] and remove the alignment motor/rear [2].

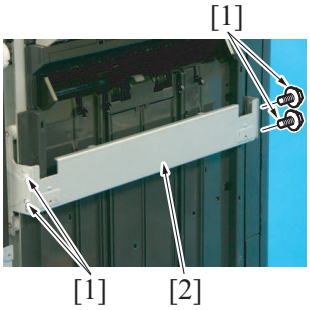
6. To reinstall, reverse the order of removal.

8.16.18 Pre-eject drive motor (M9) (FS-536/FS-536SD)

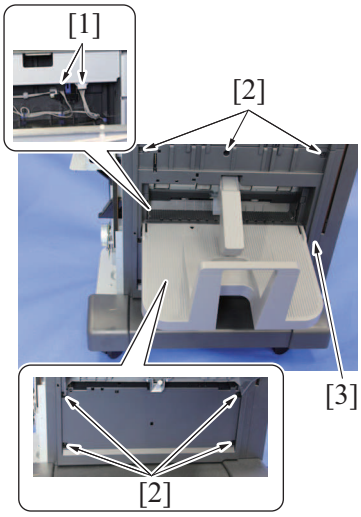
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



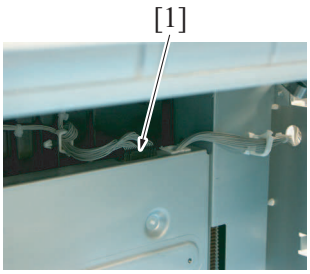
4. Remove two screws [1], and remove the exit tray [2].



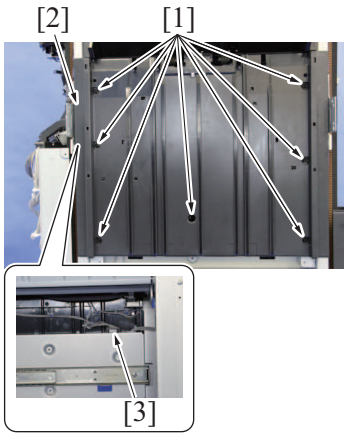
5. Remove four screws [1] and remove the plate [2].



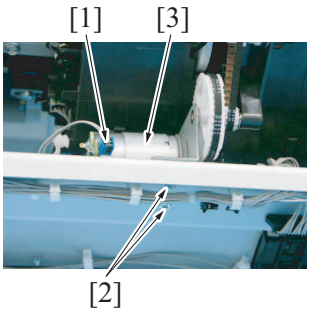
6. Disconnect two connectors [1].
7. Remove seven screws [2], and remove the left lower cover [3].
   NOTE
   - **Disconnect one connector when the saddle unit is not installed.**



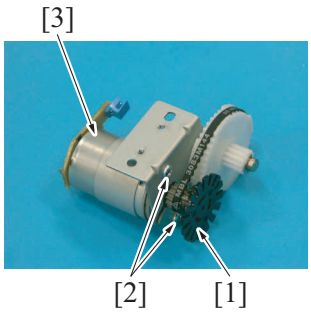
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



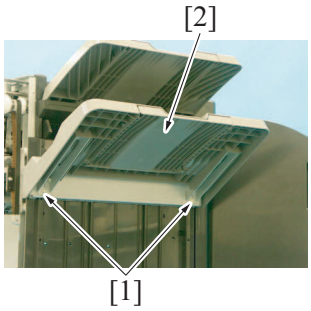
11. Disconnect the connector [1].
12. Remove two screws [2], and remove the pre-eject drive motor assy [3].



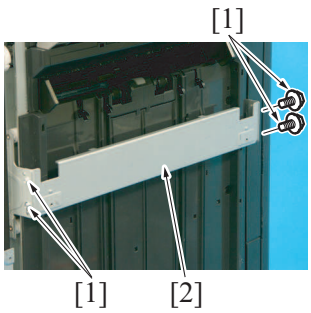
13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the pre-eject drive motor [3].
15. To reinstall, reverse the order of removal.

8.16.19 Bundle eject motor (M10) (FS-536/FS-536SD)

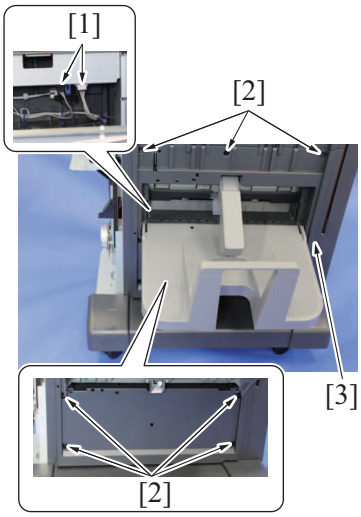
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



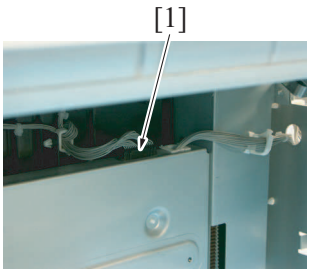
4. Remove two screws [1], and remove the exit tray [2].



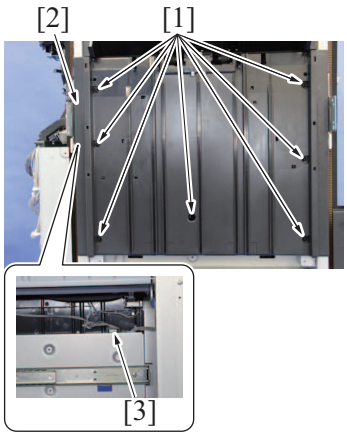
5. Remove four screws [1] and remove the plate [2].



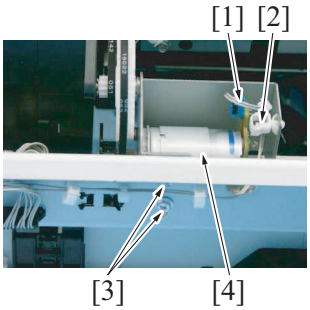
6. Disconnect two connectors [1].
7. Remove seven screws [2], and remove the left lower cover [3].
   NOTE
   - **Disconnect one connector when the saddle unit is not installed.**



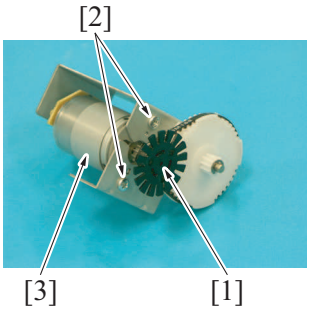
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



11. Disconnect the connector [1], and remove the harness from the wire saddle [2].
12. Remove two screws [3], and remove the bundle eject motor assy [4].

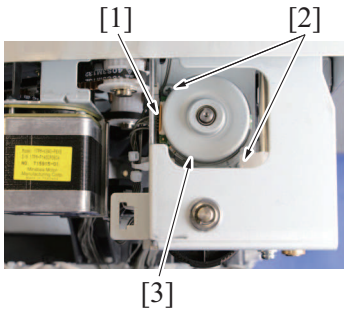


13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the bundle eject motor [3].

15. To reinstall, reverse the order of removal.

8.16.20 Main tray up/down motor (M11) (FS-536/FS-536SD)

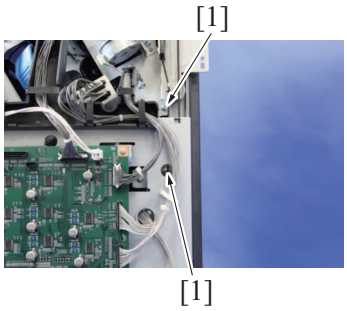
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)



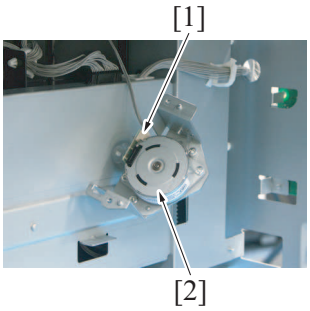
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the main tray up/down motor [3].
5. To reinstall, reverse the order of removal.

8.16.21 Paper receiving control motor (M12) (FS-536/FS-536SD)

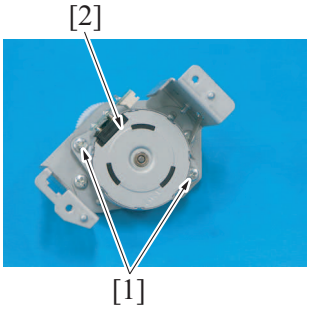
1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



4. Remove two screws [1].



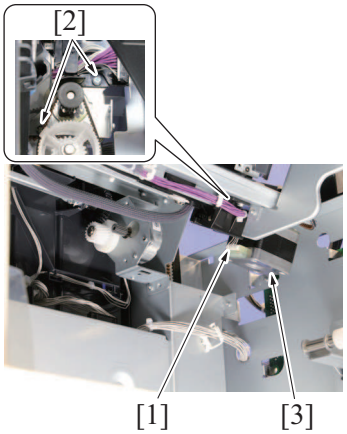
5. Disconnect the connector [1], and remove the paper receiving control motor assy [2].



6. Remove two screws [1], and remove the paper receiving control motor [2].
7. To reinstall, reverse the order of removal.

8.16.22 Side stapler movement motor (M13) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.8.16.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.

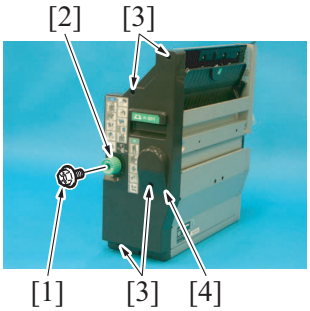


4. Disconnect the connector [1].
5. Remove two screws [2], and remove the side stapler movement motor [3].
6. To reinstall, reverse the order of removal.

8.17 Disassembly/reassembly procedure (FS-536SD saddle section)

8.17.1 Front cover (FS-536SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-536SD)

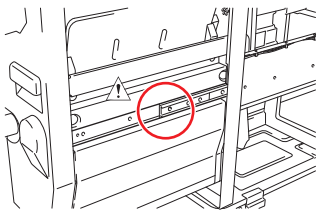


2. Remove the screw [1], and remove the jam clearing dial [2].
3. Remove four screws [3], and remove the front cover [4].
4. To reinstall, reverse the order of removal.

8.17.2 Saddle unit (FS-536SD)

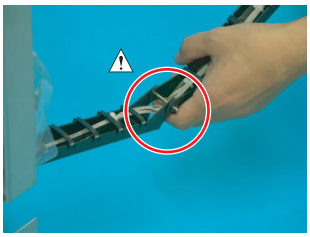
⚠CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.

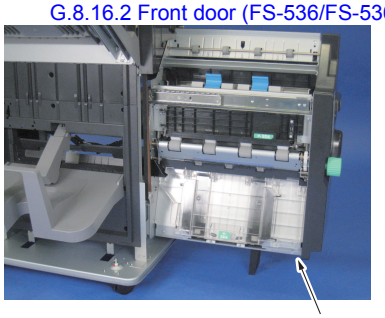


⚠CAUTION

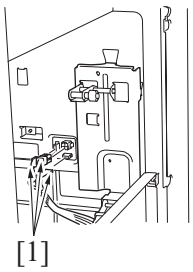
- Be careful not to jam your finger in the connecting section of the pantograph.



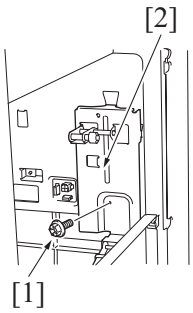
1. Remove the finisher.
   G.8.16.6 Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.8.16.2 Front door (FS-536/FS-536SD)



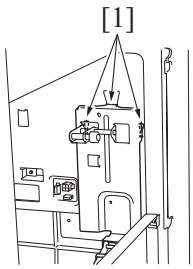
3. Pull out the saddle unit [1].
4. Remove the finisher left lower cover.
   Left lower cover (FS-536/FS-536SD)
5. Remove the finisher front upper cover.
   G.8.16.3 Front upper cover (FS-536/FS-536SD)
6. Remove the finisher front lower cover.
   G.8.16.5 Front lower cover (FS-536/FS-536SD)



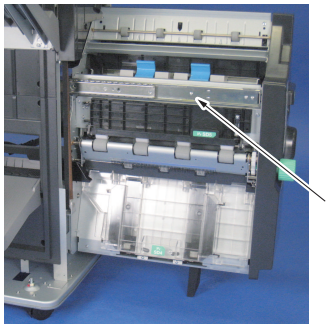
7. Disconnect three connectors [1].



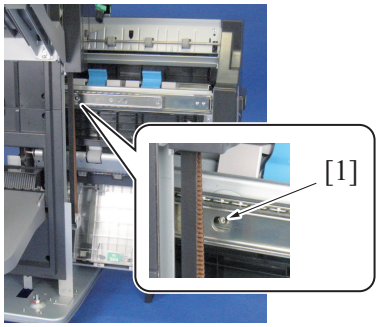
8. Remove the screw [1], and remove the pantograph [2].



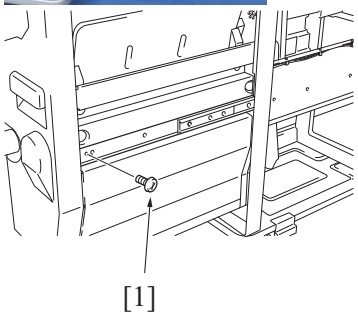
9. **NOTE**
- **For installation of the pantograph, insert three hooks [1] on the pantograph of the saddle unit into the back holes inside the finisher.**



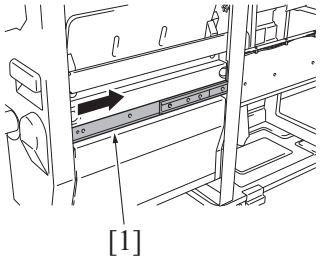
10. Remove the screw [1].



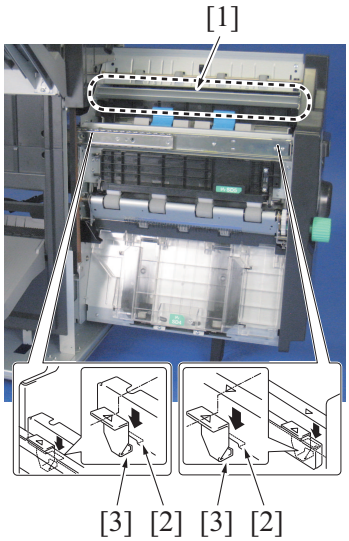
11. Push back the saddle unit into the position of the illustration, and then remove the screw [1].



12. Pull out the saddle unit, and then remove the screw [1].



13. Insert the rail [1] on the right side into the finisher.



14. Grip the portion [1] as shown in the illustration to raise the saddle unit and take it out.
NOTE
- **For installation of the saddle unit, insert two hooks [3] on the left rail into two holes [2] of the saddle unit.**

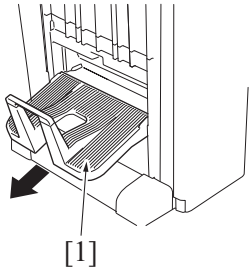
15. To reinstall, reverse the order of removal.

8.17.3 Exit tray (FS-536SD saddle section)



1. Remove the pin [1], and remove the exit lever [2].

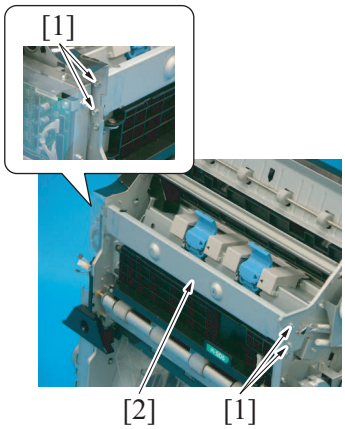
2. Remove the exit tray [1].



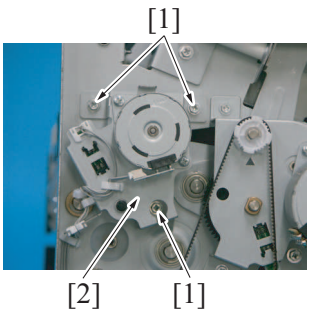
3. To reinstall, reverse the order of removal.

8.17.4 Staple unit (FS-536SD saddle section)

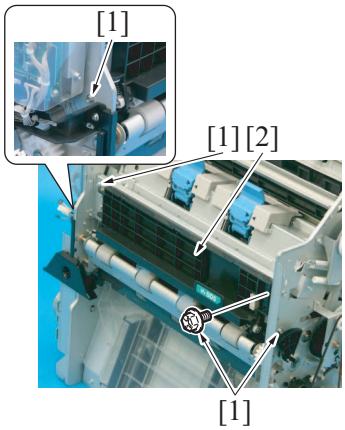
1. Remove the saddle unit.
Saddle unit (FS-536SD)
2. Remove the front cover.
G.8.17.1 Front cover (FS-536SD saddle section)



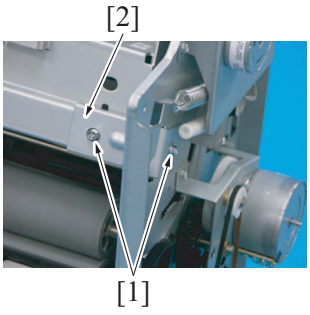
3. Remove four screws [1], and remove the plate [2].



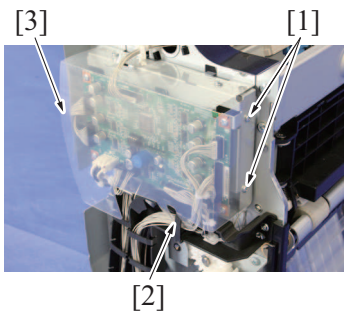
4. Remove three screws [1], and remove the tri-folding guide motor assy [2].



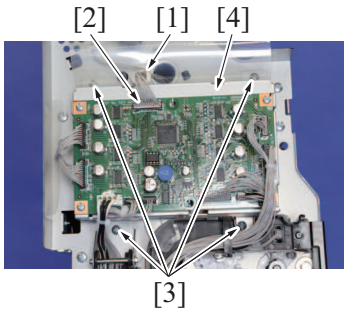
5. Remove four screws [1], and remove the conveyance assy [2].



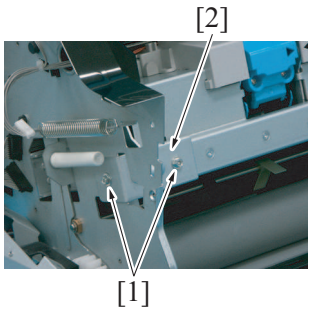
6. Remove two screws [1], and remove the plate [2].



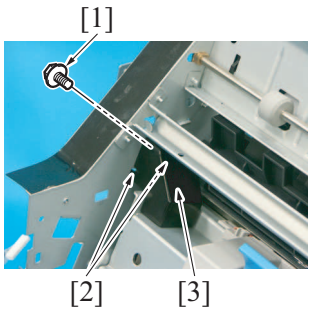
7. Remove two screws [1].
8. Detach the board support film [3] from the harness guide tabs [2].



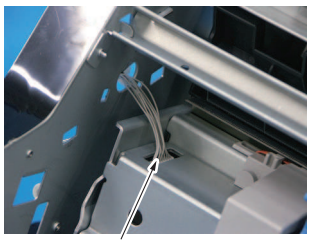
9. Remove the harness from the wire saddle [1].
10. Disconnect the connector [2].
11. Remove four screws [3], and remove the SD control board assy [4].



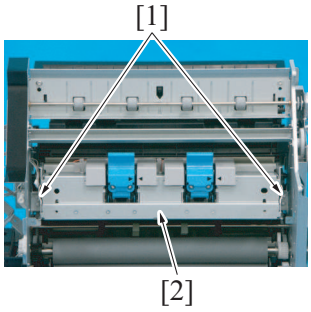
12. Remove two screws [1], and remove the plate [2].



13. Remove the screw [1].
14. Release two tabs [2], and remove the cover [3].



15. Disconnect the connector [1].

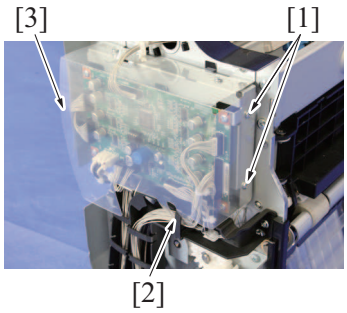


16. Remove two screws [1], and remove the staple unit [2].

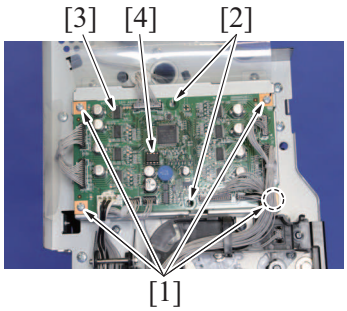
17. To reinstall, reverse the order of removal.

8.17.5 SD control board (SDCB) (FS-536SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-536SD)



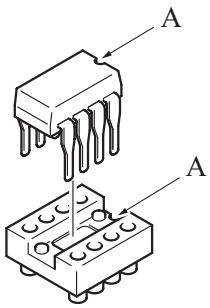
2. Remove two screws [1].
3. Remove the board support film [3] from the harness guide [2].



4. Disconnect all the connectors from the board.
5. Remove four screws [1].
6. Detach the SD control board [3] from two tabs [2].

NOTE

- **When the SD control board (SDCB) has been replaced, be sure to remount EEPROM (U3) [4].**
  Remove EEPROM (U3) [4] from the old SD control board and mount it on the new SD control board.



7. **NOTE**
   - **When mounting EEPROM (U3), align the notches (indicated by "A" in the illustration).**

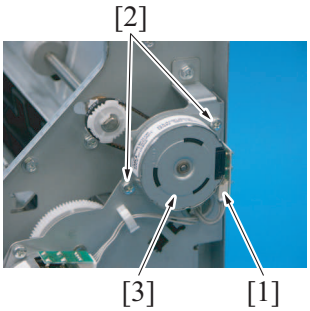
8. To reinstall, reverse the order of removal.

NOTE

- **After replacing the SD control board, be sure to install the latest firmware.**

8.17.6 SD transport motor (M1) (FS-536SD saddle section)

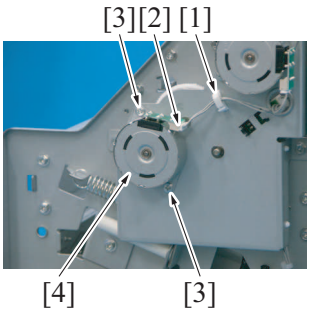
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD transport motor [3].
5. To reinstall, reverse the order of removal.

8.17.7 Paper discharge control motor (M2) (FS-536SD saddle section)

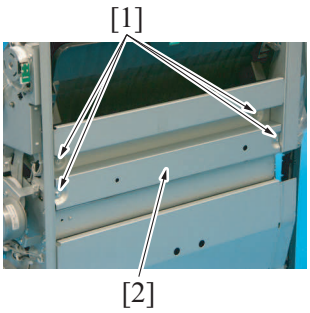
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



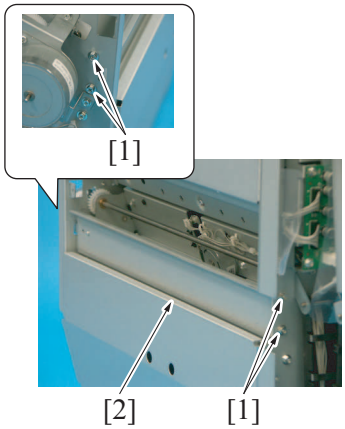
3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the paper discharge control motor [4].
5. To reinstall, reverse the order of removal.

8.17.8 Alignment motor (M3) (FS-536SD saddle section)

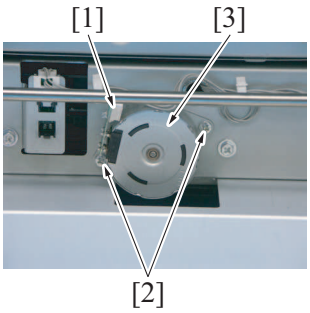
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



3. Remove four screws [1], and remove the plate [2].



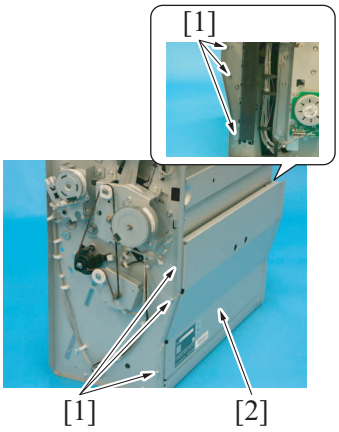
4. Remove four screws [1], and remove the plate [2].



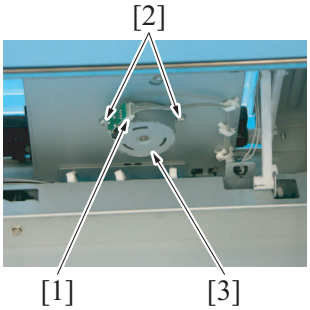
5. Disconnect the connector [1].
6. Remove two screws [2], and remove the alignment motor [3].
7. To reinstall, reverse the order of removal.

8.17.9 Stopper drive motor (M4) (FS-536SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



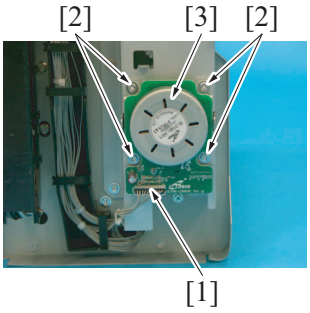
3. Remove six screws [1], and remove the plate [2].



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the stopper drive motor [3].
6. To reinstall, reverse the order of removal.

8.17.10 Center fold roller motor (M5) (FS-536SD saddle section)

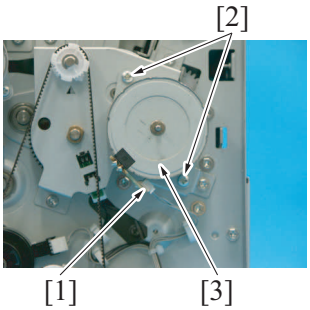
1. Remove the saddle unit.
   Saddle unit (FS-536SD)



2. Disconnect the connector [1].
3. Remove four screws [2], and remove the center fold roller motor [3].
4. To reinstall, reverse the order of removal.

8.17.11 Center fold guide motor (M6) (FS-536SD saddle section)

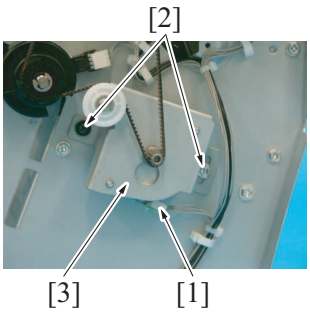
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



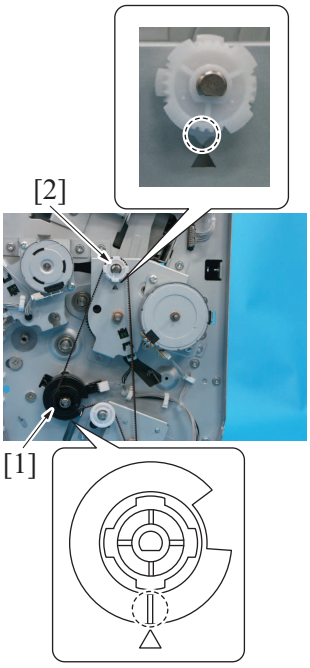
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the center fold guide motor [3].
5. To reinstall, reverse the order of removal.

8.17.12 SD paddle motor (M7) (FS-536SD saddle section)

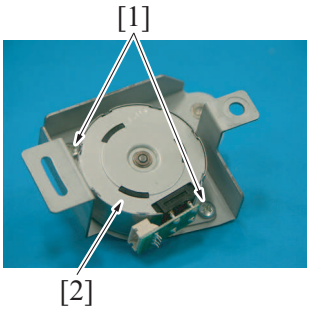
1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD paddle motor assy [3].



5. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

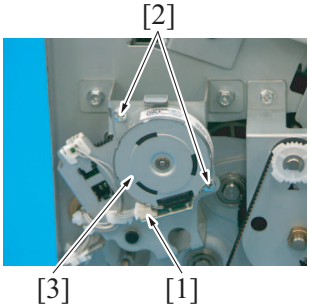


6. Remove two screws [1], and remove the SD paddle motor [2].

7. To reinstall, reverse the order of removal.

8.17.13 Tri-folding guide motor (M8) (FS-536SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the tri-folding guide motor [3].

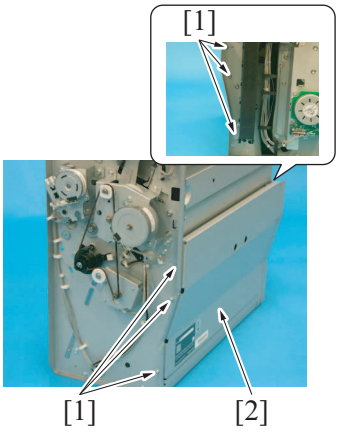
5. To reinstall, reverse the order of removal.

8.17.14 Center fold knife motor (M9) (FS-536SD saddle section)

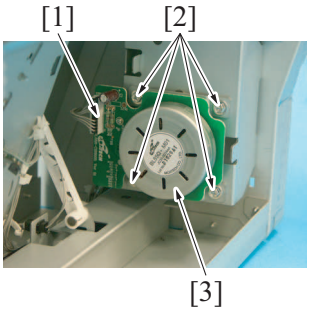
1. Remove the saddle unit.

Saddle unit (FS-536SD)

2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)



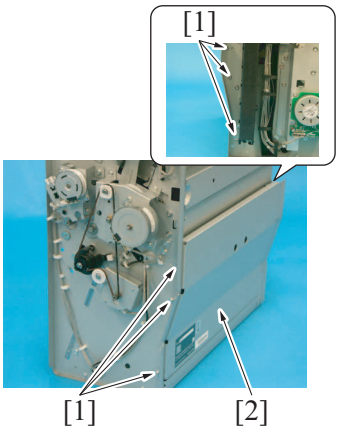
3. Remove six screws [1], and remove the plate [2].



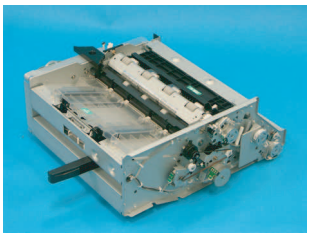
4. Disconnect the connector [1].
5. Remove four screws [2], and remove the center fold knife motor [3].
6. To reinstall, reverse the order of removal.

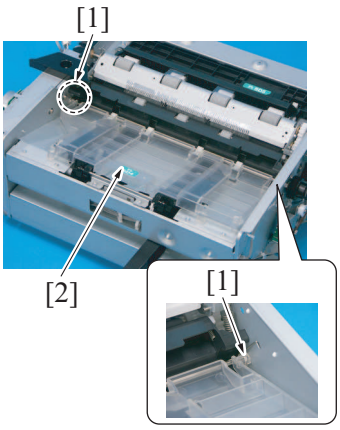
8.17.15 Stopper solenoid (SD1) (FS-536SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-536SD)
2. Remove the front cover.
   G.8.17.1 Front cover (FS-536SD saddle section)

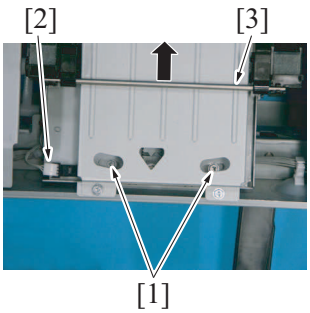


3. Remove six screws [1], and remove the plate [2].
4. Place the saddle unit as shown in the illustration.



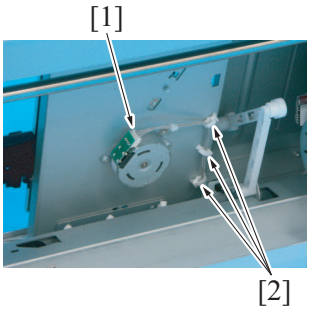


5. Remove two stoppers [1], and remove the guide plate [2].

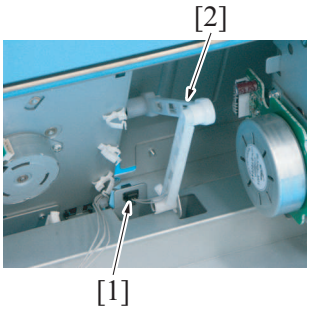


6. Slide the lever unit [3] upward.
7. Remove two screws [1] and disconnect the connector [2].

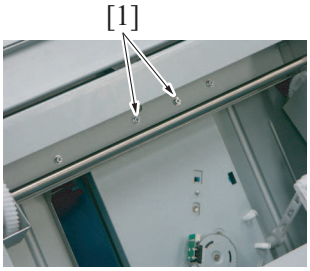
8. Raise the saddle unit.



9. Disconnect the connector [1], and remove the harness from three wire saddles [2].

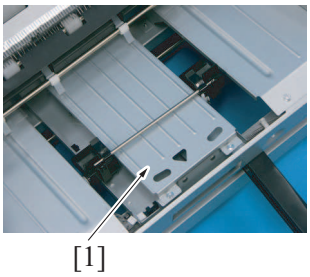


10. Disconnect the connector [1], and remove the drive lever [2].

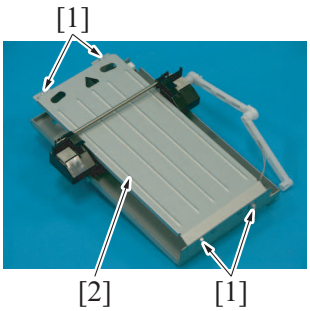


11. Remove two screws [1].

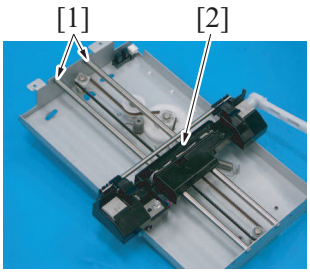
12. Remove the guide plate assy [1].
NOTE
- **When reinstalling the guide plate assy, perform mechanical adjustment.**
Half-fold skew adjustment



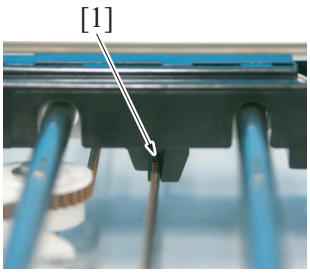
13. Remove four screws [1], and remove the plate [2].



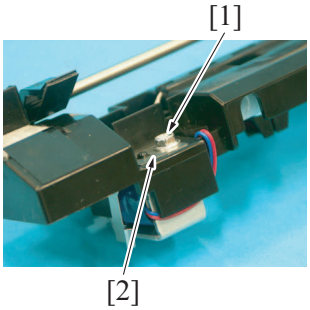
14. Remove two E-rings [1], and remove the stopper guide [2].

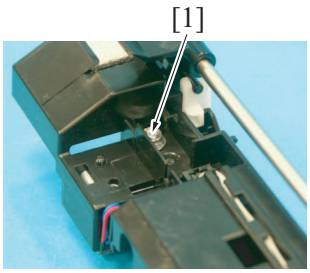


15. **NOTE**
- **When reinstalling the stopper guide, fit the belt into the stopper guide groove [1].**

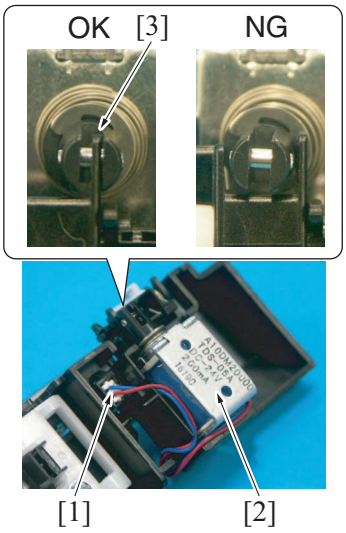


16. Remove the screw [1], and remove the plate [2].





17. Remove the screw [1].



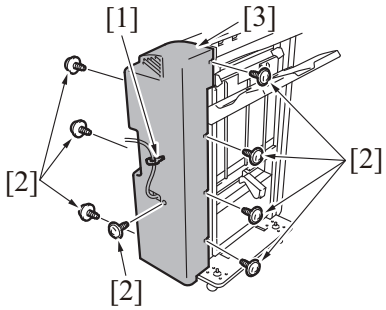
18. Disconnect the connector [1], and remove the stopper solenoid [2].
NOTE
- **When reinstalling the stopper solenoid, fit its tip into the place [3] shown in the illustration.**

19. To reinstall, reverse the order of removal.

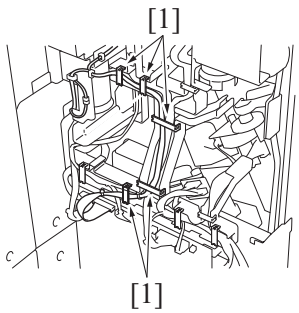
8.18 Disassembly/reassembly procedure (PK-520)

8.18.1 Punch kit (PK-520)

1. Remove the finisher from the main body.
G.8.16.6 Finisher (FS-536/FS-536SD)

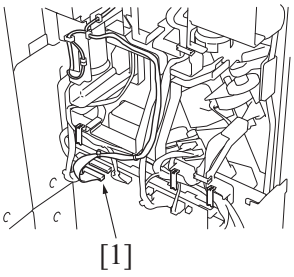


2. Remove the harness from the wire saddle [1].
3. Remove eight screws [2], and remove the rear cover [3].

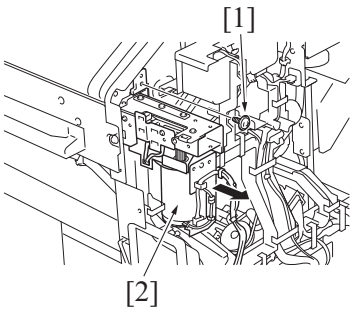


4. Remove the harness from five wire saddles [1].

5. Disconnect the connector [1].



6. Remove the screw [1], and remove the punch kit [2].

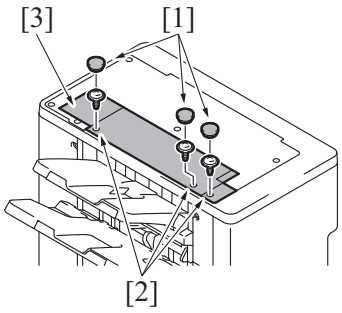


7. To reinstall, reverse the order of removal.

8.19 Disassembly/reassembly procedure (FS-537/FS-537SD)

8.19.1 Upper cover/1 (FS-537/FS-537SD)

1. Remove three caps [1] and three screws [2], then remove the upper cover/1 [3].

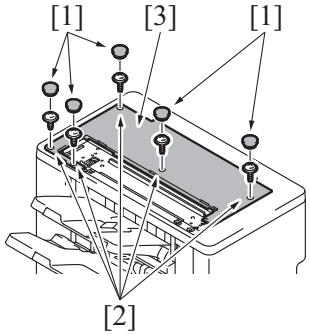


2. Reinstall the above parts following the removal steps in reverse.

8.19.2 Upper cover/2 (FS-537/FS-537SD)

1. Remove the upper cover/1.
G.8.19.1 Upper cover/1 (FS-537/FS-537SD)

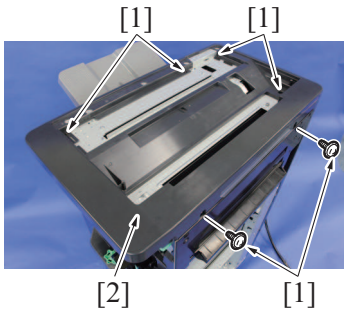
2. Remove five caps [1] and five screws [2], then remove the upper cover/2 [3].



3. Reinstall the above parts following the removal steps in reverse.

8.19.3 Upper cover/3 (FS-537/FS-537SD)

1. Remove the upper cover/1.
G.8.19.1 Upper cover/1 (FS-537/FS-537SD)
2. Remove the upper cover/2.
G.8.19.2 Upper cover/2 (FS-537/FS-537SD)

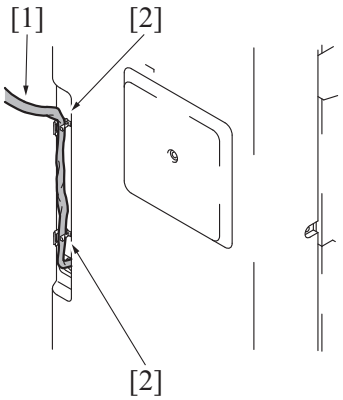


3. Remove six screws [1], and remove the upper cover/3 [2].

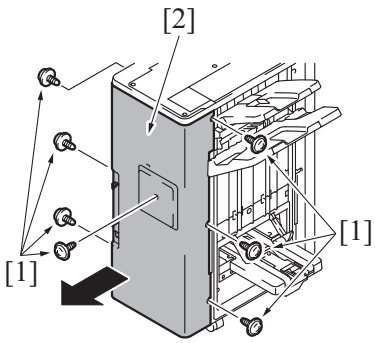
4. Reinstall the above parts following the removal steps in reverse.

8.19.4 Rear cover (FS-537/FS-537SD)

1. Remove the finisher from the main body.
G.8.19.12 Finisher (FS-537/FS-537SD)



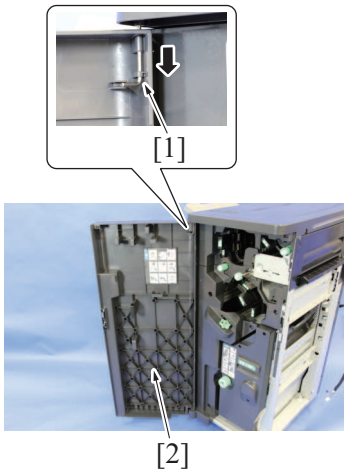
2. Remove the cable [1] at the back of the finisher from two wire saddles [2].



3. Remove seven screws [1], and remove the rear cover [2].

4. Reinstall the above parts following the removal steps in reverse.

8.19.5 Front door (FS-537/FS-537SD)

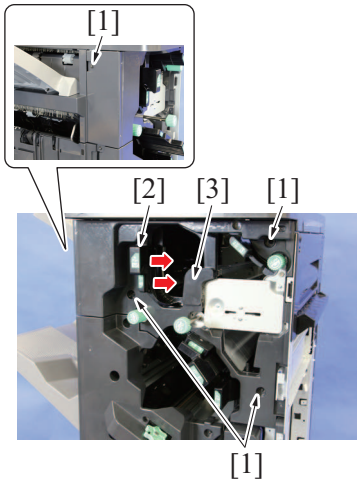


1. Remove the stopper [1] and remove the front door [2].

2. Reinstall the above parts following the removal steps in reverse.

8.19.6 Front upper cover (FS-537/FS-537SD)

1. Remove the front door.
G.8.19.5 Front door (FS-537/FS-537SD)

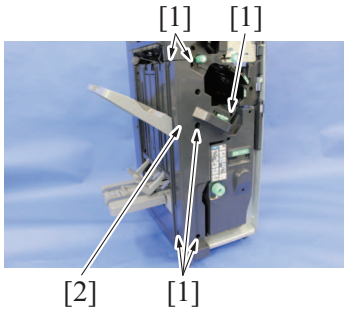


2. Remove four screws [1], then remove the front upper cover [3] while sliding the guide lever (FS4/FS5) [2].

3. Reinstall the above parts following the removal steps in reverse.

8.19.7 Front lower cover (FS-537/FS-537SD)

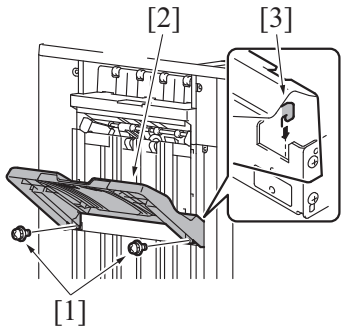
1. Remove the front door.
G.8.19.5 Front door (FS-537/FS-537SD)



2. Remove six screws [1], and remove the front lower cover [2].

3. Reinstall the above parts following the removal steps in reverse.

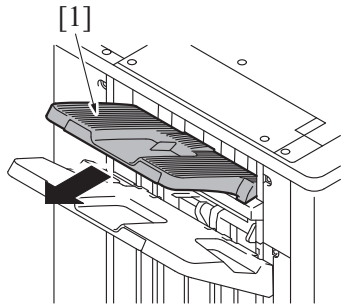
8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



1. Remove two screws [1] and remove the main tray [2].
NOTE
- **When installing the main tray, you must perform installation after mounting then main tray hooks [3] to the two depressions on the finisher.**

2. Reinstall the above parts following the removal steps in reverse.

8.19.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)



1. Remove the sub tray [1].

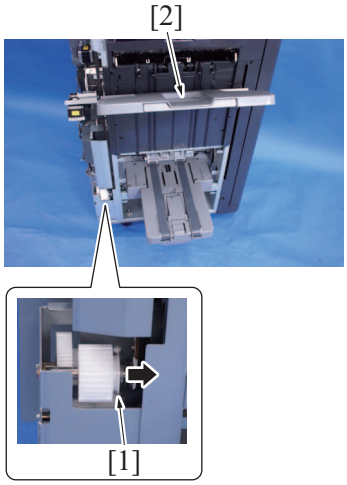
2. Reinstall the above parts following the removal steps in reverse.

8.19.10 Left upper cover (FS-537/FS-537SD)

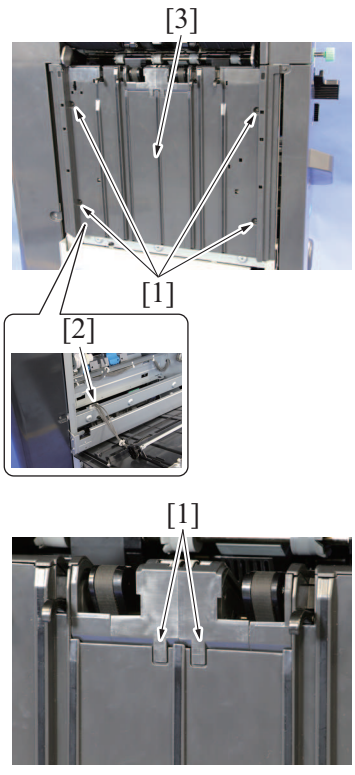
⚠CAUTION

- Always carry out this procedure while supporting the main tray with your hand since the main will strongly come down when you slide the coupling.

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the left lower cover.
   G.8.19.11 Left lower cover (FS-537/FS-537SD)

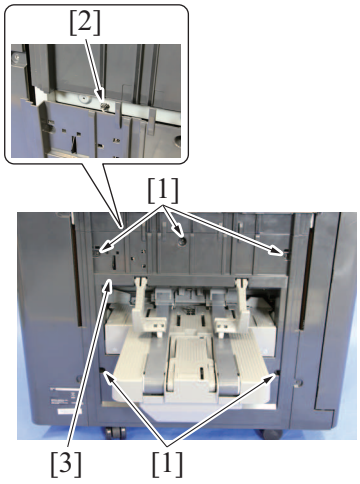


3. Slide the gear coupling [1] to the right and lower the main tray [2] to the lowest level.
4. Remove the main tray.
   G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)

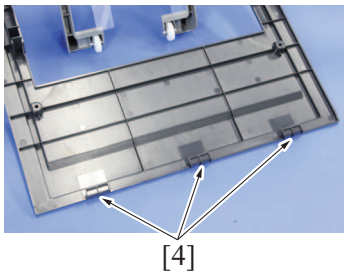


5. Remove four screws [1], disconnect the connector [2], and remove the left upper cover [3].
6. **NOTE**
   - **Always perform the installation after mounting the top part of the left upper cover on the two inner tabs [1] of the finisher.**
7. Reinstall the above parts following the removal steps in reverse.

8.19.11 Left lower cover (FS-537/FS-537SD)



1. Remove five screws [1], disconnect the connector [2], and remove the left lower cover [3].

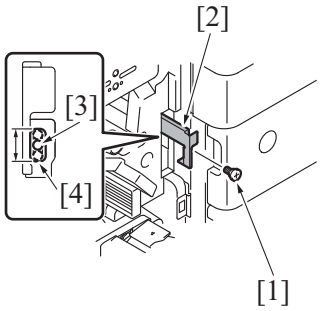


2. **NOTE**
   - **Always perform the installation after mounting three hooks [4] of the left lower cover on the finisher plate.**

3. Reinstall the above parts following the removal steps in reverse.

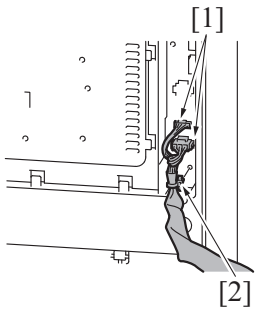
8.19.12 Finisher (FS-537/FS-537SD)

1. Open the front door of the finisher.

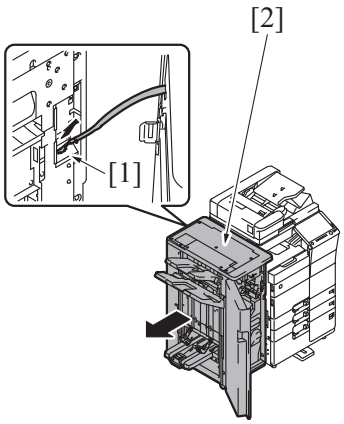


2. Remove the screw [1] and pull out the lever [2].
   NOTE
   - **During installation, when the pulled out lever is pushed down, the finisher screw [3] must be inside the range of the lever installation hole [4].**

3. Remove the DF cable cover.
   G.6.2.22 DF cable cover



4. Disconnect two connectors [1] and the cable tie insertion part [2].

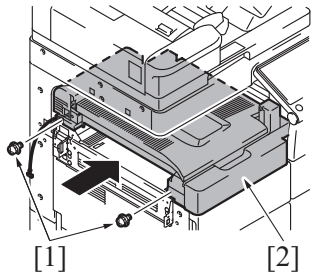


5. Remove the connector [1] and remove the finisher [2] from the main body.

6. To reinstall, reverse the order of removal.

8.19.13 Relay unit (FS-537/FS-537SD)

1. Remove the finisher from the main body.
   G.8.19.12 Finisher (FS-537/FS-537SD)

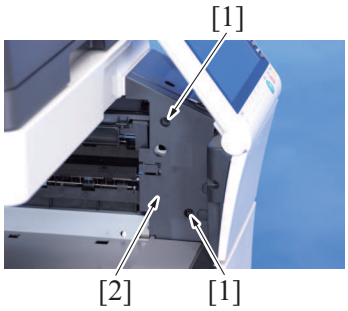


2. Remove two screws [1], and remove the RU transport unit [2].

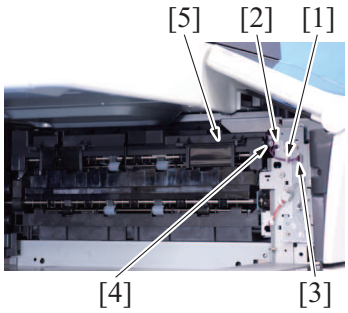
3. To reinstall, reverse the order of removal.

8.19.14 Sensor unit (FS-537/FS-537SD)

1. Remove the RU transport unit.
   G.8.19.13 Relay unit (FS-537/FS-537SD)



2. Remove two screws [1], and remove the control panel left cover/1 [2].



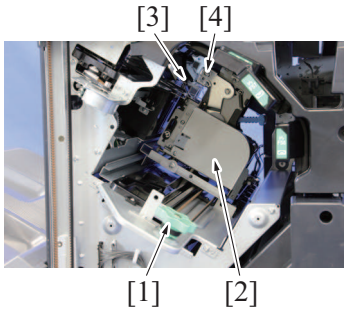
3. Remove the harness from the wire saddle [1] and the edge cover [2].
4. Disconnect the connector [3].
5. Remove the screw [4], and remove the sensor unit [5].

6. To reinstall, reverse the order of removal.

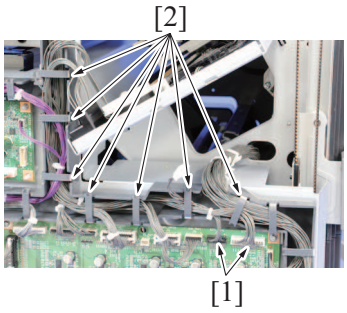
8.19.15 Stapler unit (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the front door.
   G.8.19.5 Front door (FS-537/FS-537SD)
3. Remove the front lower cover.
   G.8.19.7 Front lower cover (FS-537/FS-537SD)

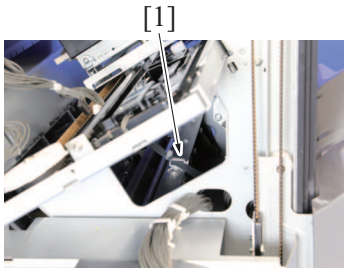
4. Remove the stapler movement motor assy
G.8.19.30 Stapler movement motor (M19) (FS-537/FS-537SD)



5. Rotate the stapler transfer dial [1] until the stapler [2] has been moved to the location shown in the figure (the location where the back-end stopper [3] does not interact with the clincher staple arm [4]).

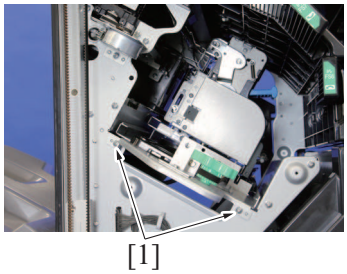


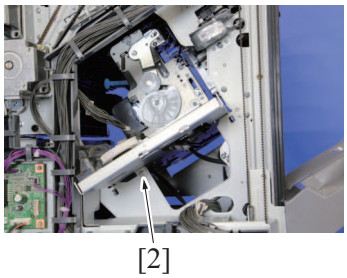
6. Disconnect two connectors [1] and remove the harness from seven wire saddles [2].

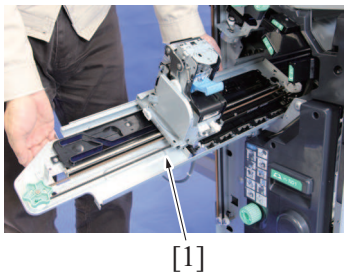


7. Remove the harness from the wire saddle [1].

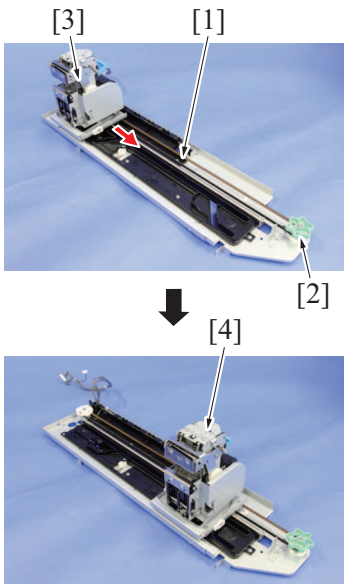
8. Remove two screws [1] from the front of the finisher and one screw [2] from the back of the finisher.



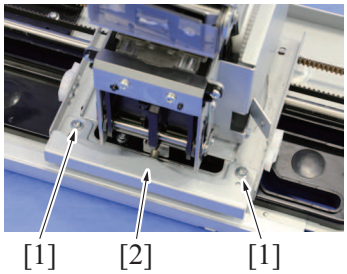




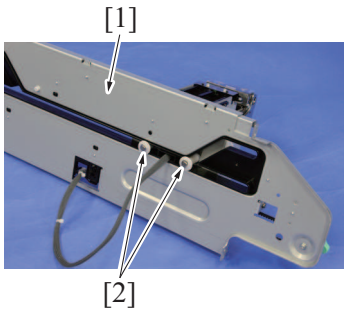
9. Remove the stapler assy [1] from the finisher.
NOTE
- **While removing the stapler assy [1], be careful not to hit the stapler against the finisher frame.**



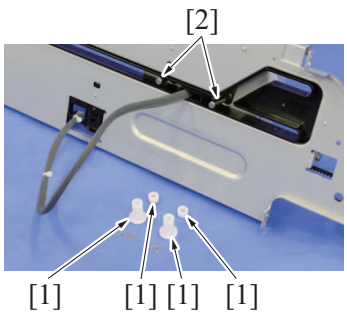
10. Put the stapler assy [1] on a stable workbench.
11. Rotate the stapler transfer dial [2] until the stapler unit [3] has been moved to the near side [4].



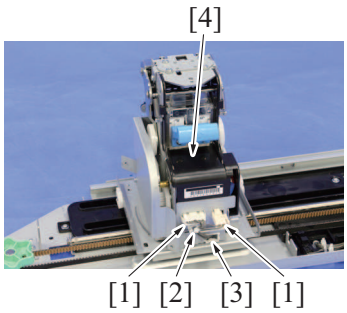
12. Remove two screws [1], and remove the plate [2].



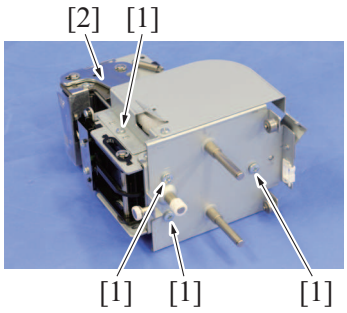
13. Flip the stapler assy [1] over.
14. Remove two E-rings [2] from the guide shafts.



15. Remove four white rollers [1] from the guide shaft [2].



16. Disconnect two connectors [1] and remove the harness from the wire saddle [2] and harness guide [3].
17. Remove the stapler assy [4].

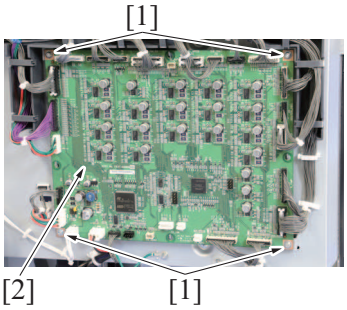


18. Remove four screws [1], and remove the stapler unit [2].

19. Reinstall the above parts following the removal steps in reverse.

8.19.16 FS control board (FSCB) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)

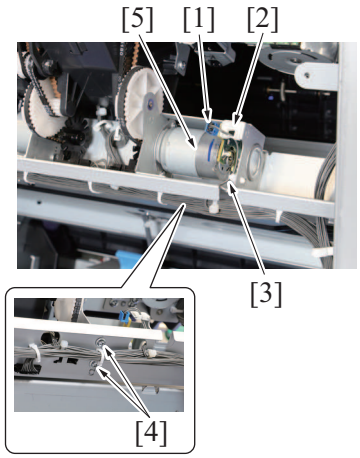


2. Disconnect all connectors on the FS control board.
3. Remove four screws [1], and remove the FS control board [2].

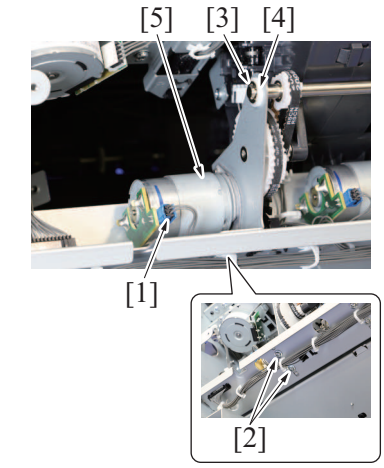
4. Reinstall the above parts following the removal steps in reverse.

8.19.17 Bundle eject motor (M1) / Pre-eject drive motor (M2) / Stacker plate drive motor (M3) (FS-537/FS-537SD)

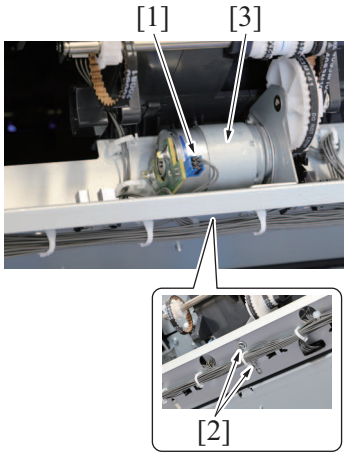
1. Remove the left upper cover.
   Left upper cover (FS-537/FS-537SD)
2. Remove the main tray (paper exit lower tray).
   G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



3. Disconnect the connector [1], and remove the harness from the edge cover [2] and the wire saddle [3].
4. Remove two screws [4], and remove the bundle eject motor [5].



5. Disconnect the connector [1].
6. Remove two screws [2], the E-ring [3], and the bushing [4], and remove the Pre-eject drive motor [5].

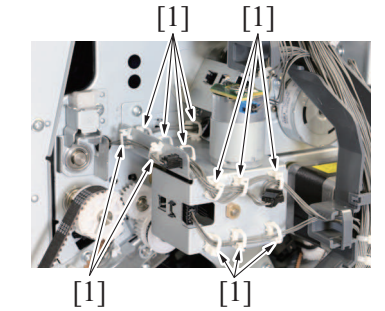


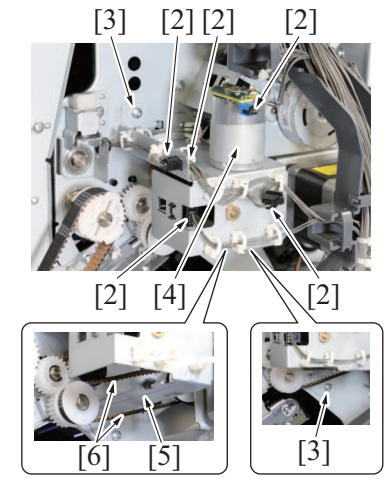
7. Disconnect the connector [1].
8. Remove two screws [2] and remove the stacker plate drive motor [3].

9. Reinstall the above parts following the removal steps in reverse.

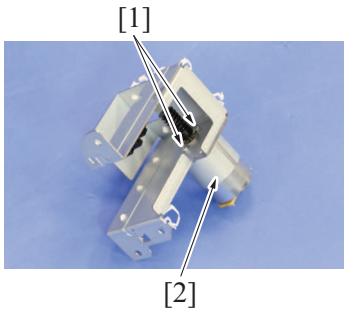
8.19.18 Route change gate motor (M4) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)





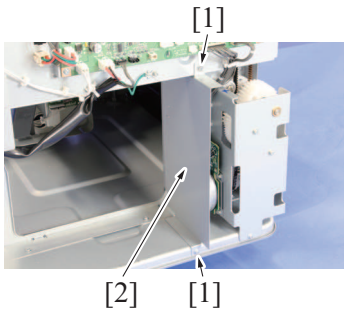
2. Remove the harness from 12 wire saddles [1].
3. Disconnect five connectors [2].
4. Remove two screws [3] and remove the route change gate motor assy [4].
   NOTE
   - **During installation, you must pass the metal plate [5] between the belt [6].**



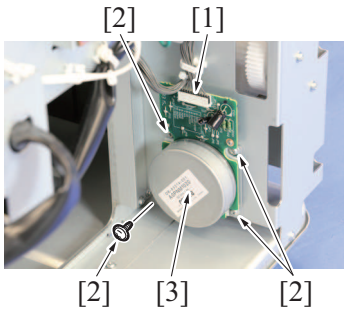
5. Remove two screws [1] and remove the route change gate motor [2].
6. Reinstall the above parts following the removal steps in reverse.

8.19.19 Main tray up/down motor (M6) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)



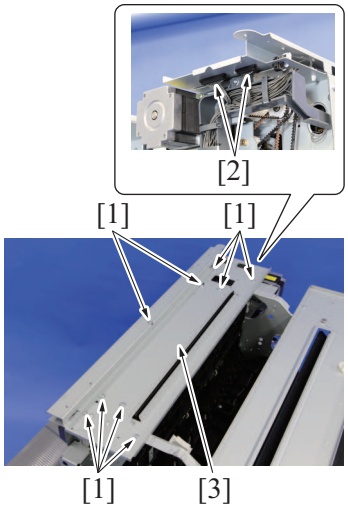
2. When the saddle unit is attached, open the front door and pull out the saddle unit.
3. Remove two screws [1] and remove the metal plate [2].



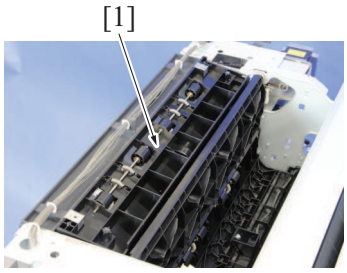
4. Disconnect the connector [1].
5. Remove four screws [2] and remove the main tray up/down motor [3].
6. Reinstall the above parts following the removal steps in reverse.

8.19.20 Paddle up/down motor (M7) / Arm drive motor (M8) / FNS paddle motor (M9) (FS-537/FS-537SD)

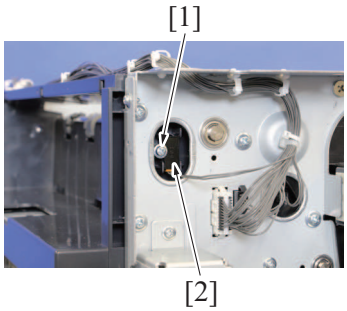
1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the upper cover/1.
   G.8.19.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
   G.8.19.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
   G.8.19.3 Upper cover/3 (FS-537/FS-537SD)
5. Remove the front upper cover.
   G.8.19.6 Front upper cover (FS-537/FS-537SD)
6. Remove the sub tray (paper exit upper tray).
   G.8.19.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)



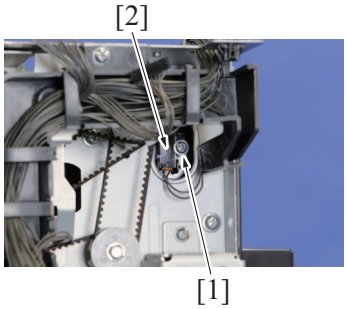
7. Remove nine screws [1], disconnect two connectors [2], and remove the metal plate [3].



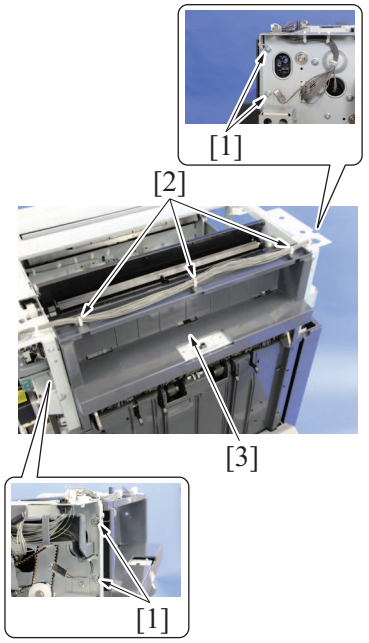
8. Remove the transfer roller unit [1].



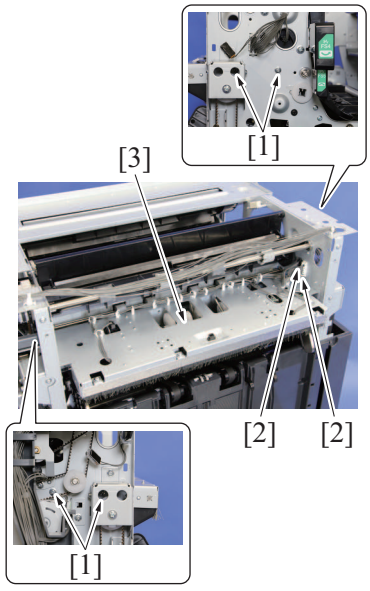
9. Remove the screw [1] and remove the sub tray full detection sensor/in (PS41) [2].



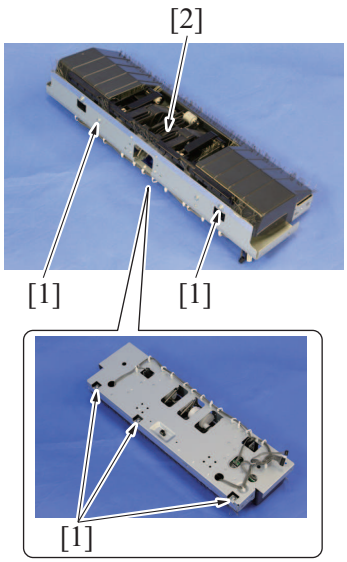
10. Remove the screw [1] and remove the sub tray full detection sensor/out (PS39) [2].



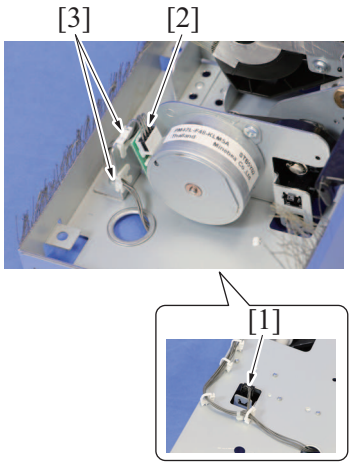
11. Remove four screws [1], remove the harness from three wire saddles [2], and remove the cover [3].



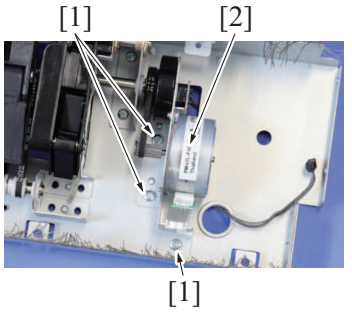
12. Remove four screws [1], disconnect two connectors [2], and remove the upper paddle unit [3].



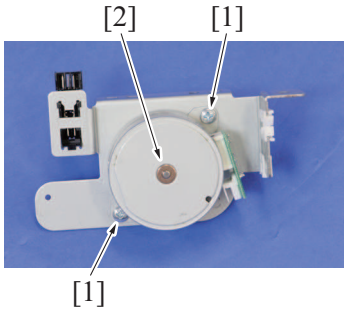
13. Remove five screws [1] and remove the cover [2].



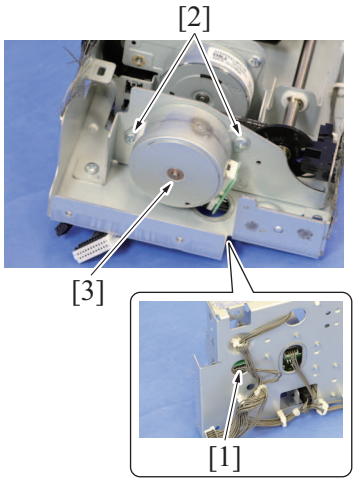
14. Disconnect the connector [1].
15. Disconnect the connector [2] and remove the harness from two edge covers [3].



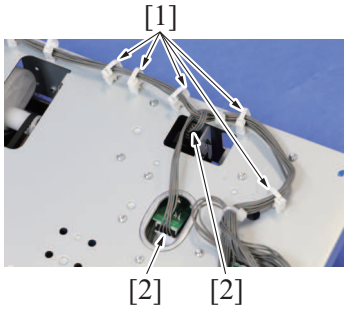
16. Remove three screws [1] and remove the paddle up/down motor assy [2].



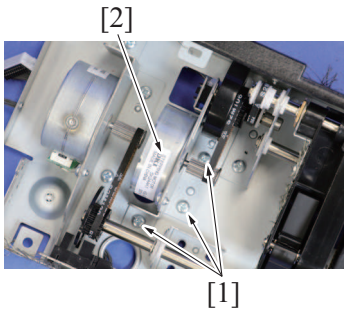
17. Remove two screws [1] and remove the paddle up/down motor [2].



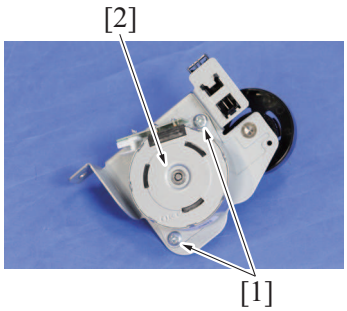
18. Disconnect the connector [1].
19. Remove two screws [2] and remove the arm drive motor [3].



20. Disconnect the harness from five wire saddles [1], loosen the harness, and disconnect two connectors [2].



21. Remove three screws [1] and remove the FNS paddle motor assy [2].

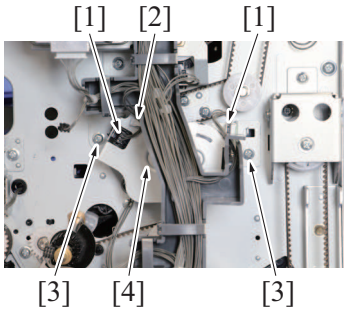


22. Remove two screws [1], and remove the FNS paddle motor [2].

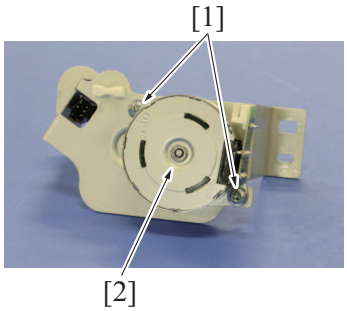
23. Reinstall the above parts following the removal steps in reverse.

8.19.21 Receiving roller retraction motor (M10) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the route change gate motor assy.
   G.8.19.18 Route change gate motor (M4) (FS-537/FS-537SD)
3. Remove the FNS discharge motor assy.
   G.8.19.28 FNS discharge motor (M17) (FS-537/FS-537SD)



4. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
5. Remove two screws [3] and remove the receiving roller retraction motor assy [4].

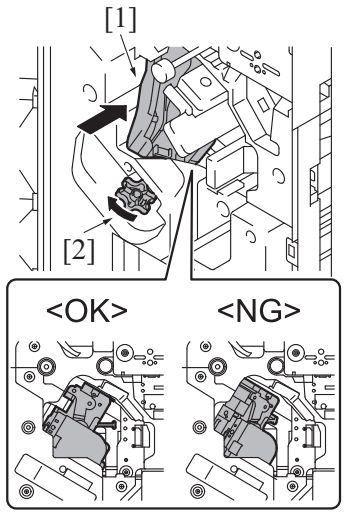


6. Remove two screws [1], and remove the receiving roller retraction motor [2].

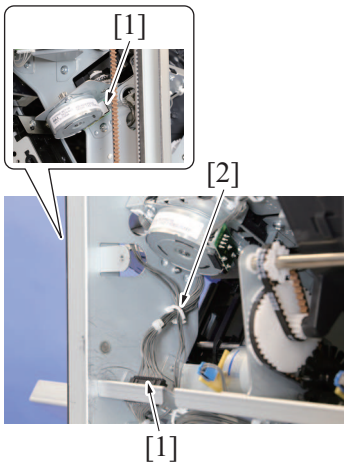
7. Reinstall the above parts following the removal steps in reverse.

8.19.22 Trail edge stopper motor/R (M11) (FS-537/FS-537SD)

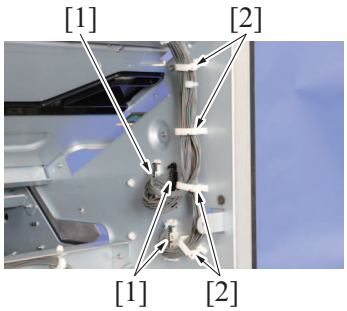
1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the front lower cover.
   G.8.19.7 Front lower cover (FS-537/FS-537SD)
3. Remove the left upper cover.
   Left upper cover (FS-537/FS-537SD)
4. Remove the main tray (paper exit lower tray).
   G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



5. Rotate the stapler transfer dial [2] to move the stapler [1] towards the rear until the dial stops.
NOTE
- **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**

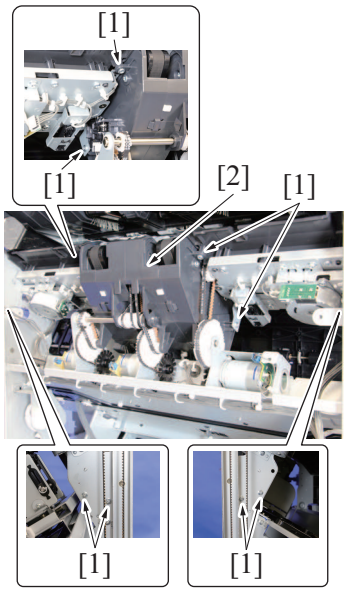


6. Disconnect two connectors [1] and remove the harness from the wire saddle [2].

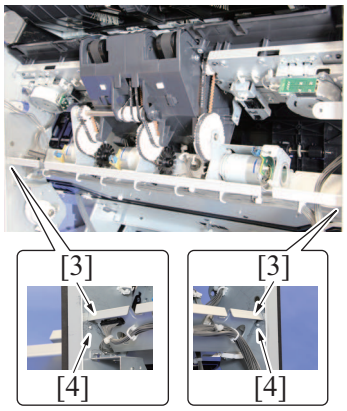


7. Disconnect three connectors [1] and remove the harness from four wire saddles [2].

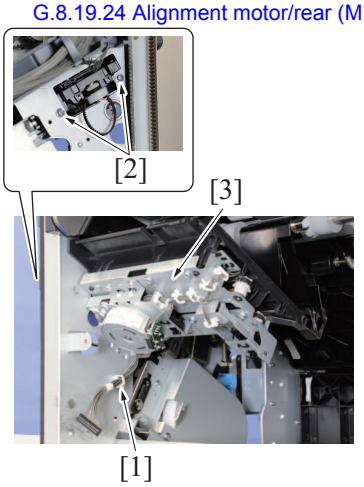
8. Remove eight screws [1] and remove the paper exit part [2].



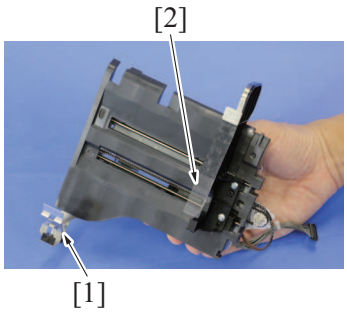
9. **NOTE**
- **During installation, place the metal plate part [3] shown in the illustration on top of the dowel [4].**



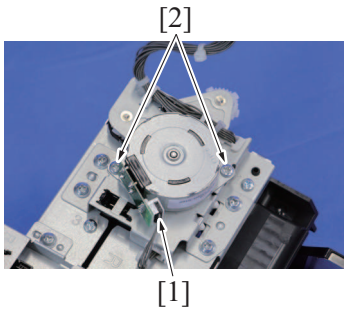
10. Remove the alignment motor/rear.
G.8.19.24 Alignment motor/rear (M13) (FS-537/FS-537SD)



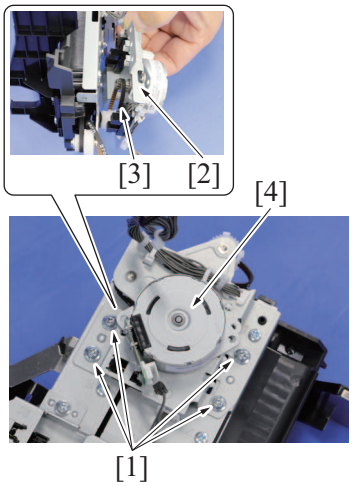
11. Remove the harness from the wire saddle [1].
12. Remove two screws [2] and remove the alignment plate [3].
NOTE
- **When removing, be careful not to drop the alignment plate.**



13. **NOTE**
    - **During the procedure, be careful not to bend the plate [1] and the mylar [2].**



14. Disconnect the connector [1] and remove two screws [2].

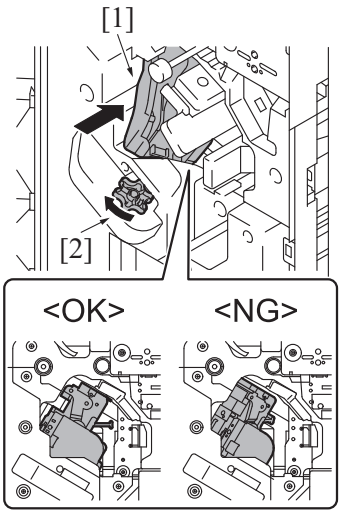


15. Remove four screws [1], remove the belt [3] while sliding the metal plate [2], then remove the trail edge stopper motor/R [4].
    NOTE
    - **Place the belt [3] on the gear during installation.**

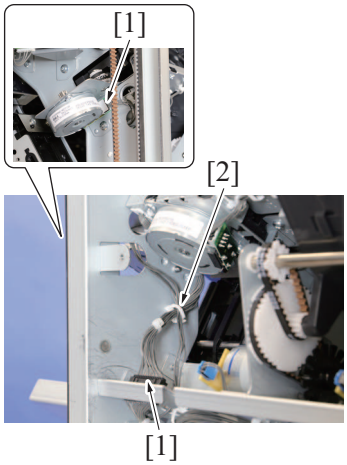
16. Reinstall the above parts following the removal steps in reverse.

8.19.23 Trail edge stopper motor/F (M12) (FS-537/FS-537SD)

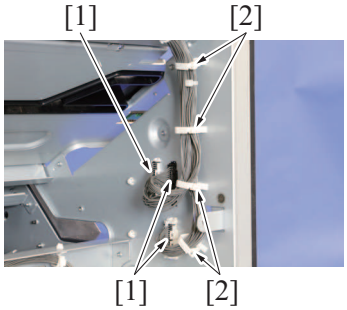
1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the front lower cover.
   G.8.19.7 Front lower cover (FS-537/FS-537SD)
3. Remove the left upper cover.
   Left upper cover (FS-537/FS-537SD)
4. Remove the main tray (paper exit lower tray).
   G.8.19.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



5. Rotate the stapler transfer dial [2] to move the stapler [1] towards the rear until the dial stops.
   NOTE
   - **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**

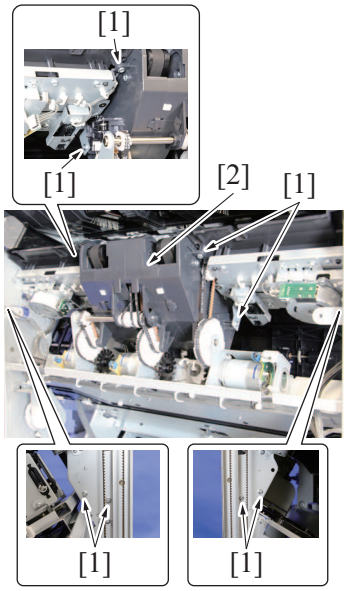


6. Disconnect two connectors [1] and remove the harness from the wire saddle [2].

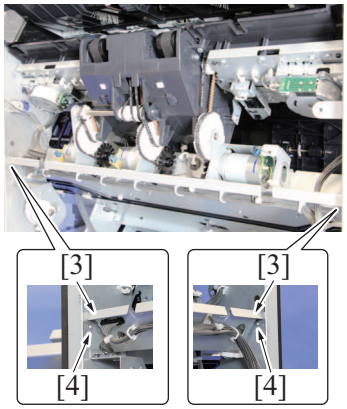


7. Disconnect three connectors [1] and remove the harness from four wire saddles [2].

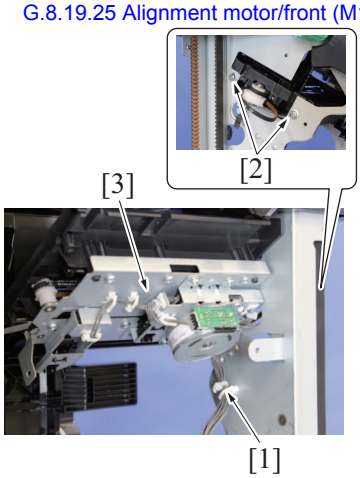
8. Remove eight screws [1] and remove the paper exit part [2].



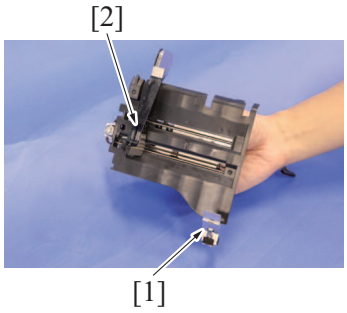
9. **NOTE**
- **During installation, place the plate [3] part shown in the illustration on top of the dowel [4].**



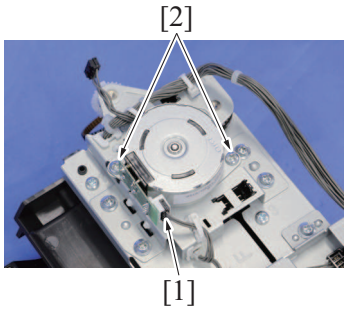
10. Remove the alignment motor/front.
G.8.19.25 Alignment motor/front (M14) (FS-537/FS-537SD)



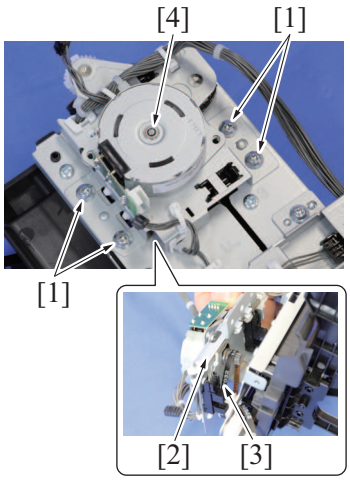
11. Remove the harness from the wire saddle [1].
12. Remove two screws [2] and remove the alignment plate [3].
NOTE
- **When removing, be careful not to drop the alignment plate.**



13. **NOTE**
- **During the procedure, be careful not to bend the plate [1] and the mylar [2].**



14. Disconnect the connector [1] and remove two screws [2].

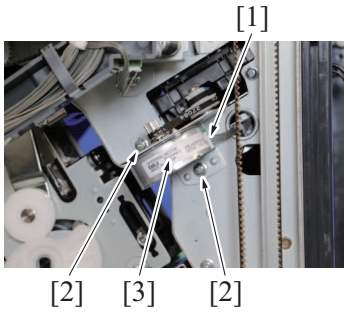


15. Remove four screws [1], remove the belt [3] while sliding the metal plate [2], then remove the trail edge stopper motor/F [4].
NOTE
- **Place the belt [3] on the gear during installation.**

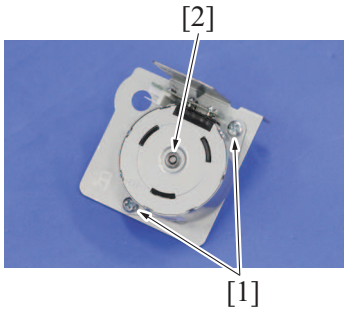
16. Reinstall the above parts following the removal steps in reverse.

8.19.24 Alignment motor/rear (M13) (FS-537/FS-537SD)

1. Remove the rear cover.
Rear cover (FS-537/FS-537SD)



2. Disconnect the connector [1].
3. Remove two screws [2], and remove the alignment motor/rear assy [3].

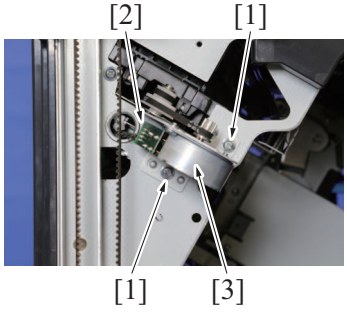


4. Remove two screws [1], and remove the alignment motor/rear [2].

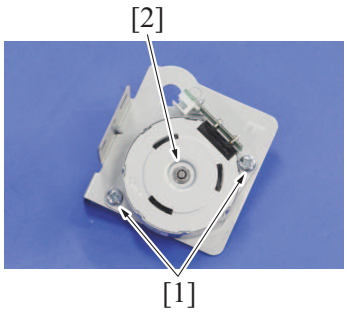
5. Reinstall the above parts following the removal steps in reverse.

8.19.25 Alignment motor/front (M14) (FS-537/FS-537SD)

1. Remove the front lower cover.
G.8.19.7 Front lower cover (FS-537/FS-537SD)



2. Remove two screws [1] and the connector [2], then remove the alignment motor/front assy [3].

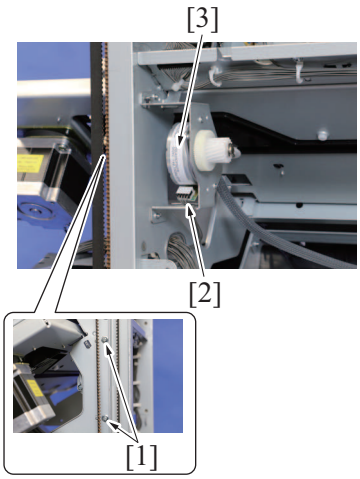


3. Remove two screws [1], and remove the alignment motor/front [2].

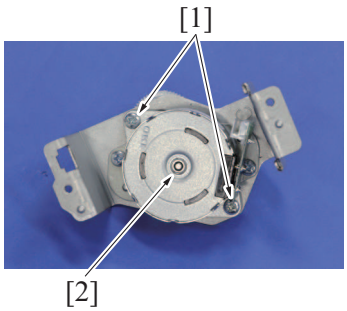
4. Reinstall the above parts following the removal steps in reverse.

8.19.26 Paper receiving control motor (M15) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the left upper cover.
   Left upper cover (FS-537/FS-537SD)



3. Remove two screws [1] and the connector [2], then remove the paper receiving control motor assy [3].

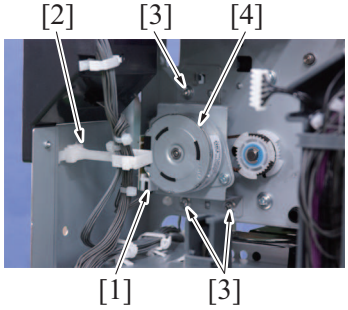


4. Remove two screws [1], and remove the paper receiving control motor [2].

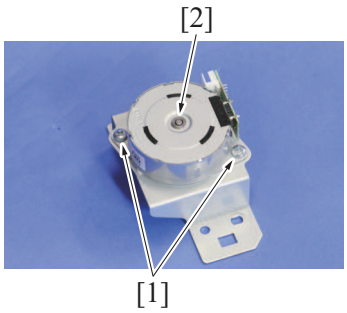
5. Reinstall the above parts following the removal steps in reverse.

8.19.27 SD discharge motor (M16) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the ZU discharge motor assy.
   G.8.19.32 ZU Discharge Motor (M21) (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove the clamp [2].
5. Remove three screws [3] as clearing the harness, and remove the SD discharge motor assy [4].

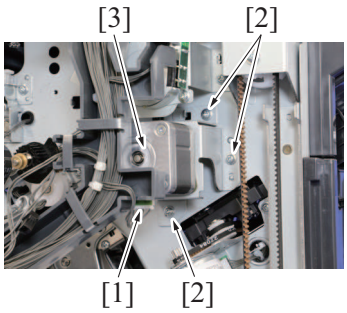


6. Remove two screws [1], and remove the SD discharge motor [2].

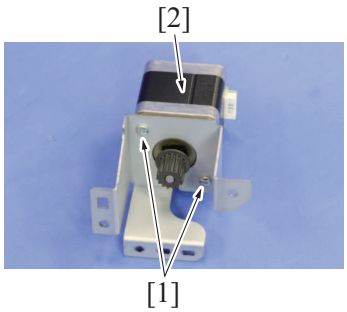
7. To reinstall, reverse the order of removal.

8.19.28 FNS discharge motor (M17) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)
2. Remove the route change gate motor assy.
   G.8.19.18 Route change gate motor (M4) (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove three screws [2], and remove the FNS discharge motor assy [3].

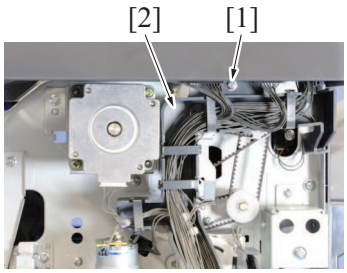


5. Remove two screws [1], and remove the FNS discharge motor [2].

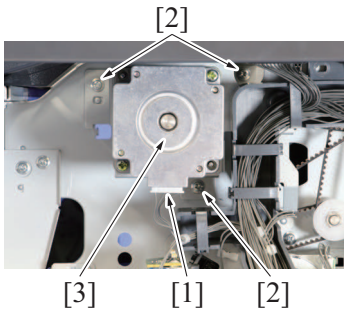
6. Reinstall the above parts following the removal steps in reverse.

8.19.29 Sub tray discharge motor (M18) (FS-537/FS-537SD)

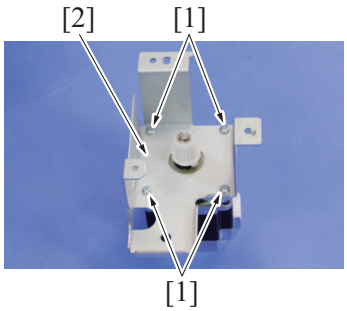
1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)



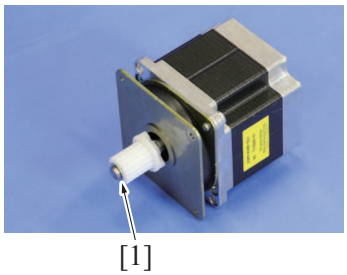
2. Remove the screw [1] and loosen the harness guide [2].



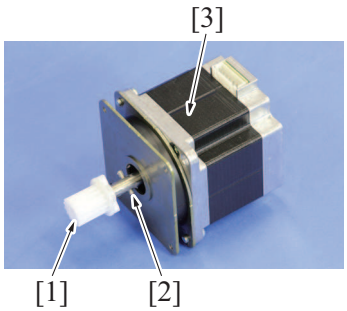
3. Disconnect the connector [1].
4. Remove three screws [2] and remove the sub tray discharge motor assy [3].



5. Remove four screws [1], and remove the plate [2].



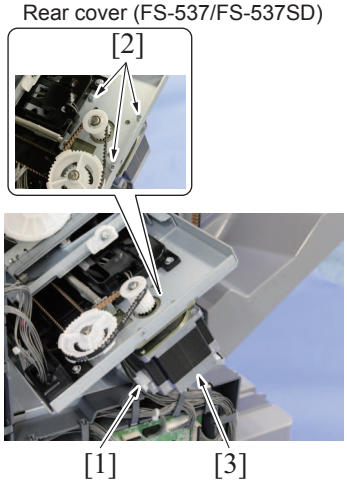
6. Remove the E-ring [1].



7. Remove the gear [1] and pin [2], and remove the sub tray discharge motor [3].
8. Reinstall the above parts following the removal steps in reverse.

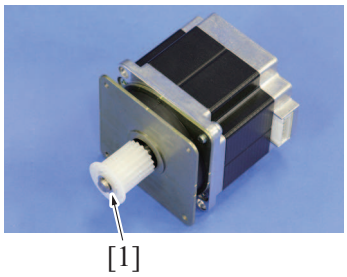
8.19.30 Stapler movement motor (M19) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)

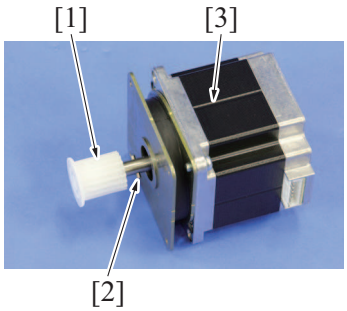


2. Disconnect the connector [1].
3. Remove three screws [2] and remove the stapler movement motor assy [3].

4. Remove the E-ring [1].



5. Remove the gear [1] and pin [2], then remove the stapler movement motor [3].

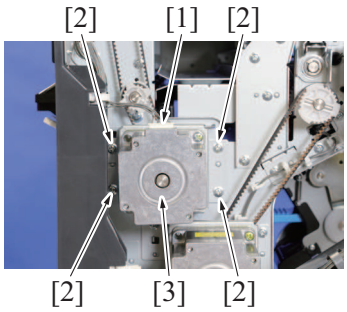


6. Reinstall the above parts following the removal steps in reverse.

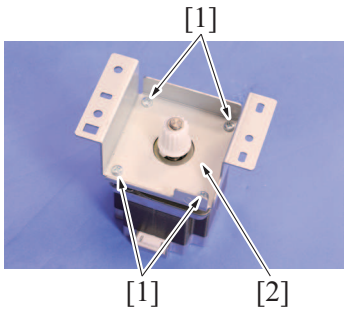
8.19.31 FNS entry transport motor (M20) (FS-537/FS-537SD)

1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)

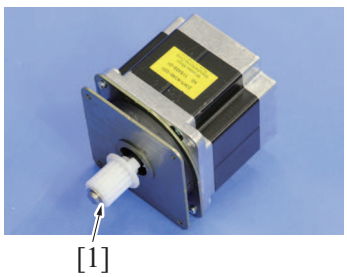
2. Disconnect the connector [1].
3. Remove four screws [2], and remove the FNS entry transport motor assy [3].

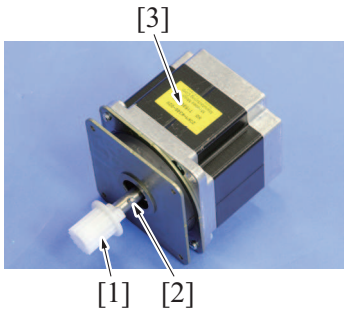


4. Remove four screws [1] and remove the metal plate [2].



5. Remove the E-ring [1].



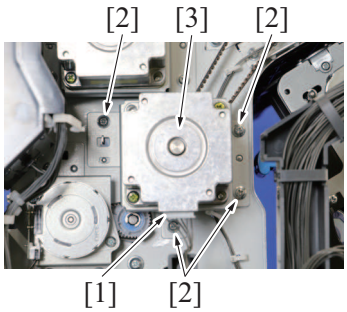


6. Remove the gear [1] and pin [2], and remove the FNS entry transport motor [3].

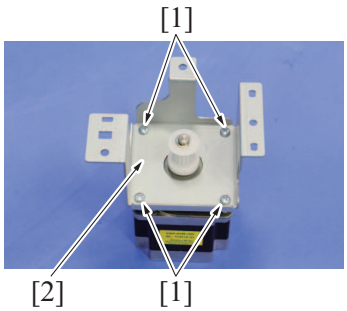
7. Reinstall the above parts following the removal steps in reverse.

8.19.32 ZU Discharge Motor (M21) (FS-537/FS-537SD)

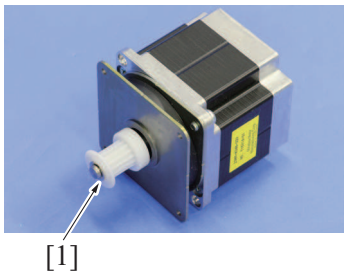
1. Remove the rear cover.
   Rear cover (FS-537/FS-537SD)



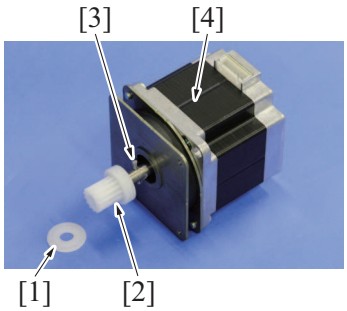
2. Disconnect the connector [1].
3. Remove four screws [2] and remove the ZU discharge motor assy [3].



4. Remove four screws [1] and remove the metal plate [2].



5. Remove the E-ring [1].

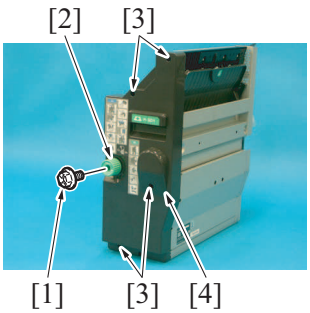


6. Remove the flange [1], gear [2], and pin [3], the remove the ZU discharge motor [4].

7. Reinstall the above parts following the removal steps in reverse.

8.20 Disassembly/reassembly procedure (FS-537SD saddle section)

8.20.1 Front cover (FS-537SD saddle section)

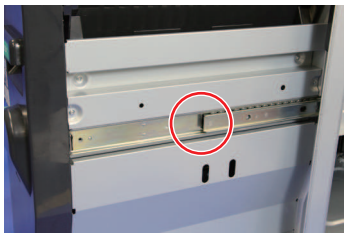


1. Remove the screw [1], and remove the jam clearing dial [2].
2. Remove four screws [3], and remove the front cover [4].
3. To reinstall, reverse the order of removal.

8.20.2 Saddle unit (FS-537SD saddle section)

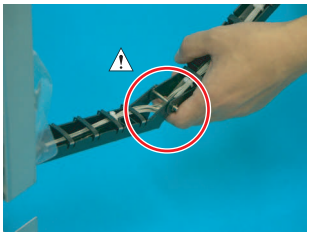
⚠CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.



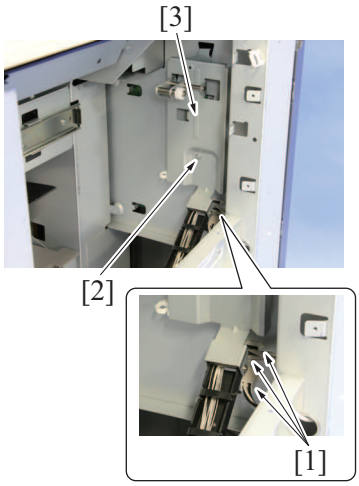
⚠CAUTION

- Be careful not to jam your finger in the connecting section of the pantograph.

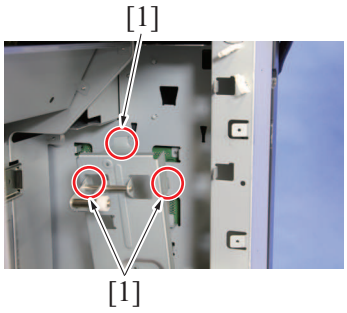


1. Remove the finisher from the main body.
   G.8.19.12 Finisher (FS-537/FS-537SD)
2. Remove the front door of the finisher.
   G.8.19.5 Front door (FS-537/FS-537SD)
3. Remove the finisher front lower cover.

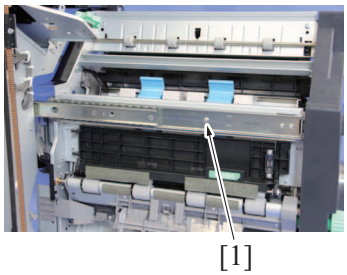
G.8.19.7 Front lower cover (FS-537/FS-537SD)



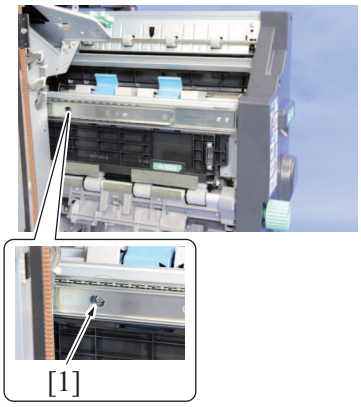
4. Disconnect three connectors [1] on the pantograph.
5. Remove the screw [2] and remove the pantograph [3].



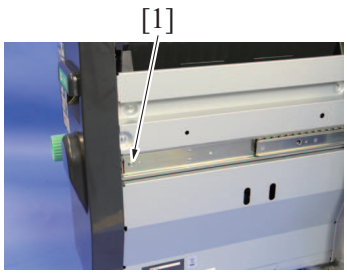
6. **NOTE**
   - **For installation of the pantograph, insert three hooks [1] on the pantograph of the saddle unit into the back holes inside the finisher.**



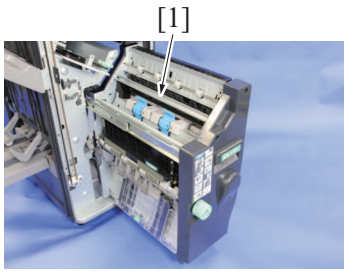
7. Remove the screw [1].

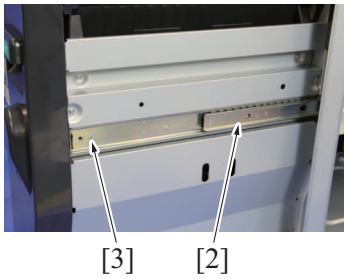


8. Push back the saddle unit into the position of the illustration, and then remove the screw [1].

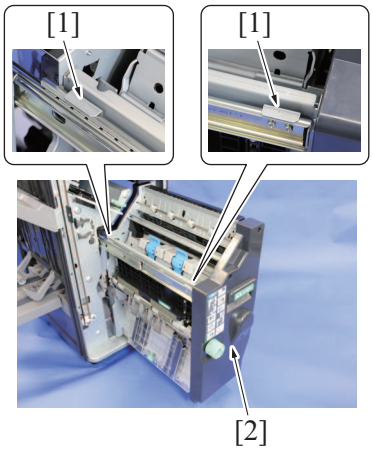


9. Pull out the saddle unit and remove the screw [1].





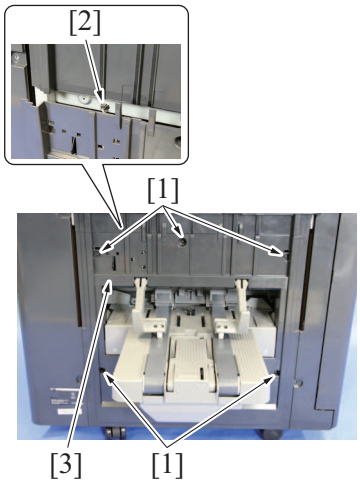
10. Place the right rail [2] to inside the finisher while holding the saddle unit in the section indicated in the figure [1] and raising it.
NOTE
- **Place the boss [3] of the saddle unit into the hole in the right rail when installing the saddle unit.**



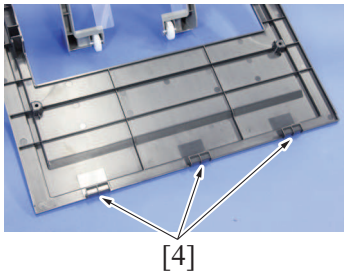
11. Remove the saddle unit [2] from two tabs [1].

12. To reinstall, reverse the order of removal.

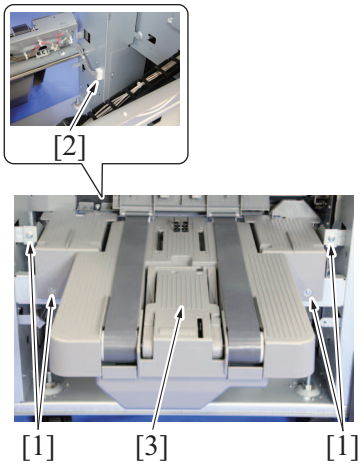
8.20.3 Exit tray (FS-537SD saddle section)



1. Remove five screws [1].
2. Disconnect the connector [2] and remove the left lower cover [3].



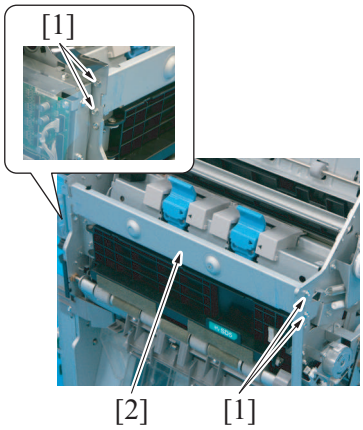
3. **NOTE**
- **Install after hooking three tabs [4] of the left lower cover when installing.**



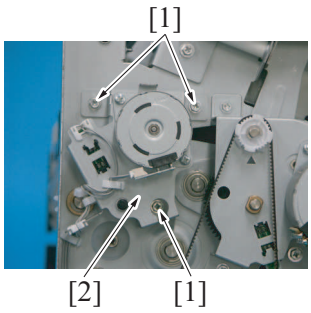
4. Remove four screws [1].
5. Disconnect the connector [2] and remove the exit tray [3].
6. To reinstall, reverse the order of removal.

8.20.4 Staple unit (FS-537SD saddle section)

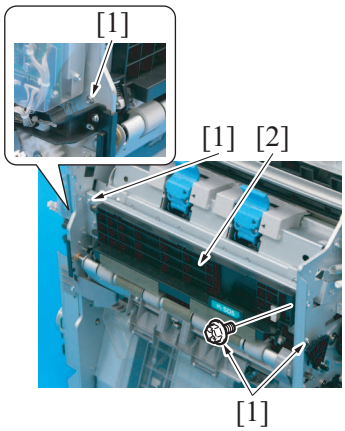
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



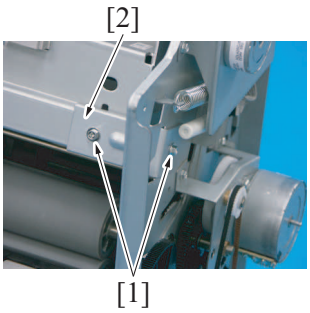
3. Remove four screws [1], and remove the plate [2].



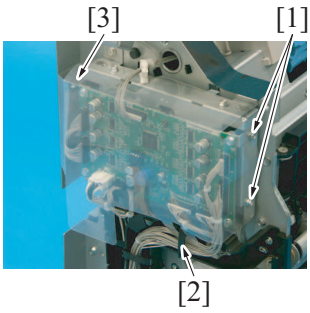
4. Remove three screws [1], and remove the tri-folding guide motor assy [2].



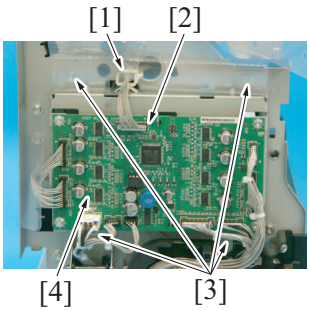
5. Remove four screws [1], and remove the conveyance assy [2].



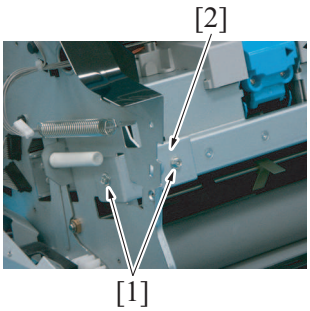
6. Remove two screws [1], and remove the plate [2].



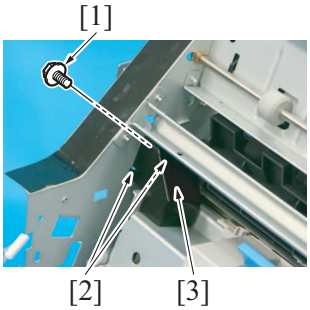
7. Remove two screws [1].
8. Detach the board support film [3] from the harness guide tabs [2].



9. Remove the harness from the wire saddle [1].
10. Disconnect the connector [2].
11. Remove four screws [3] and remove the SD control board assy [4].

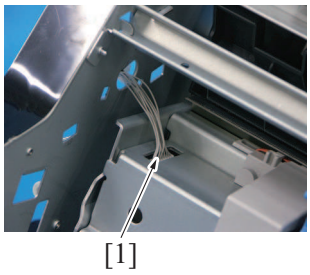


12. Remove two screws [1], and remove the plate [2].

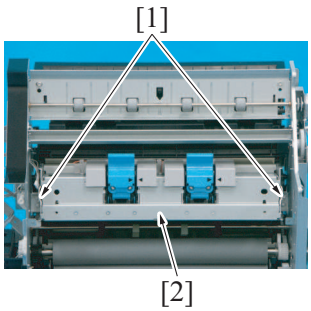


13. Remove the screw [1].
14. Release two tabs [2], and remove the cover [3].

15. Disconnect the connector [1].



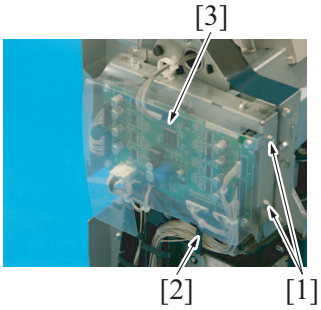
16. Remove two screws [1], and remove the staple unit [2].



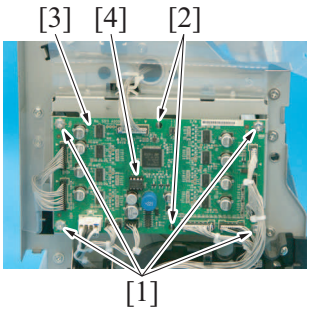
17. To reinstall, reverse the order of removal.

8.20.5 SD control board (SDCB) (FS-537SD saddle section)

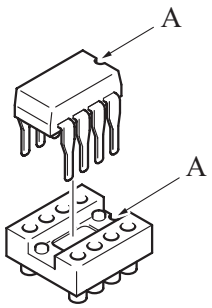
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)



2. Remove two screws [1].
3. Remove the board support film [3] from the harness guide [2].



4. Disconnect all connectors on the SD control board.
5. Remove four screws [1].
6. Remove the SD control board [3] from the 2 tabs [2].
   NOTE
   - **Remount the EEPROM (U3) [4] when the SD control board (SDCB) is replaced.**
     Install the EEPROM (U3) [4] from the old SD control board on to the new SD control board.



7. **NOTE**
   - **When mounting EEPROM (U3), align the notches (indicated by "A" in the illustration).**

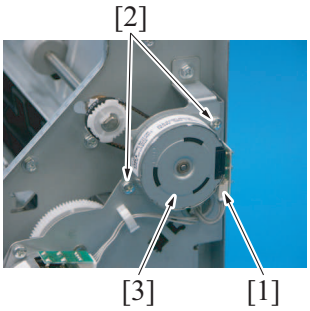
8. To reinstall, reverse the order of removal.

NOTE

- **After replacing the SD control board, be sure to install the latest firmware.**

8.20.6 SD transport motor (M1) (FS-537SD saddle section)

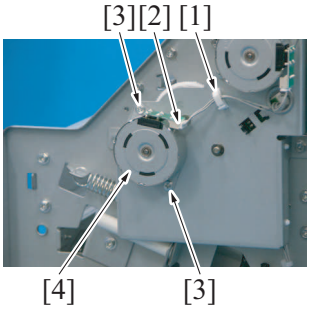
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD transport motor [3].
5. To reinstall, reverse the order of removal.

8.20.7 Paper discharge control motor (M2) (FS-537SD saddle section)

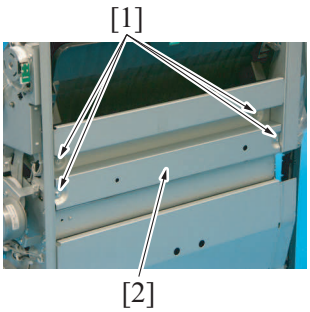
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



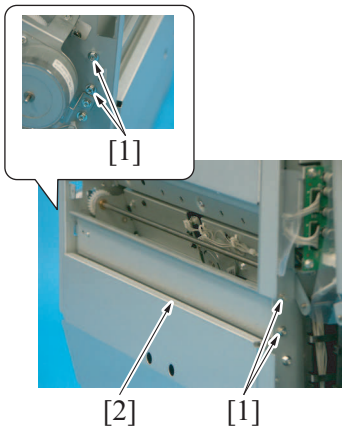
3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the paper discharge control motor [4].
5. To reinstall, reverse the order of removal.

8.20.8 Alignment motor (M3) (FS-537SD saddle section)

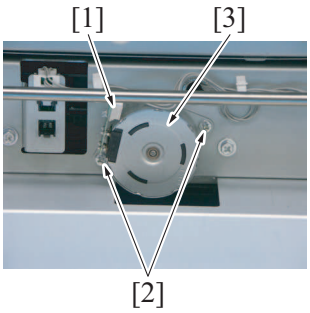
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



3. Remove four screws [1], and remove the plate [2].



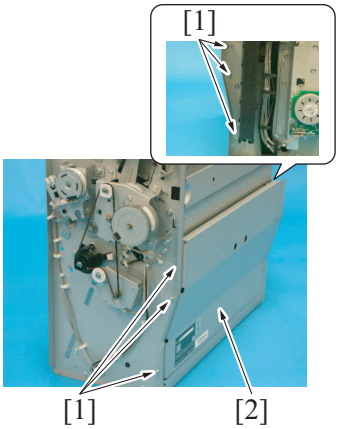
4. Remove four screws [1], and remove the plate [2].



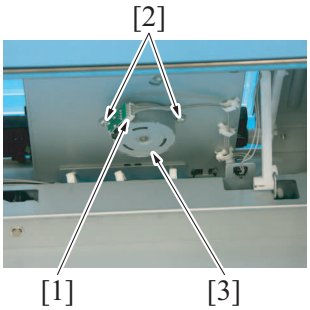
5. Disconnect the connector [1].
6. Remove two screws [2], and remove the alignment motor [3].
7. To reinstall, reverse the order of removal.

8.20.9 Stopper drive motor (M4) (FS-537SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



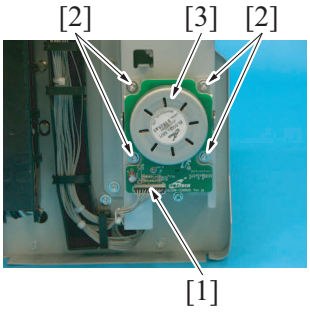
3. Remove six screws [1], and remove the plate [2].



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the stopper drive motor [3].
6. To reinstall, reverse the order of removal.

8.20.10 Center fold roller motor (M5) (FS-537SD saddle section)

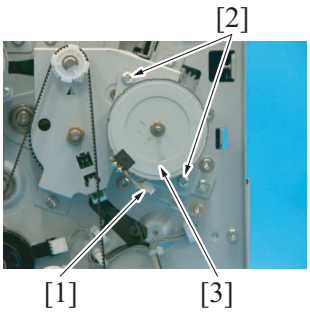
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)



2. Disconnect the connector [1].
3. Remove four screws [2], and remove the center fold roller motor [3].
4. To reinstall, reverse the order of removal.

8.20.11 Center fold guide motor (M6) (FS-537SD saddle section)

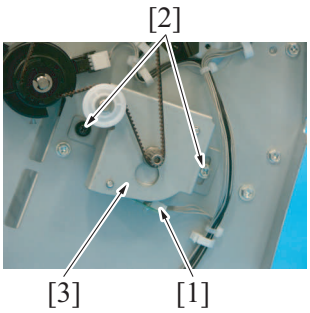
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



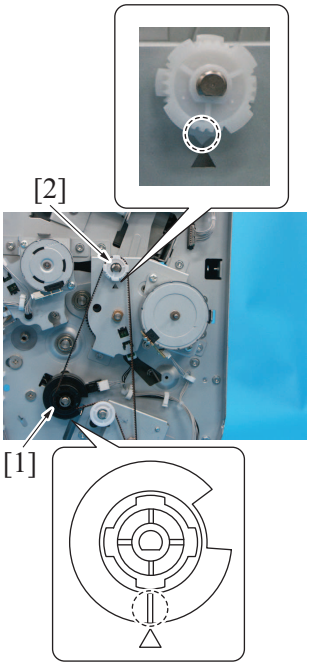
3. Disconnect the connector [1].
4. Remove two screws [2] and remove the center fold guide motor [3].
5. To reinstall, reverse the order of removal.

8.20.12 SD paddle motor (M7) (FS-537SD saddle section)

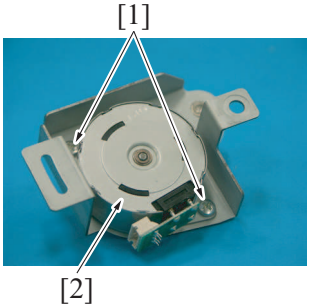
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD paddle motor assy [3].



5. **NOTE**
   - **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**



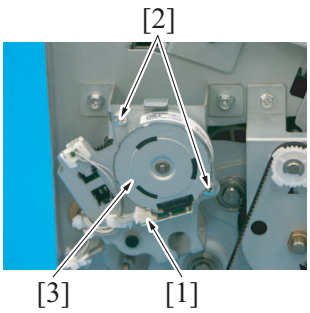
6. Remove two screws [1], and remove the SD paddle motor [2].
7. To reinstall, reverse the order of removal.

8.20.13 Tri-folding guide motor (M8) (FS-537SD saddle section)

1. Remove the saddle unit.

Saddle unit (FS-537SD saddle section)

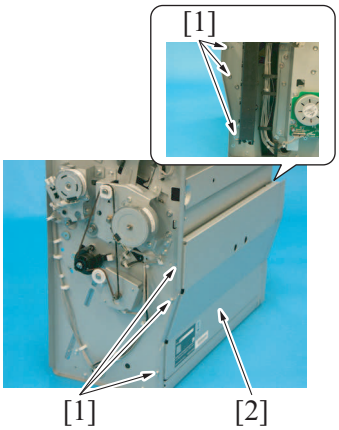
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



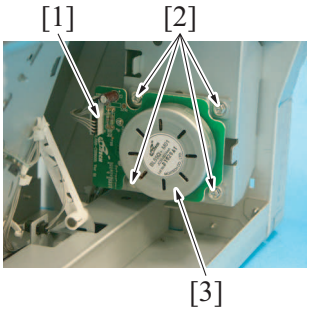
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the tri-folding guide motor [3].
5. To reinstall, reverse the order of removal.

8.20.14 Center fold knife motor (M9) (FS-537SD saddle section)

1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



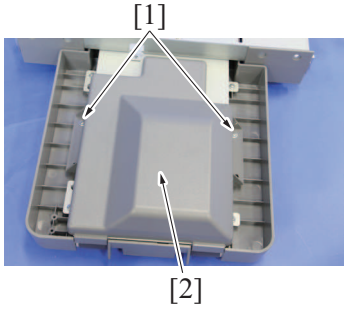
3. Remove six screws [1], and remove the plate [2].



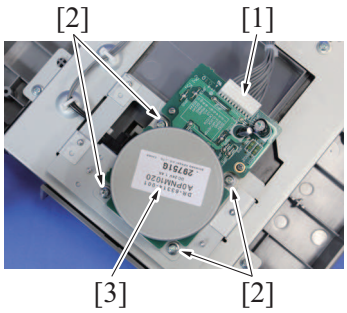
4. Disconnect the connector [1].
5. Remove four screws [2], and remove the center fold knife motor [3].
6. To reinstall, reverse the order of removal.

8.20.15 Paper transport belt motor (M34) (FS-537SD saddle section)

1. Remove the exit tray.
   G.8.20.3 Exit tray (FS-537SD saddle section)



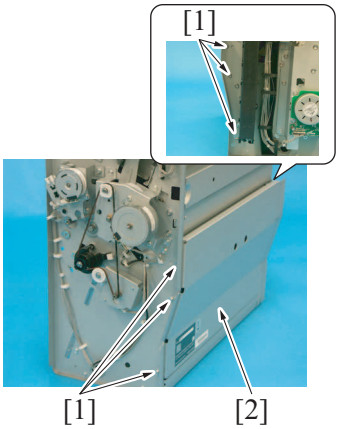
2. Remove two screws [1], and remove the cover [2].



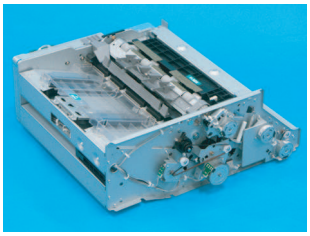
3. Disconnect the connector [1].
4. Remove four screws [2] and remove the paper transport belt motor [3].
5. To reinstall, reverse the order of removal.

8.20.16 Stopper solenoid (SD1) (FS-537SD saddle section)

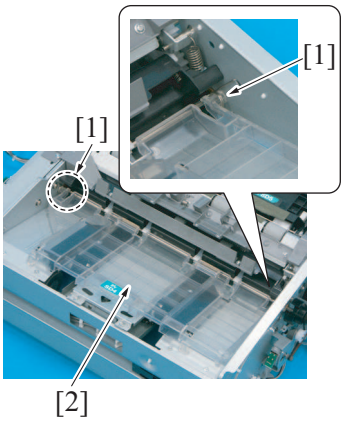
1. Remove the saddle unit.
   Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.8.20.1 Front cover (FS-537SD saddle section)



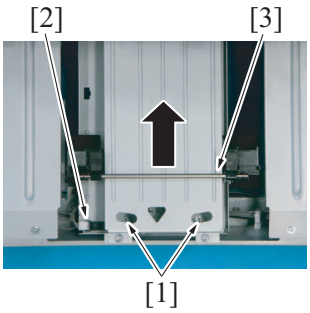
3. Remove six screws [1], and remove the plate [2].



4. Place the saddle unit as shown in the illustration.

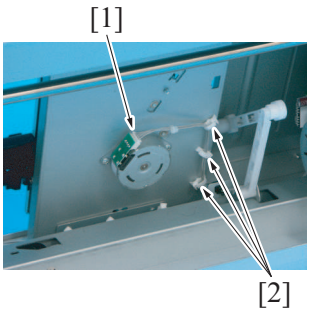


5. Remove two stoppers [1], and remove the guide plate [2].

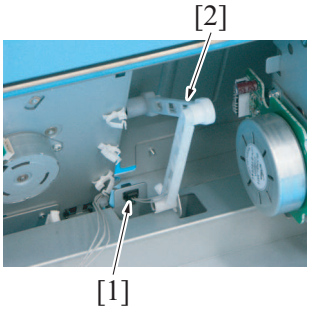


6. Slide the lever unit [3] upward.
7. Remove two screws [1] and disconnect the connector [2].

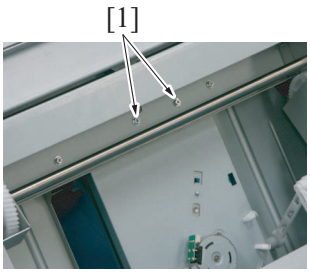
8. Raise the saddle unit.



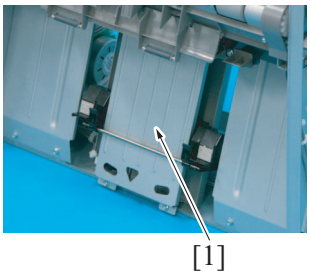
9. Disconnect the connector [1], and remove the harness from three wire saddles [2].



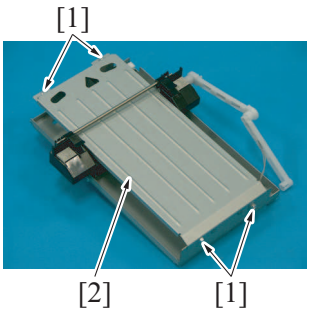
10. Disconnect the connector [1], and remove the drive lever [2].



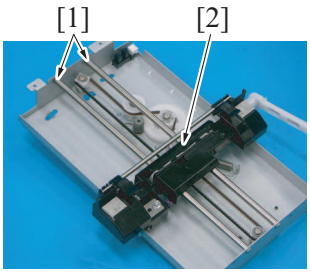
11. Remove two screws [1].



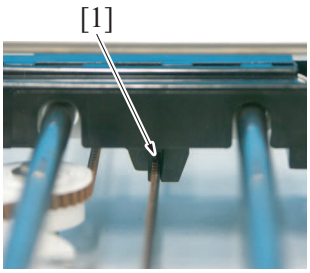
12. Remove the guide plate assy [1].
NOTE
- **When reinstalling the guide plate assy, perform mechanical adjustment.**
  Half-fold skew adjustment



13. Remove four screws [1], and remove the plate [2].

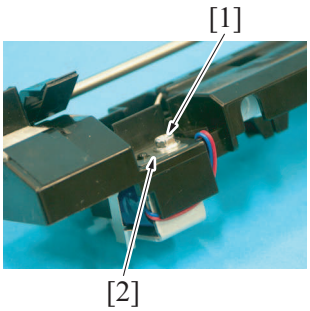


14. Remove two E-rings [1], and remove the stopper guide [2].

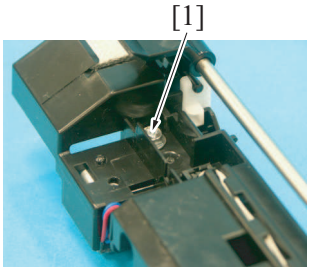


15. **NOTE**

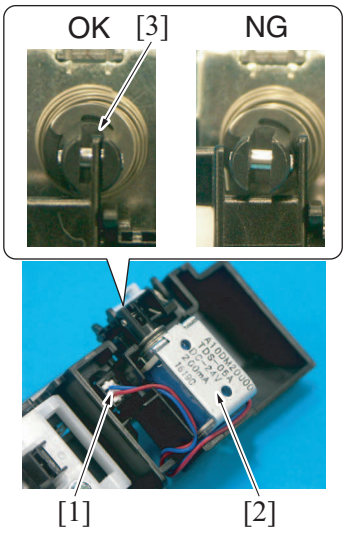
- **When reinstalling the stopper guide, fit the belt into the stopper guide groove [1].**



16. Remove the screw [1], and remove the plate [2].



17. Remove the screw [1].



18. Disconnect the connector [1], and remove the stopper solenoid [2].
NOTE
- **When reinstalling the stopper solenoid, fit its tip into the place [3] shown in the illustration.**

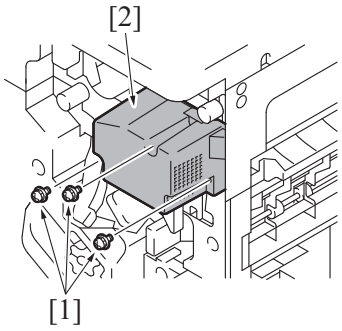
19. To reinstall, reverse the order of removal.

8.21 Disassembly/reassembly procedure (PK-523)

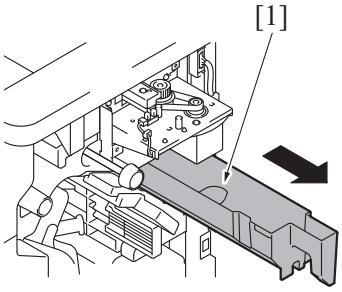
8.21.1 Punch Kit (PK-523)

1. Remove the finisher from the main body.
G.8.19.12 Finisher (FS-537/FS-537SD)

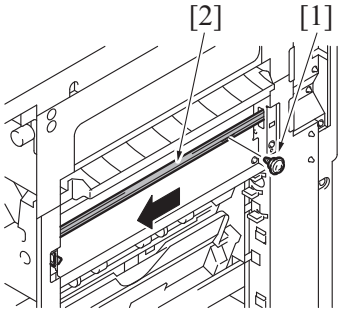
2. Open the finisher front door.



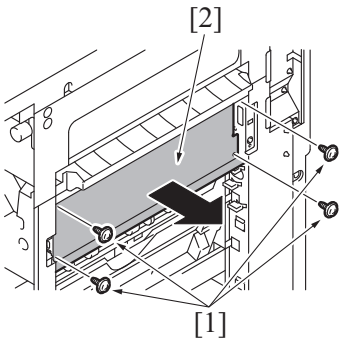
3. Remove three screws [1] and remove the cover [2].



4. Remove the punch disposal box [1].

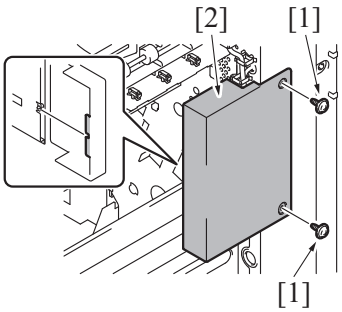


5. Remove the screw [1], and remove the plate [2].

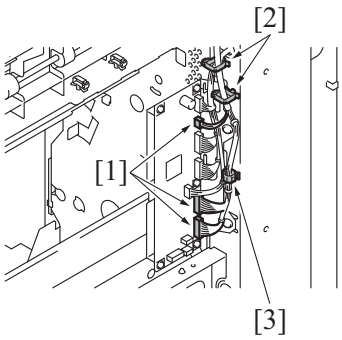


6. Remove four screws [1] and remove the plate [2].

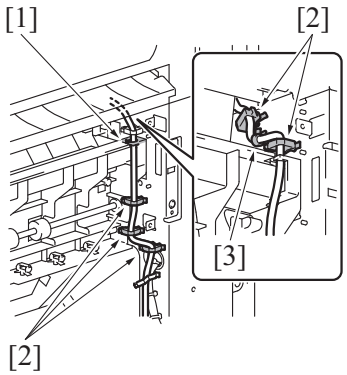
7. Remove the rear cover of the finisher.
Rear cover (FS-537/FS-537SD)



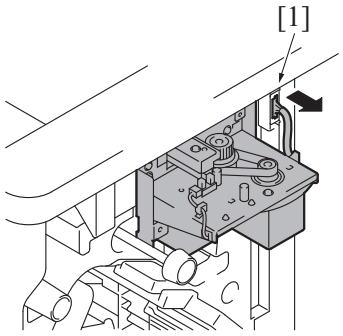
8. Remove two screws [1] and remove the board cover [2].



9. Disconnect three connectors [1].
10. Remove the harness from two wire saddles [2] and the clamp [3].

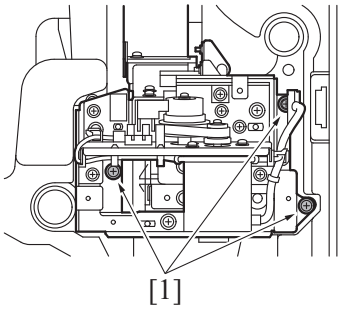


11. Remove the harness from harness guide [1].
12. Remove the harness from five wire saddles [2].
NOTE
- **Place the harness clamp [3] between the two top wire saddles when installing.**

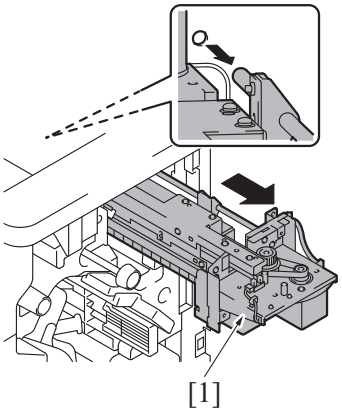


13. Disconnect the connector [1].

14. Remove three screws [1].



15. Remove the punch kit [1] by pulling it out from the finisher main unit.



16. To reinstall, reverse the order of removal.

NOTE

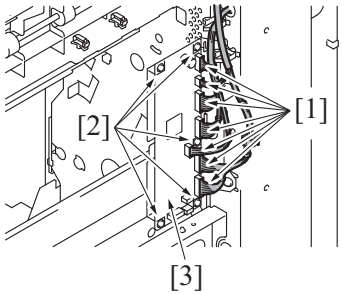
If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:

- **No paper pieces are left on the paper path.**
- **Execute the [** Punch F. Sensor Intensity Adj. **]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
- **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

8.21.2 Punch control board (PKCB) (PK-523)

1. Remove the finisher from the main body.
   G.8.19.12 Finisher (FS-537/FS-537SD)

2. Disconnect seven connectors [1] on the punch control board.
3. Remove five screws [2], and remove the punch control board [3].

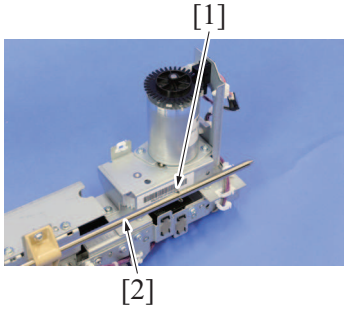


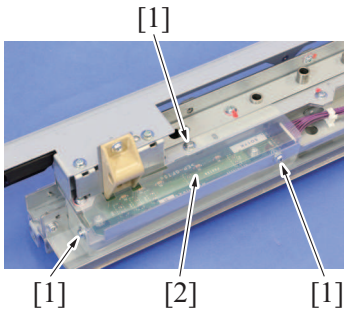
4. Reinstall the above parts following the removal steps in reverse.

8.21.3 Paper size detect board (PSDTB) (PK-523)

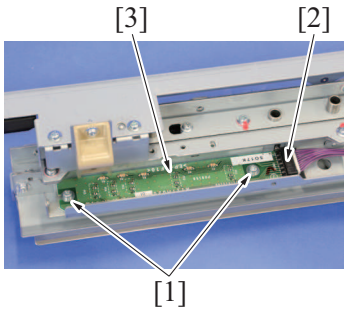
1. Remove the punch kit.
   Punch Kit (PK-523)

2. Remove the E-ring [1] and pull out the punch oscillating section [2].





3. Remove three screws [1] and remove the board protective shield [2].

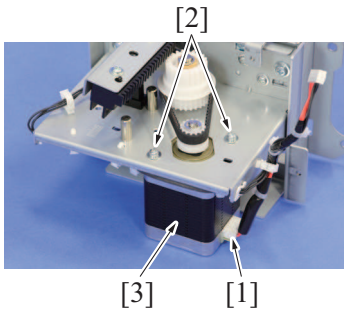


4. Remove two screws [1], disconnect the connector [2], and remove the paper size detect board [3].

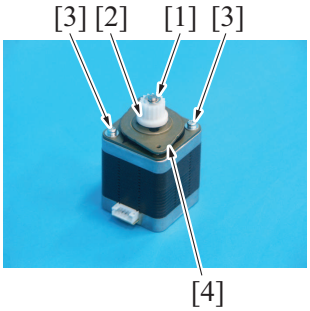
5. To reinstall, reverse the order of removal.
NOTE
If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:
- **No paper pieces are left on the paper path.**
- **Execute the [** Punch F. Sensor Intensity Adj. **]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
- **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

8.21.4 Punch oscillating motor (M302) (PK-523)

1. Remove the punch kit.
Punch Kit (PK-523)



2. Disconnect the connector [1].
3. Remove two screws [2] and remove the punch oscillating motor [3].



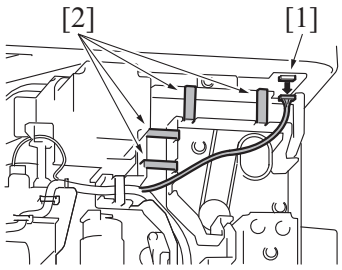
4. Remove the E-ring [1], and remove the gear [2].
NOTE
- **Take care not to lose the pin.**
5. Remove two screws [3] and remove the plate [4].

6. To reinstall, reverse the order of removal.
NOTE
If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:
- **No paper pieces are left on the paper path.**
- **Execute the [** Punch F. Sensor Intensity Adj. **]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
- **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

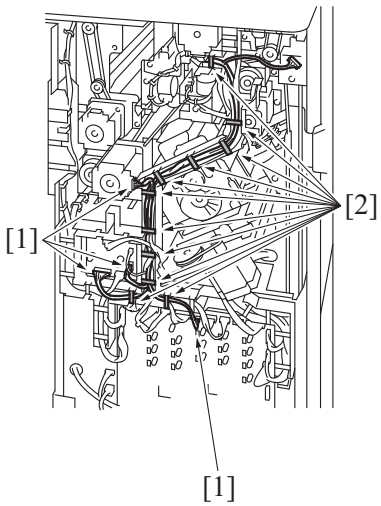
8.22 Disassembly/reassembly procedure (ZU-609)

8.22.1 Z Folding Unit (ZU-609)

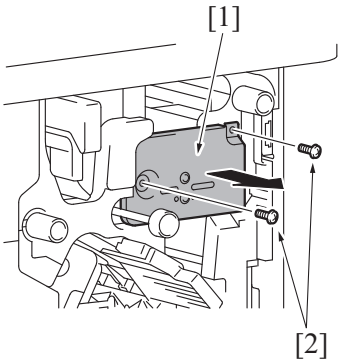
1. Remove the finisher from the main body.
   G.8.19.12 Finisher (FS-537/FS-537SD)
2. Remove the rear cover of the finisher.
   Rear cover (FS-537/FS-537SD)



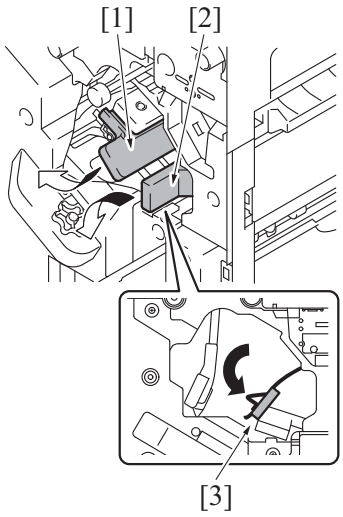
3. Disconnect the connector [1] and pull out the harness from the harness guide [2].



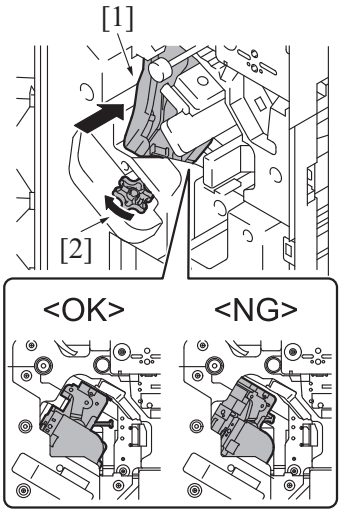
4. Disconnect four connectors [1] and remove the harness from the harness guide [2].
5. Open the front door of the finisher.



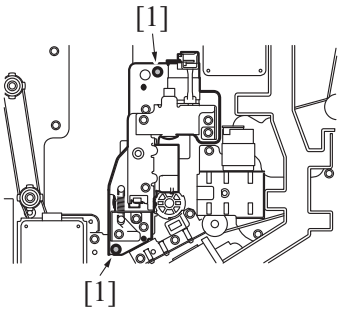
6. If the metal plate [1] is attached, remove two screws [2] to remove the metal plate [1].
7. Remove the Punch Kit if it is installed.
   Punch Kit (PK-523)



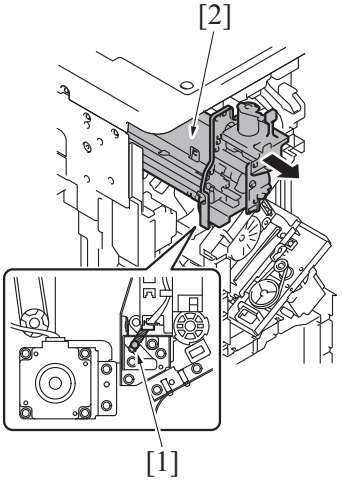
8. Open the three ([1]/[2]/[3]) jam removal levers.



9. **NOTE**
- **If the lever does not open because the stapler [1] is being blocked, rotate the stapler transfer dial [2] and move the stapler [1] towards the rear until the dial stops.**
- **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**



10. Remove two screws [1].

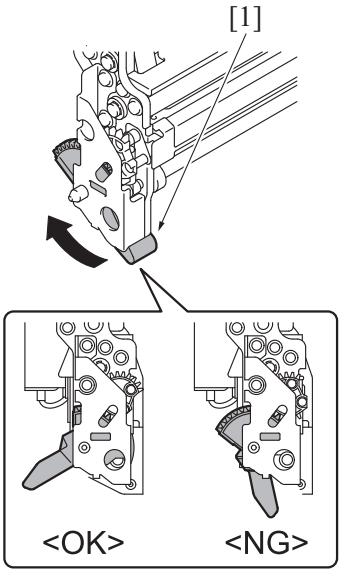


11. Remove the Z folding unit [2] from the finisher by lifting it a little with the shaft lever [1] of the lower part of the Z folding unit slided upper left.

12. To reinstall, follow the removal procedure backwards.

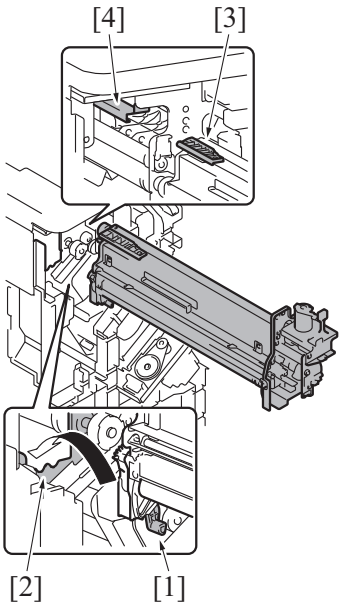
13. **NOTE**
Take note of the following when installing:

- **If the jam removal lever [1] of Z folding unit is not in the position shown in the illustration, pull the lever to set to the position shown in the illustration.**



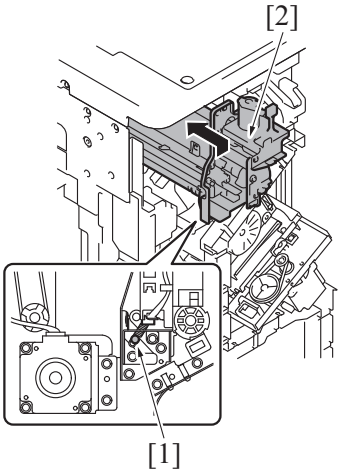
14. **NOTE**

- **Do not make the lever [1] caught on the lower frame [2] of the finisher opening.**
- **Put the upper resin part [3] of the Z folding unit on the rail [4] of the finisher opening.**



15. **NOTE**

- **Hold up the Z folding unit [2] a little to insert further, with the shaft lever [1] on the lower part of the Z folding unit slided to the upper left.**

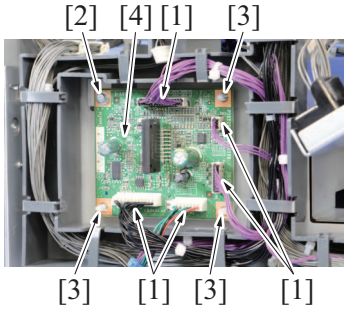


8.22.2 ZU drive board (ZUDB) (ZU-609)

1. Remove the finisher from the main body.

G.8.19.12 Finisher (FS-537/FS-537SD)

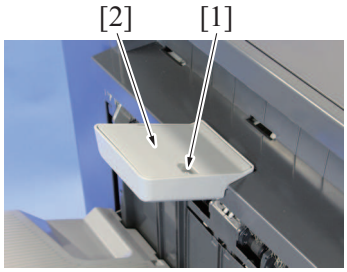
2. Remove the rear cover of the finisher.
Rear cover (FS-537/FS-537SD)



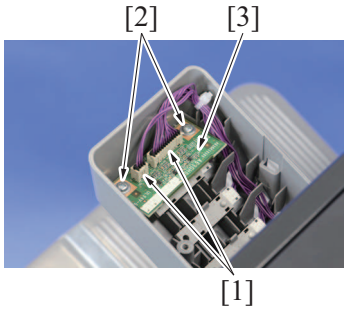
3. Disconnect five connectors [1] on the ZU drive board.
4. Remove the screw [2] and three board supports [3], then remove the ZU drive board [4].
5. Reinstall the above parts following the removal steps in reverse.

8.22.3 ZU relay board (ZURB) (ZU-609)

1. Remove the finisher sub tray (paper exit upper tray).
G.8.19.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)



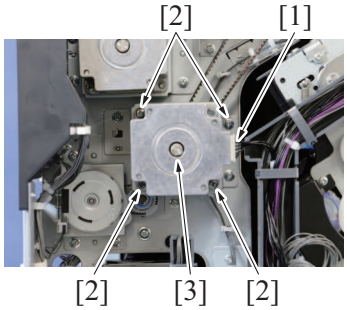
2. Remove the screw [1], and remove the cover [2].



3. Disconnect two connectors [1] on the ZU relay board.
4. Remove two screws [2], and remove the ZU relay board [3].
5. Reinstall the above parts following the removal steps in reverse.

8.22.4 ZU transport motor (M500) (ZU-609)

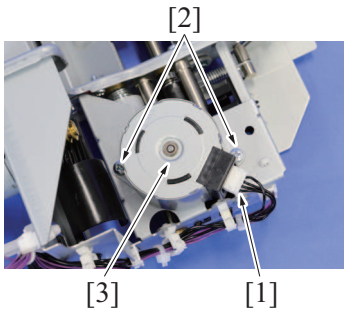
1. Remove the finisher from the main body.
G.8.19.12 Finisher (FS-537/FS-537SD)
2. Remove the rear cover of the finisher.
Rear cover (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove four screws [2] and remove the ZU transport motor [3].
5. Reinstall the above parts following the removal steps in reverse.

8.22.5 Folding guide motor (M501) (ZU-609)

1. Remove the Z folding unit.
Z Folding Unit (ZU-609)

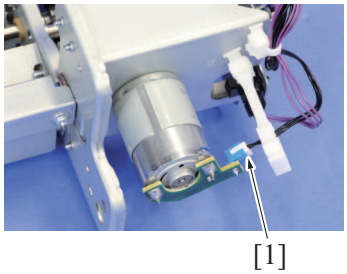


2. Disconnect the connector [1].
3. Remove two screws [2] and remove the folding guide motor [3].

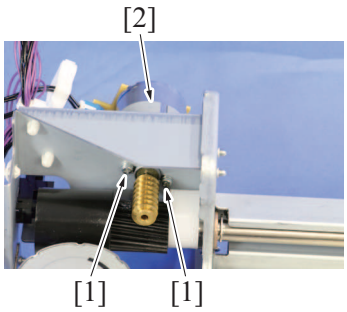
4. To reinstall, follow the removal procedure backwards.

8.22.6 Pressure motor (M502) (ZU-609)

1. Remove the Z folding unit.
   Z Folding Unit (ZU-609)



2. Disconnect the connector [1].

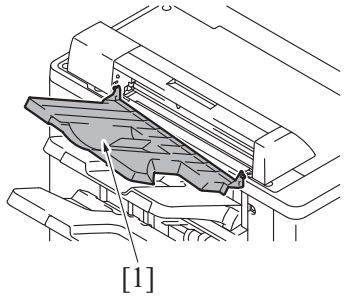


3. Remove two screws [1] and remove the pressure motor [2].

4. Reinstall the above parts following the removal steps in reverse.

8.23 Disassembly/reassembly procedure (JS-602)

8.23.1 Paper exit tray (JS-602)

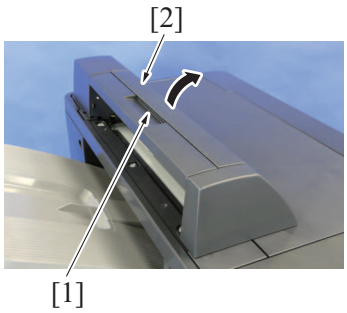


1. Remove the paper exit tray [1].

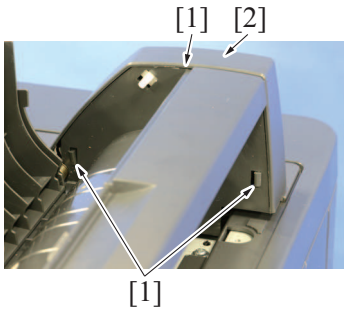
2. Reinstall the above parts following the removal steps in reverse.

8.23.2 Front cover (JS-602)

1. Remove the paper exit tray.
   G.8.23.1 Paper exit tray (JS-602)



2. Pull the unlock lever [1] and open the upper door [2].

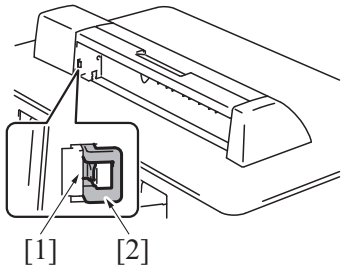


3. Remove three tabs [1] and remove the front cover [2].

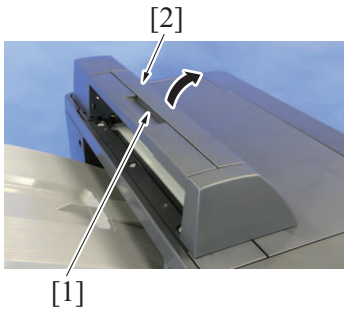
4. To reinstall, reverse the order of removal.

8.23.3 Rear cover (JS-602)

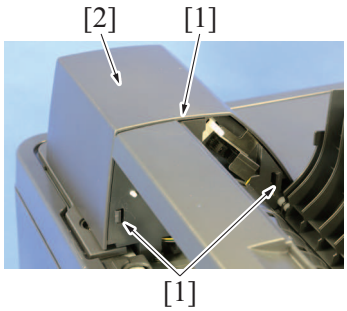
1. Remove the paper exit tray.
G.8.23.1 Paper exit tray (JS-602)



2. Remove the tab [1] and remove the spacer [2].



3. Pull the unlock lever [1] and open the upper door [2].



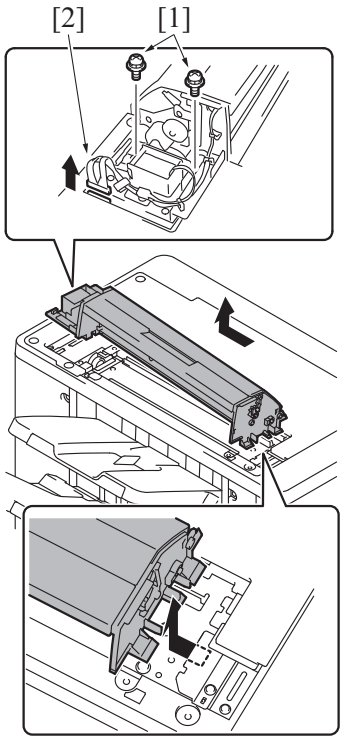
4. Remove three tabs [1] and remove the rear cover [2].

5. To reinstall, reverse the order of removal.

8.23.4 Job separator (JS-602)

1. Remove the paper exit tray.
G.8.23.1 Paper exit tray (JS-602)

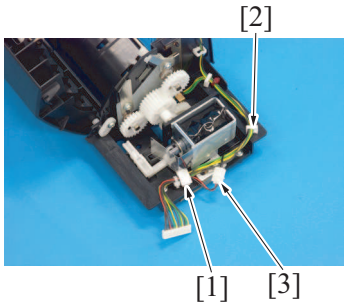
2. Remove the front cover.
   G.8.23.2 Front cover (JS-602)
3. Remove the rear cover.
   G.8.23.3 Rear cover (JS-602)



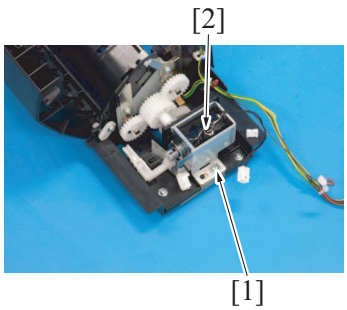
4. Remove two screws [1], disconnect the connector [2], and remove the job separator [3].

8.23.5 Entrance switching solenoid (SD401) (JS-602)

1. Remove the rear cover.
   G.8.23.3 Rear cover (JS-602)



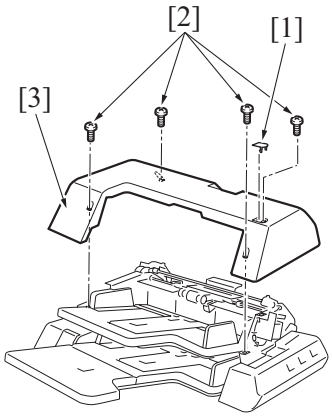
2. Remove the harness from the wire saddle [1] and the edge cover [2].
3. Disconnect the connector [3].



4. Remove the screw [1] and remove the entrance switching solenoid [2].
5. To reinstall, reverse the order of removal.

8.24 Disassembly/reassembly procedure (PI-507)

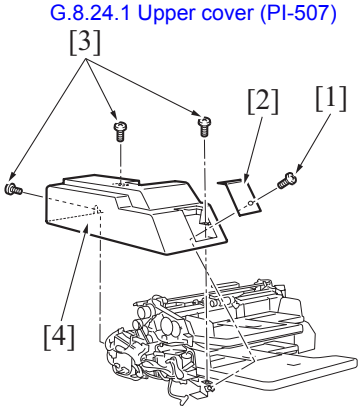
8.24.1 Upper cover (PI-507)



1. Remove the cap [1].
2. Remove four screws [2] and remove the upper cover [3].
3. To reinstall, reverse the order of removal.

8.24.2 Rear cover (PI-507)

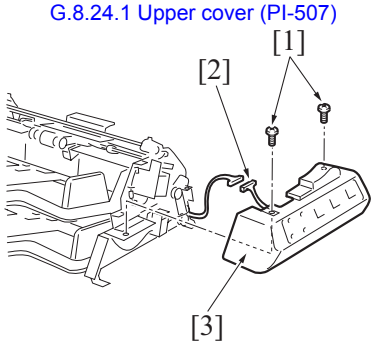
1. Remove the upper cover.
G.8.24.1 Upper cover (PI-507)



2. Remove the screw [1], and remove the connector cover [2].
3. Remove three screws [3], and remove the rear cover [4].
4. To reinstall, reverse the order of removal.

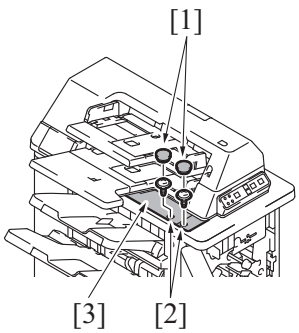
8.24.3 Operation panel cover assy (PI-507)

1. Remove the upper cover.
G.8.24.1 Upper cover (PI-507)

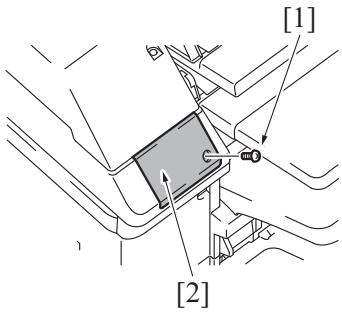


2. Remove two screws [1], disconnect the connector [2], and remove the operational panel cover assy [3].
3. To reinstall, reverse the order of removal.

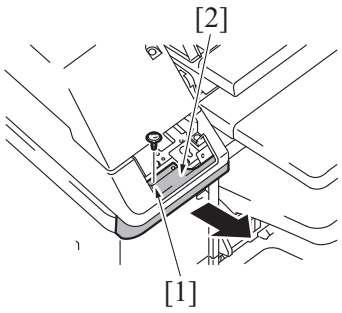
8.24.4 Post Inserter (PI-507)



1. Remove two caps [1] and two screws [2], and remove the finisher cover [3].

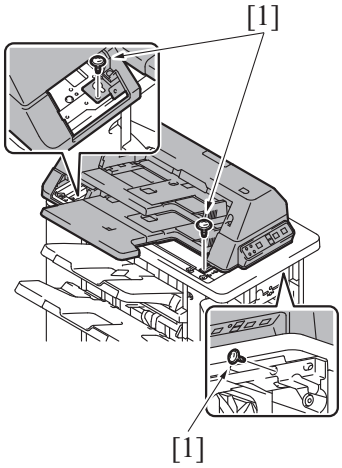


2. Remove the screw [1], and remove the connector cover [2].

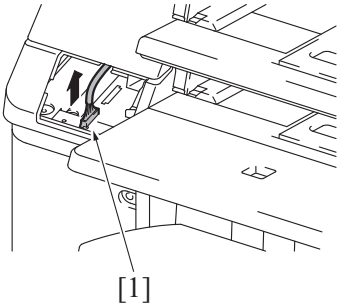


3. Remove the screw [1], and remove the cover [2].

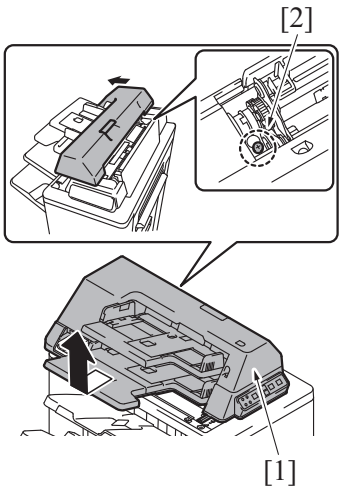
4. Open the finisher front door.



5. Remove three screws [1].



6. Disconnect the connector [1].

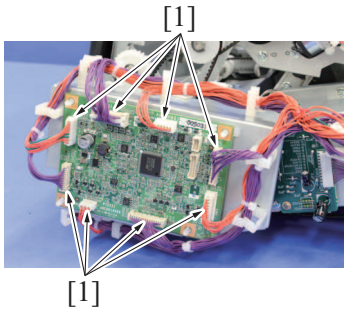


7. Remove the post inserter [1] by shifting it toward the direction of the arrow.
NOTE
- **Install the post inserter so it is hooked to the positioning screw [2] attached to the finisher.**

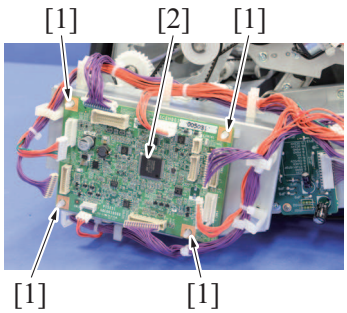
8. To reinstall, reverse the order of removal.

8.24.5 PI drive board (PIDB) (PI-507)

1. Remove the rear cover.
G.8.24.2 Rear cover (PI-507)



2. Disconnect eight connectors [1] on the board.

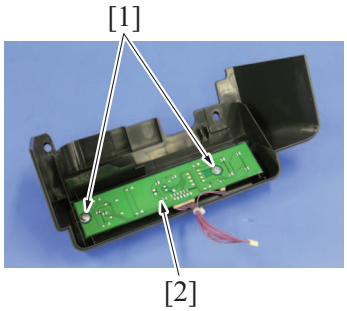


3. Remove four board supports [1] and remove the PI drive board [2].

4. To reinstall, reverse the order of removal.

8.24.6 PI operation board (PIOB) (PI-507)

1. Remove the operation panel cover assy.
G.8.24.3 Operation panel cover assy (PI-507)



2. Remove two screws [1] and remove the PI operation board [2].

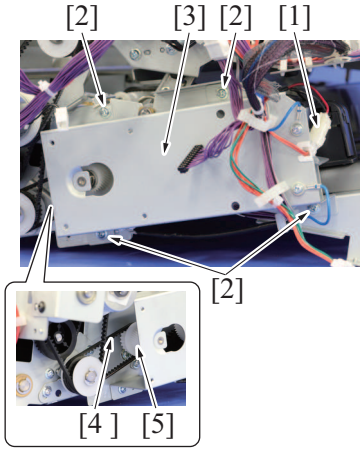
3. To reinstall, reverse the order of removal.

8.24.7 PI relay board (PIRB) (PI-507)

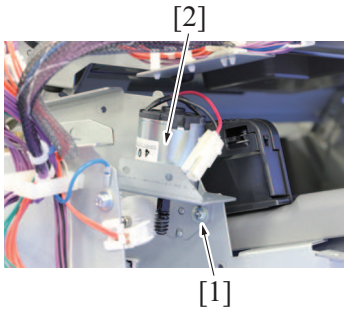
- The removal process of the PI relay board (PIRB) is the same as the removal process of the ZU drive board (ZUDB) of the Z fold unit ZU-609. Refer to the removal process of the ZU drive board (ZUDB)
ZU drive board (ZUDB) (ZU-609)

8.24.8 Tray lift motor /Lw (M202) (PI-507)

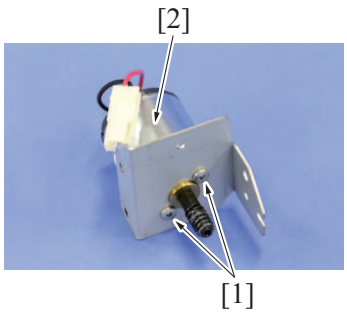
1. Remove the transfer motor (M203).
   G.8.24.9 Transfer motor (M203) (PI-507)



2. Disconnect the connector [1].
3. Remove four screws [2] and slide the metal plate [3].
   NOTE
   - **Place the belt [4] on the gear [5] during installation.**



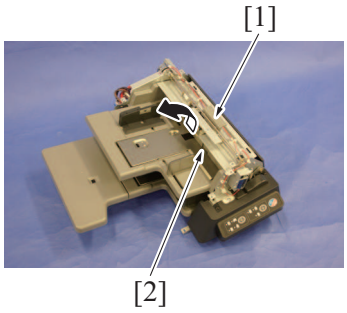
4. Remove the screw [1] and remove the tray lift motor /Lw assy [2].



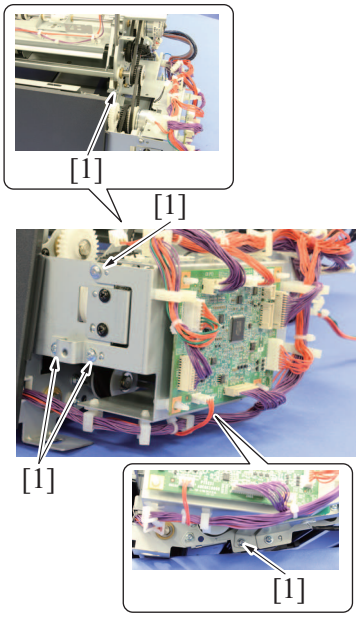
5. Remove two screws [1] and remove the tray lift motor /Lw [2].
6. Reinstall the above parts following the removal steps in reverse.

8.24.9 Transfer motor (M203) (PI-507)

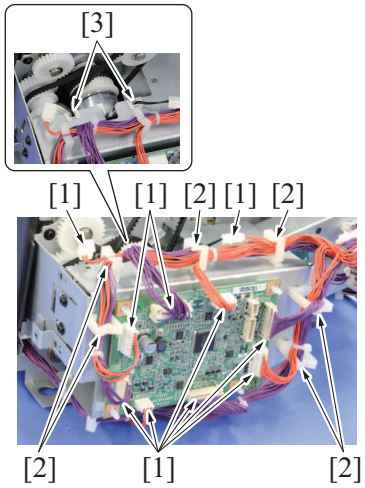
1. Remove the post-inserter.
   G.8.24.4 Post Inserter (PI-507)
2. Remove the rear cover.
   G.8.24.2 Rear cover (PI-507)



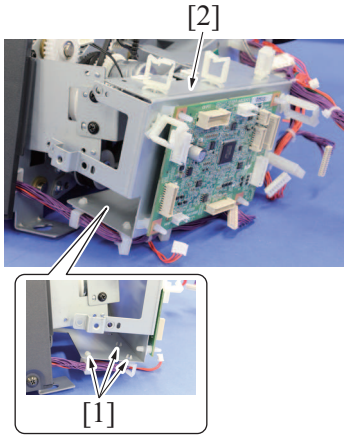
3. Pull the unlock lever [1] and open the upper door [2].



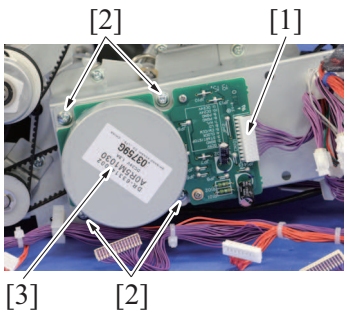
4. Remove five screws [1].



5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from the two harness guides [3].



7. Unhook three wire saddle hooks [1] and remove the metal plate [2].



8. Disconnect the connector [1], remove four screws [2], and remove the transfer motor [3].

9. Reinstall the above parts following the removal steps in reverse.

8.24.10 Transport roller drive motor (M204) (PI-507)

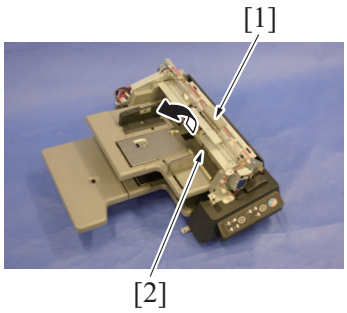
- Removing the transport roller drive motor (M204) is the same as removing the ZU transport motor (M500) of the Z fold unit ZU-609. Refer to the method of removing the ZU transport motor (M500).
  ZU transport motor (M500) (ZU-609)

8.24.11 Folding guide motor (M501) (PI-507)

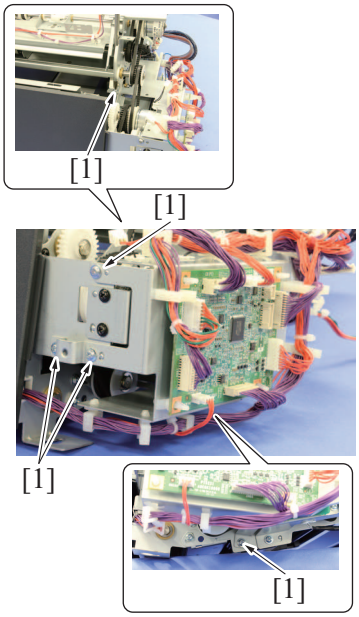
- Removing the folding guide motor (M501) is the same as removing the folding guide motor (M501) of the Z fold unit ZU-609. Refer to the method of removing the folding guide motor (M501).
  G.8.22.5 Folding guide motor (M501) (ZU-609)

8.24.12 Transfer clutch /Lw (CL202) (PI-507)

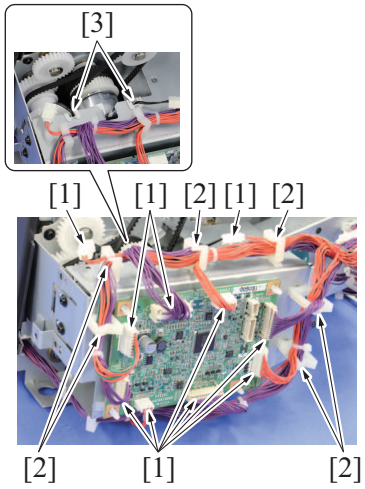
1. Remove the post-inserter.
   G.8.24.4 Post Inserter (PI-507)
2. Remove the rear cover.
   G.8.24.2 Rear cover (PI-507)
3. Pull the unlock lever [1] and open the upper door [2].

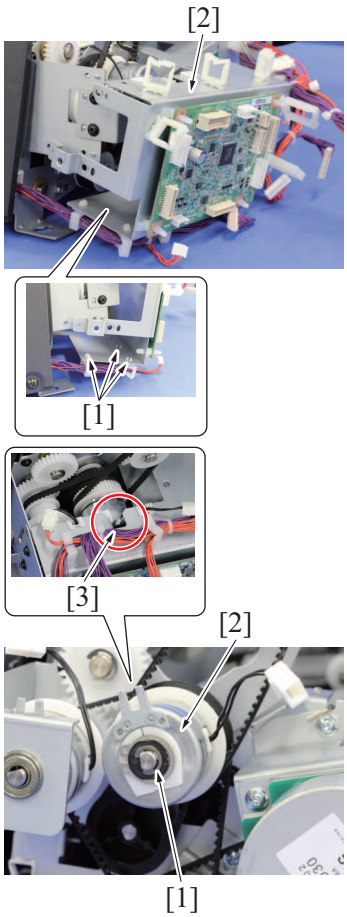


4. Remove five screws [1].



5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from two harness guides [3].





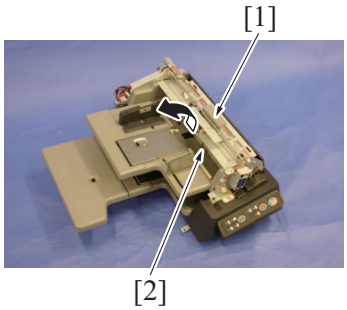
7. Unhook three wire saddle hooks [1] and remove the metal plate [2].

8. Remove the E-ring [1] and remove the transfer clutch /Lw [2].
NOTE
- **During installation, always fit the depressed part of the transfer clutch [3] into the groove of the metal plate.**

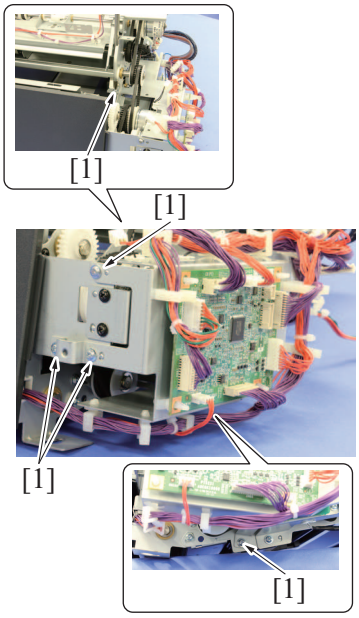
9. Reinstall the above parts following the removal steps in reverse.

8.24.13 Registration clutch (CL203) (PI-507)

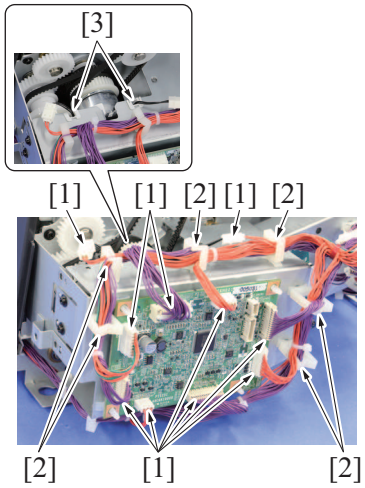
1. Remove the post-inserter.
G.8.24.4 Post Inserter (PI-507)
2. Remove the rear cover.
G.8.24.2 Rear cover (PI-507)



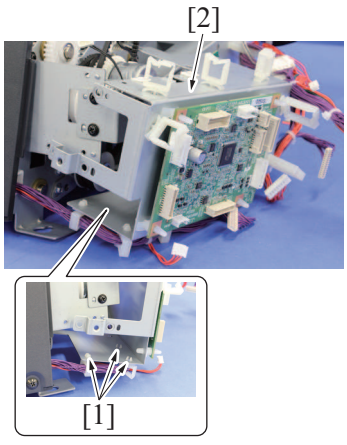
3. Pull the unlock lever [1] and open the upper door [2].



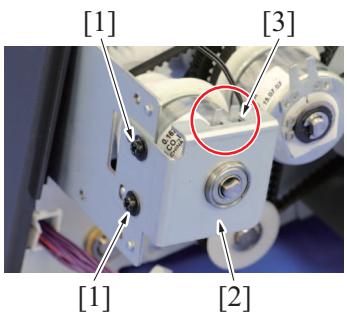
4. Remove five screws [1].



5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from two harness guides [3].

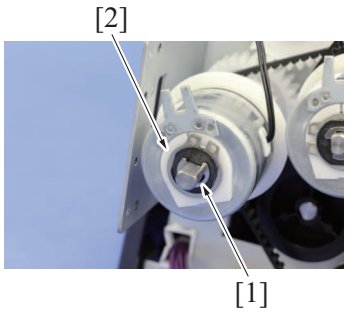


7. Unhook three wire saddle hooks [1] and remove the metal plate [2].



8. Remove two screws [1] and remove the metal plate [2].
NOTE
- **During installation, always fit the depressed part of the registration clutch [3] into the groove of the metal plate.**

9. Remove the E-ring [1], and remove the registration clutch [2].

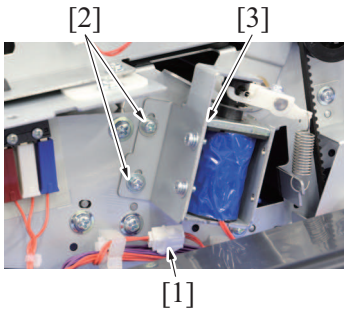


10. Reinstall the above parts following the removal steps in reverse.

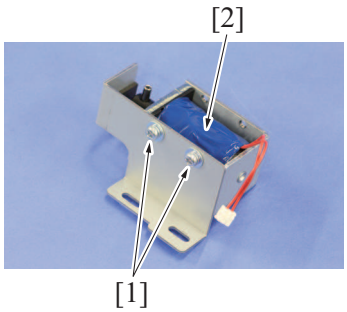
8.24.14 Pick-up solenoid /Lw (SD202) (PI-507)

1. Remove the post-inserter.
   G.8.24.4 Post Inserter (PI-507)
2. Remove the control panel cover assy.
   G.8.24.3 Operation panel cover assy (PI-507)

3. Disconnect the connector [1], remove two screws [2], and remove Pick-up solenoid /Lw assy [3].



4. Remove two screws [1] and remove the pick-up solenoid /Lw [2].

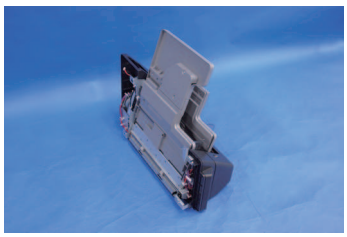


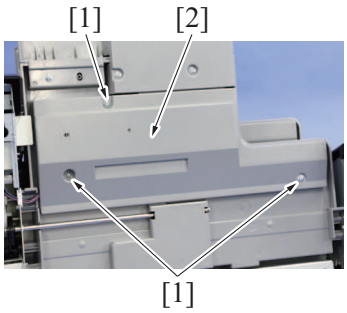
5. Reinstall the above parts following the removal steps in reverse.

8.24.15 Paper size VR /Lw (VR202) (PI-507)

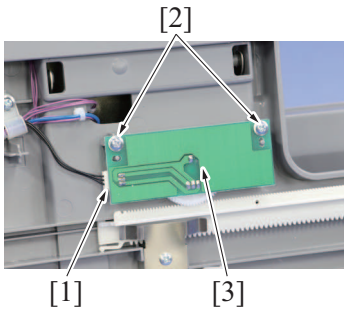
1. Remove the post-inserter.
   G.8.24.4 Post Inserter (PI-507)

2. Raise the post-inserter as shown in the illustration.





3. Remove three screws [1] and remove the cover [2].



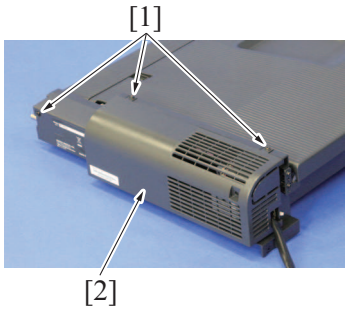
4. Disconnect the connector [1], remove two screws [2], and remove the paper size VR /Lw [3].

5. Reinstall the above parts following the removal steps in reverse.

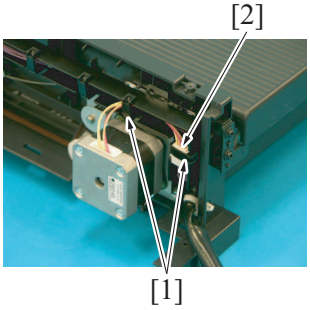
8.25 Disassembly/reassembly procedure (RU-513)

8.25.1 RU transport motor (M1)

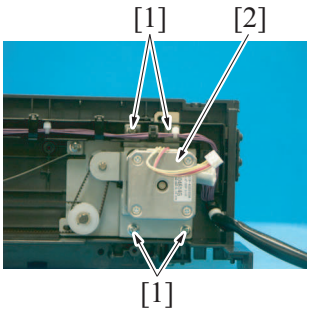
1. Remove the finisher from the main body.
   G.8.14.6 Finisher (FS-534/FS-534SD)
   G.8.16.6 Finisher (FS-536/FS-536SD)
   G.8.19.12 Finisher (FS-537/FS-537SD)
2. Remove the RU transport unit.
   G.8.14.7 Relay unit (RU-513)
   G.8.16.7 Relay unit (FS-536/FS-536SD)
   G.8.19.13 Relay unit (FS-537/FS-537SD)



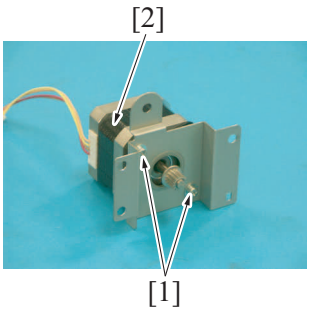
3. Remove three screws [1], and remove the rear cover [2] of the RU transport unit.



4. Remove the harness from two wire saddles [1].
5. Disconnect the connector [2].



6. Remove four screws [1], and remove the RU transport motor assy [2].



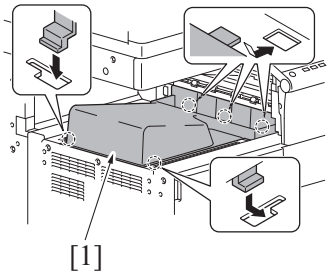
7. Remove two screws [1], and remove the RU transport motor [2].

8. To reinstall, reverse the order of removal.

8.26 Disassembly/reassembly procedure (OT-506)

8.26.1 Paper exit tray

1. Remove the paper exit tray [1].



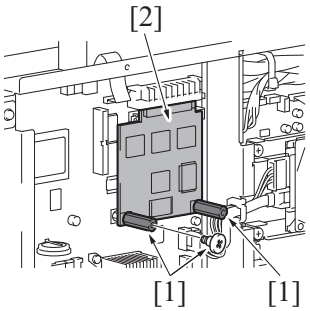
2. To reinstall, reverse the order of removal.

8.27 Disassembly/reassembly procedure (SC-508)

8.27.1 DSC board/1 (for front side) (SC-508) (bizhub C368/C308/C258)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the DSC board/2. (Option)
   G.8.27.2 DSC board/2 (for back side) (SC-508) (bizhub C368/C308/C258)
3. Remove the dual scan image processing board. (Option)
   G.8.4.11 dual scan image processing board (DSIPB) (DF-704)

4. Remove three screws [1], and remove the DSC board/1 [2].

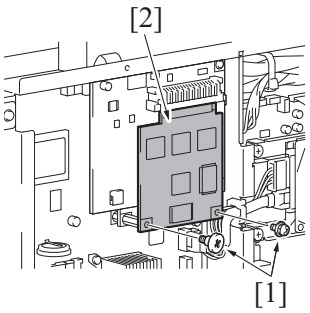


5. To reinstall, reverse the order of removal.

8.27.2 DSC board/2 (for back side) (SC-508) (bizhub C368/C308/C258)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover

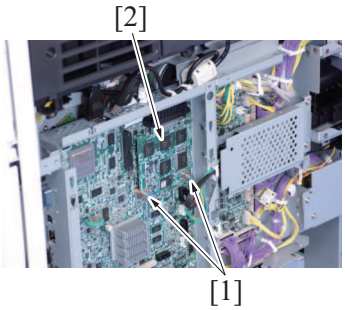
2. Remove two screws [1], and remove the DSC board/2 [2].



3. To reinstall, reverse the order of removal.

8.27.3 DSC board/1 (for front side) (SC-508) (bizhub C658/C558/C458)

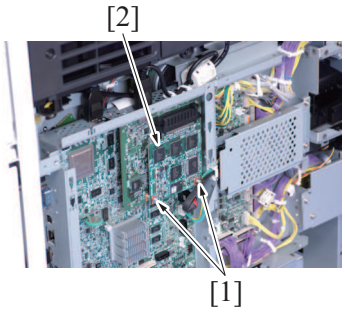
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Remove the DSC board/2. (Option)
   G.8.27.4 DSC board/2 (for back side) (SC-508) (bizhub C658/C558/C458)
6. Remove the dual scan image processing board.
   G.6.4.13 Dual scan image processing board (DSIPB)
7. Remove two screws [1], and remove the DSC board/2 [1].



8. To reinstall, reverse the order of removal.

8.27.4 DSC board/2 (for back side) (SC-508) (bizhub C658/C558/C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Remove two screws [1], and remove the DSC board/2 [2].

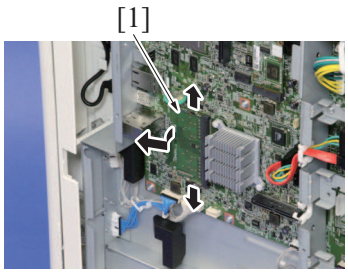


6. To reinstall, reverse the order of removal.

8.28 Disassembly/reassembly procedure (UK-211)

8.28.1 Upgrade kit (UK-211)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover



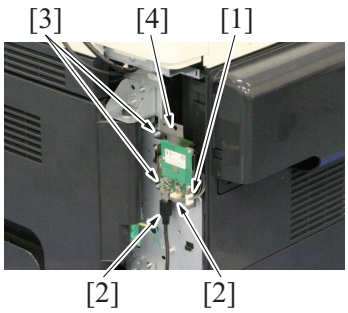
2. Remove the memory board [1] on the MFP board.

3. To reinstall, reverse the order of removal.

8.29 Disassembly/reassembly procedure (UK-212)

8.29.1 Upgrade kit (UK-212) (bizhub C368/C308/C258)

1. Remove the rear right cover.
   G.5.2.18 Rear right cover

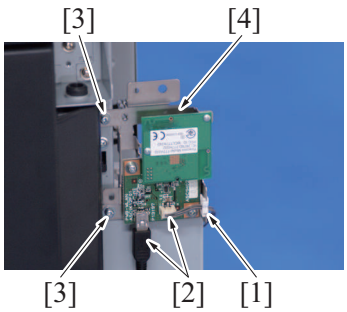


2. Remove the harness from the edge cover [1], and disconnect two connectors [2].
3. Remove two screws [3], and remove the upgrade kit [4].

4. To reinstall, reverse the order of removal.

8.29.2 Upgrade kit (UK-212) (bizhub C658/C558/C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Remove the DF cable cover.
   G.6.2.22 DF cable cover
6. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
7. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
8. Remove the rear right cover.
   G.6.2.19 Rear right cover



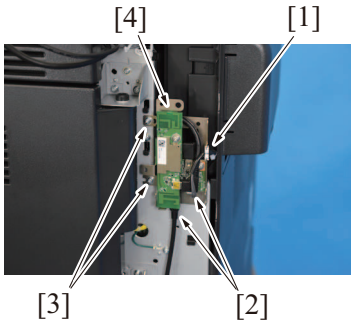
9. Remove the harness from the edge cover [1], and disconnect two connectors [2].
10. Remove two screws [3], and remove the upgrade kit [4].

11. To reinstall, reverse the order of removal.

8.30 Disassembly/reassembly procedure (UK-215)

8.30.1 Upgrade kit (UK-215) (bizhub C368/C308/C258)

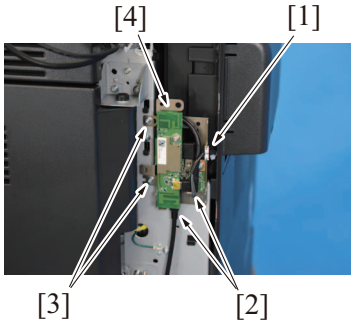
1. Remove the rear right cover.
   G.5.2.18 Rear right cover



2. Remove the harness from the edge cover [1], and disconnect two connectors [2].
3. Remove two screws [3], and remove the upgrade kit [4].
4. To reinstall, reverse the order of removal.

8.30.2 Upgrade kit (UK-215) (bizhub C658/C558/C458)

1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover
4. Remove the protective shield.
   G.6.2.26 Protective shield
5. Remove the DF cable cover.
   G.6.2.22 DF cable cover
6. Remove the scanner rear cover.
   G.6.2.1 Scanner rear cover
7. Remove the paper cooling fan assy.
   G.6.7.7 Paper cooling fan (FM8)
8. Remove the rear right cover.
   G.6.2.19 Rear right cover



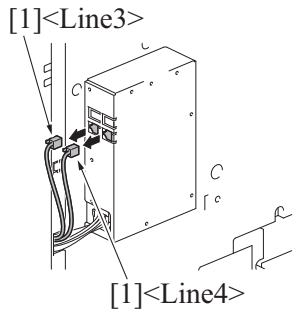
9. Remove the harness from the edge cover [1], and disconnect two connectors [2].
10. Remove two screws [3], and remove the upgrade kit [4].
11. To reinstall, reverse the order of removal.

8.31 Disassembly/reassembly procedure (FK-515)

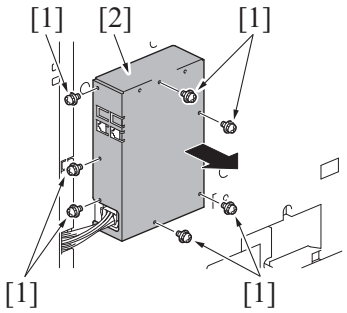
8.31.1 FAX board (line 3), FAX board (line 4) (FK-515)

NOTE

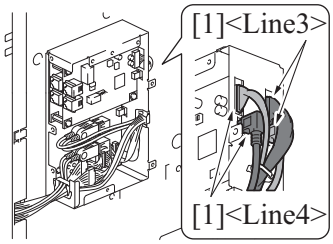
- **When removing the FAX Kit, make sure of the correct line associated with the FAX Kit to be removed before removing the line.**
- **When installing a new board, check the FAX board switch and make settings involving the line settings.**



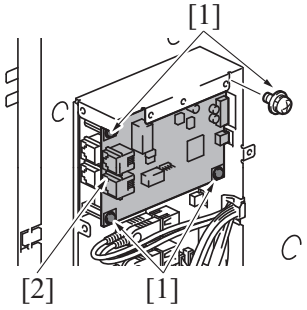
1. Disconnect the modular cable [1].



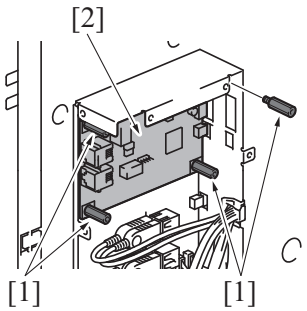
2. Remove seven screws [1], and remove the cover [2].



3. Disconnect four connectors [1].
NOTE
- **If the FAX board of Line 4 only is to be removed, there is no need to disconnect the Line 3 connector.**



4. Remove four screws [1], and remove the FAX board (Line4) [2].



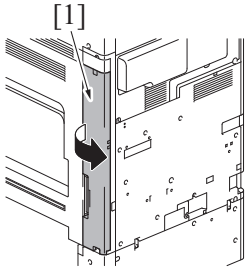
5. Remove four screws [1], and remove the FAX board (Line3) [2].

6. To reinstall, reverse the order of removal.

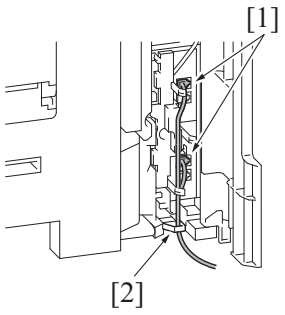
8.32 Disassembly/reassembly procedure (FK-514)

8.32.1 FAX Kit (Line1), FAX Kit (Line2) (FK-514)

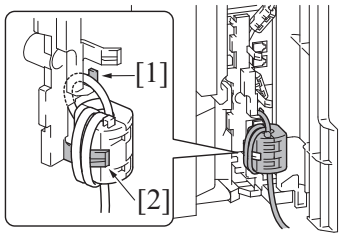
NOTE
- **Following describe the procedure to be followed when removing the FAX Kit (Line 1) and FAX Kit (Line 2) at the same time. When removing the FAX Kit, make sure of the correct line associated with the FAX Kit to be removed before removing the line.**
- **When installing a new board, check the FAX board switch and make settings involving the line settings.**



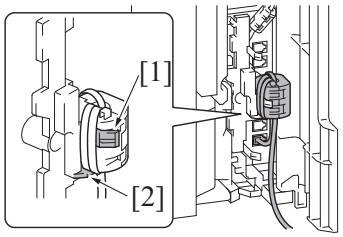
1. Open the cover [1].



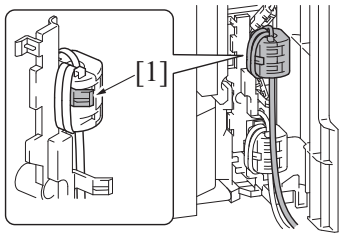
2. Disconnect the modular cable [1], and remove the modular cable from the guide [2].



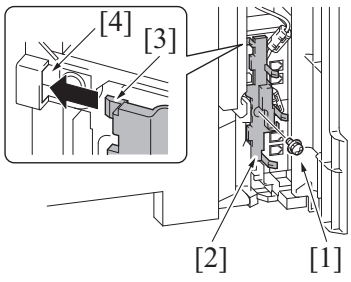
3. **NOTE**
If there is a ferrite core attached to the modular cable when it is installed, follow the instructions and attach a ferrite core to the modular cable.
- **Line 1 (LINE): Hook the cable onto the cable hook [1], and align the protrusion [2] between the ferrite core and cable.**



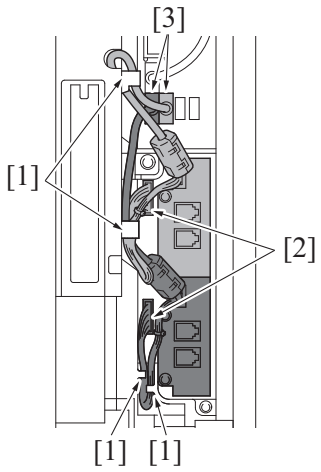
4. **NOTE**
If there is a ferrite core attached to the modular cable when it is installed, follow the instructions and attach a ferrite core to the modular cable.
- **Line 1 (TEL): Align the protrusion [1] between the ferrite core and cable, and place the ferrite core on the mounting seat [2].**



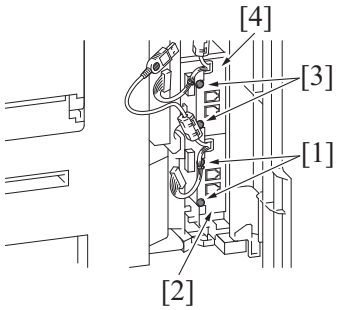
5. **NOTE**
If there is a ferrite core attached to the modular cable when it is installed, follow the instructions and attach a ferrite core to the modular cable.
- **Line 2 (LINE): Align the protrusion [1] between the ferrite core and cable.**



6. Remove the screw [1], and remove the connector cover [2].
NOTE
- **When installing the connector cover, insert the protrusion [3] on the connector cover into the holes [4] by taking care not to trap the harness.**



7. Remove the USB cable and harness from the harness guide [1].
8. Disconnect two connectors [2] and two USB cables [3].



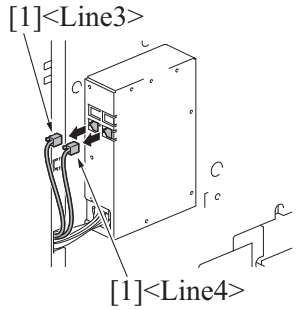
9. Remove two screws [1], and remove the Fax Kit (Line1) [2].
10. Remove two screws [3], and remove the Fax Kit (Line2) [4].

11. To reinstall, reverse the order of removal.

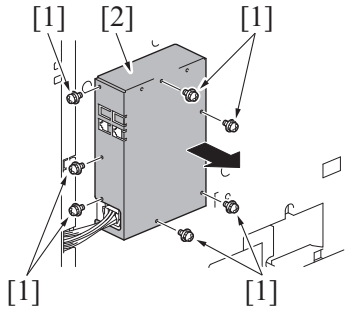
8.32.2 FAX Kit (Line1), FAX Kit (Line2) (FK-514) (with MK-742)

NOTE

- **Following describe the procedure to be followed when removing the FAX Kit (Line 1) and FAX Kit (Line 2) at the same time. When removing the FAX Kit, make sure of the correct line associated with the FAX Kit to be removed before removing the line.**
- **When installing a new board, check the FAX board switch and make settings involving the line settings.**

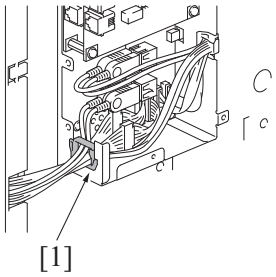


1. Disconnect the modular cable [1].

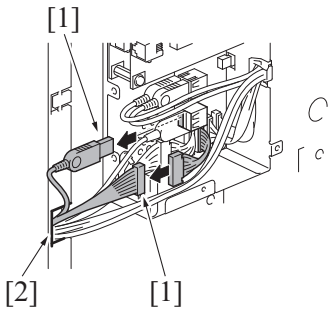


2. Remove seven screws [1], and remove the cover [2].

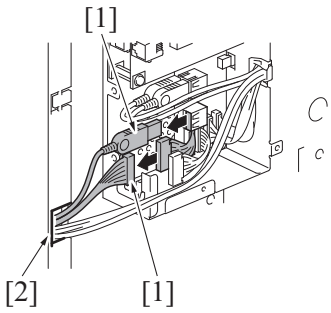
3. Remove the USB cable and harness from the wire saddle [1].



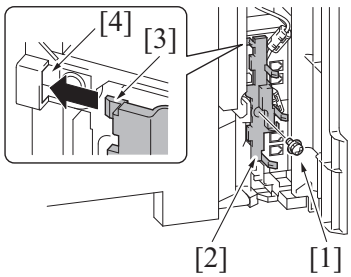
4. Disconnect two connectors [1] of the Line 2.
5. Remove the harness and USB cable from the cut-out section [2] in the cover



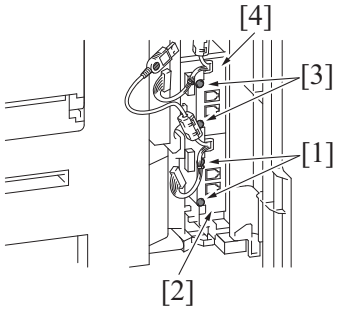
6. Disconnect two connectors [1] from Line 1.
7. Remove the harness and USB cable from the cut-out section [2] in the cover



8. Remove the screw [1], and remove the connector cover [2].
NOTE
- **When installing the connector cover, insert the protrusion [3] on the connector cover into the holes [4] by taking care not to trap the harness.**



9. Remove two screws [1], and remove the Fax Kit (Line1) [2].
10. Remove two screws [3], and remove the Fax Kit (Line2) [4].

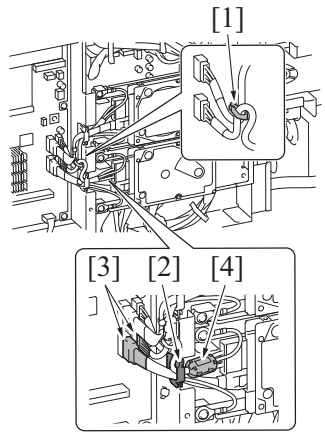


11. To reinstall, reverse the order of removal.

8.33 Disassembly/reassembly procedure (HD-524)

8.33.1 Hard disk (B) (HD-524) (bizhub C368/C308/C258)

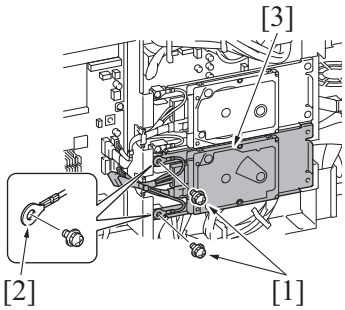
1. Remove the lower rear cover.
G.5.2.20 Lower rear cover
2. Remove the protective sheet.
G.5.2.21 Protective sheet



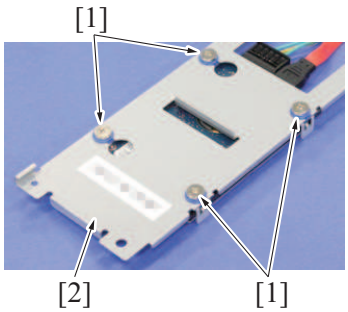
3. Remove the harness from the wire saddle [1].
4. Remove the harness from the edge cover [2].
5. Disconnect two connectors [3].

NOTE

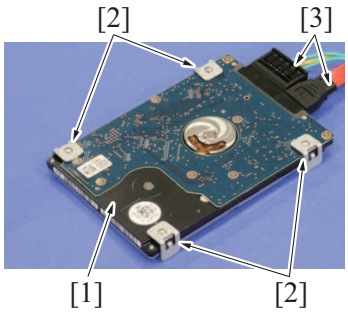
- **When the ferrite core [4] has been installed, be sure to install the hard disk at the position shown in the illustration.**
- **Ensure that the cables do not contact with the MFP board at connecting the connectors [3].**
- **When the video interface kit VI-508 has been installed, ensure that the cables do not contact with the relay circuit board at connecting the connectors [3].**



6. Remove two screws [1], and remove two ground wires [2].
7. Remove the hard disk assy [3].



8. Remove four screws [1], and remove the metal plate [2].

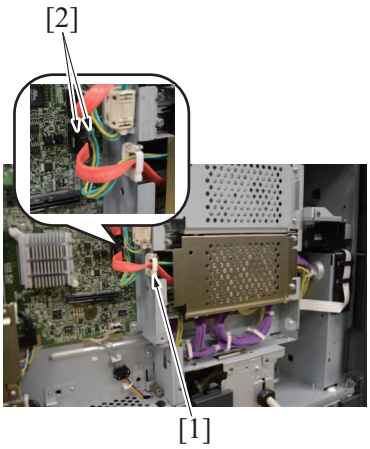


9. Remove four metal plates [2] and two connectors [3] from the hard disk [1].

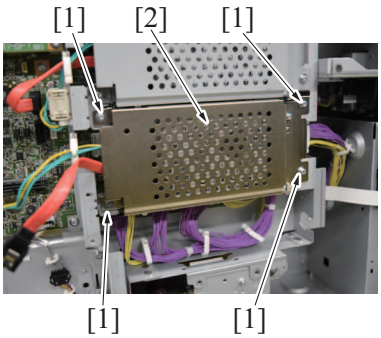
10. To reinstall, reverse the order of removal.
11. After replacing, conduct hard disk mirroring.
    [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild]

8.33.2 Hard disk (B) (HD-524: Cover type) (bizhub C368/C308/C258)

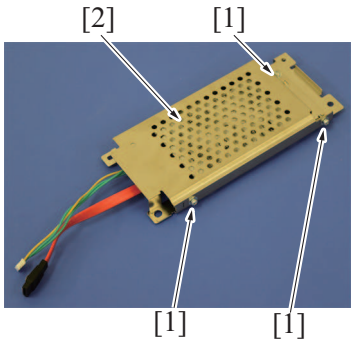
1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover



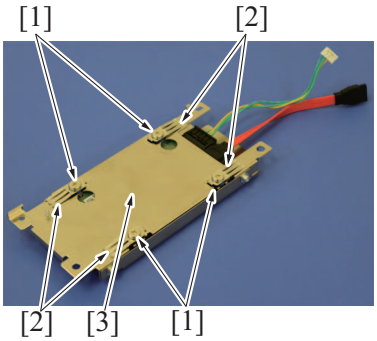
2. Remove the harness from the wire saddle [1].
3. Disconnect two connectors [2].
   NOTE
   - **Ensure that the cables do not contact with the MFP board at connecting the connectors [2].**
   - **When the security kit SC-508 has been installed, ensure that the cables do not contact with the DSC board at connecting the connectors [2].**



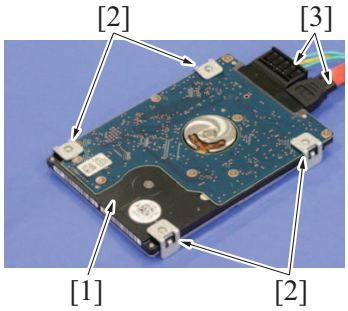
4. Remove four screws [1], and remove the hard disk assy [2].



5. Remove three screws [1], and remove the cover [2].



6. Remove four screws [1].
7. Remove the plate spring [2], and remove the plate [3].

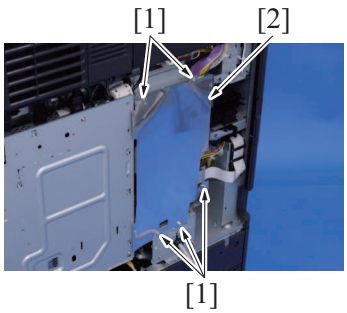


8. Remove four metal plates [2] and two connectors [3] from the hard disk [1].

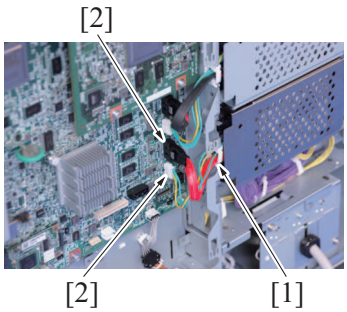
9. To reinstall, reverse the order of removal.
10. After replacing, conduct hard disk mirroring.
    [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild]

8.33.3 Hard disk (B) (bizhub C658/C558/C458)

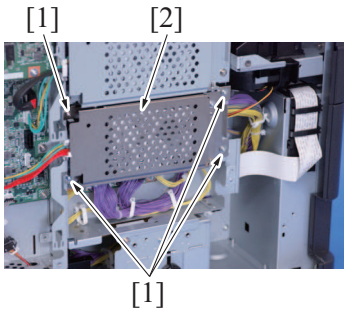
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover



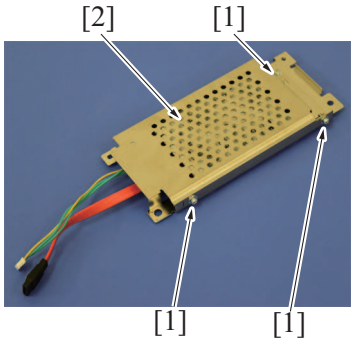
4. Remove five screws [1], and remove the aluminum sheet [2].
5. Remove the protective shield.
   G.6.2.26 Protective shield



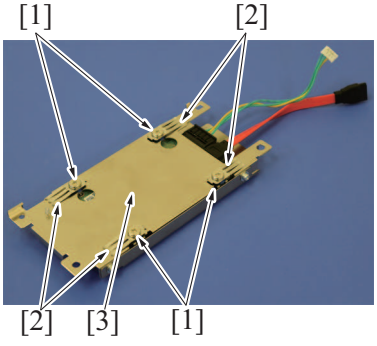
6. Remove the harness from the edge cover [1].
7. Disconnect two connectors [2].
   NOTE
   - **Make sure the cable does not make contact with the MFP board when installing the connector [2].**
   - **If the video interface kit VI-510 is installed, make sure the cable does not make contact with the relay board when installing the connector [2].**



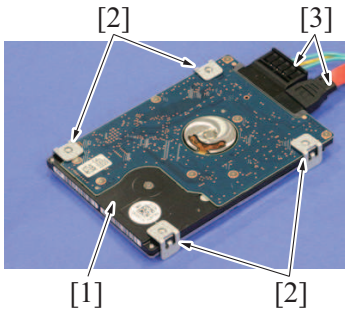
8. Remove four screws [1], and remove the hard disk assy [2].



9. Remove three screws [1], and remove the cover [2].



10. Remove four screws [1].
11. Remove four plate springs [2], and remove the plate [3].

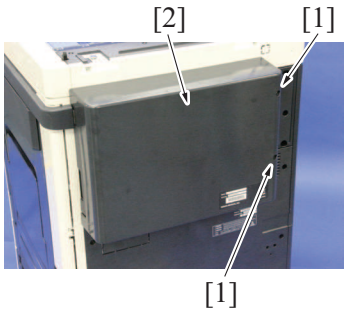


12. Remove four metal plates [2] and two connectors [3] from the hard disk [1].

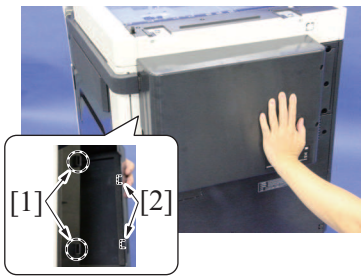
13. To reinstall, reverse the order of removal.
14. After replacing, conduct hard disk mirroring.
[State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild]

8.34 Disassembly/reassembly procedure (CU-101)

8.34.1 Clean unit cover



1. Remove two screws [1], and remove the clean unit cover [2].

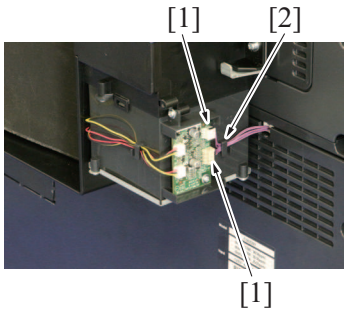


2. **NOTE**
   - **When installing the clean unit cover, fit the clean unit cover tabs [2] into the clean unit holes [1], hold it in place and secure the screws.**

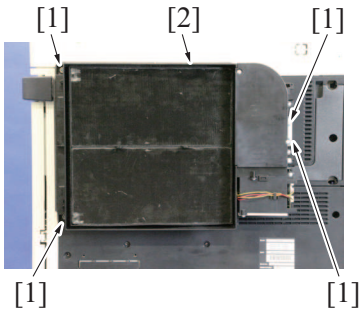
3. To reinstall, reverse the order of removal.

8.34.2 Clean unit (CU-101)

1. Remove the clean unit cover.
G.8.34.1 Clean unit cover



2. Disconnect two connectors [1], and remove the harness from the harness guide [2].

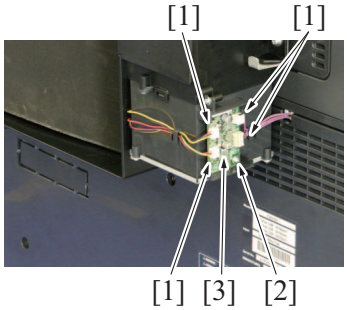


3. Remove the four screws [1], and remove the clean unit [2].

4. To reinstall, reverse the order of removal.

8.34.3 Clean unit drive board (CUDB)

1. Remove the clean unit cover.
   G.8.34.1 Clean unit cover

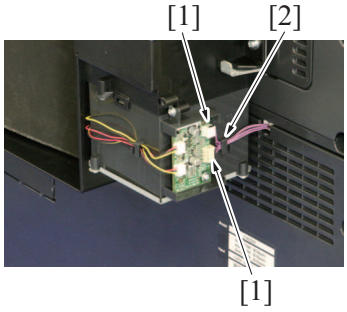


2. Disconnect four connectors [1].
3. Remove the screw [2], and remove the clean unit drive board [3].

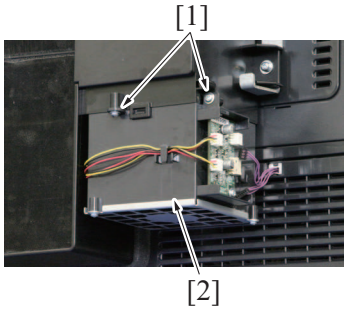
4. To reinstall, reverse the order of removal.

8.34.4 Exhaust fan/1 (FM14)

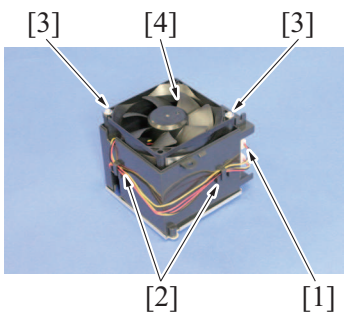
1. Remove the clean unit cover.
   G.8.34.1 Clean unit cover



2. Disconnect two connectors [1], and remove the harness from the harness guide [2].



3. Remove two screws [1], and remove the exhaust fan assy [2].

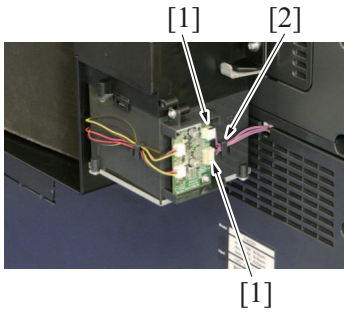


4. Disconnect the connector [1], and remove the harness from two harness guides [2].
5. Remove two screws [3], and remove the exhaust fan/1 [4].

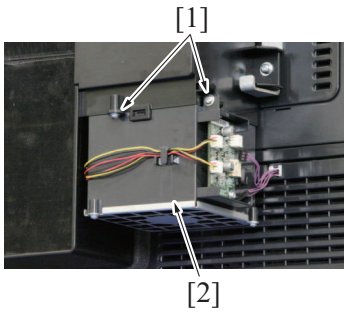
6. To reinstall, reverse the order of removal.

8.34.5 Exhaust fan/2 (FM15)

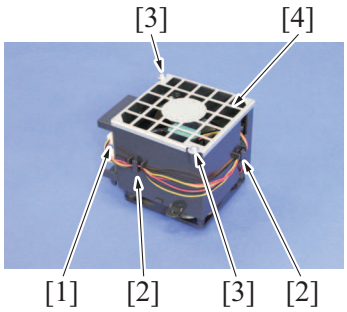
1. Remove the clean unit cover.
   G.8.34.1 Clean unit cover



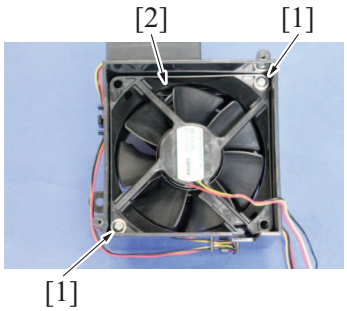
2. Disconnect two connectors [1], and remove the harness from the harness guide [2].



3. Remove two screws [1], and remove the exhaust fan assy [2].



4. Disconnect the connector [1], and remove the harness from two harness guides [2].
5. Remove two screws [3], and remove the exhaust fan cover [4].

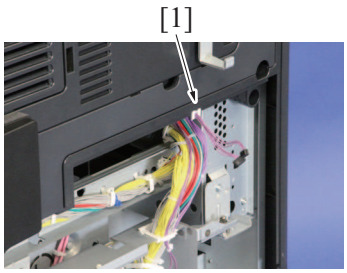


6. Remove two screws [1], and remove the exhaust fan/2 [2].

7. To reinstall, reverse the order of removal.

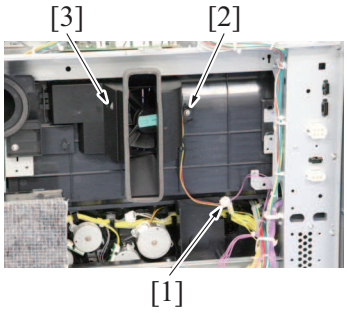
8.34.6 Suction fan (FM16)

1. Remove the clean unit cover.
   G.8.34.1 Clean unit cover
2. Remove the clean unit.
   G.8.34.2 Clean unit (CU-101)
3. Remove the lower rear cover.
   G.5.2.20 Lower rear cover

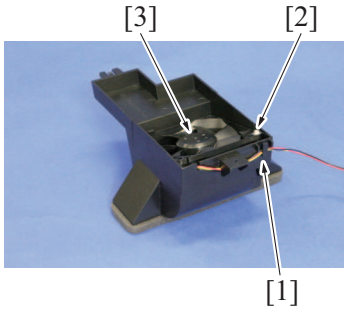


4. Remove the harness from the edge cover [1].

5. Remove the upper rear cover.
G.5.2.22 Upper rear cover



6. Disconnect the connector [1].
7. Remove the screw [2], and remove the suction fan assy [3].

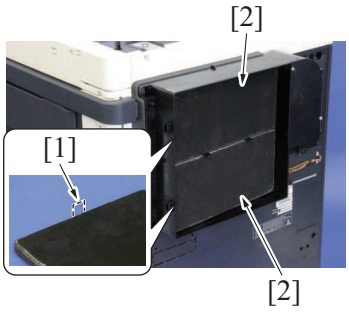


8. Remove the harness from the harness guide [1].
9. Remove the screw [2], and remove the suction fan [3].

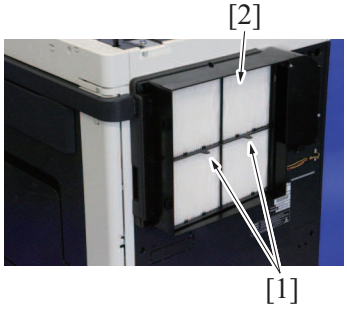
10. To reinstall, reverse the order of removal.

8.34.7 Deodorant filter/UFP filter

1. Remove the clean unit cover.
G.8.34.1 Clean unit cover



2. Hold the pull tab [1], and remove the deodorant filter [2].



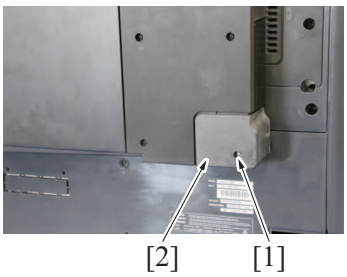
3. Hold the pull tab [1], and remove the UPF filter [2].

4. To reinstall, reverse the order of removal.

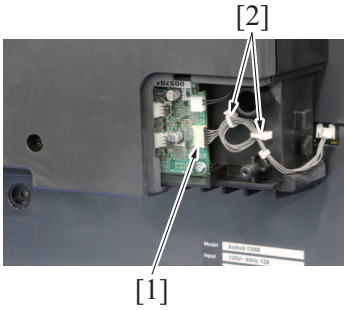
8.35 Disassembly/reassembly procedure (CU-102)

8.35.1 Clean unit (CU-102)

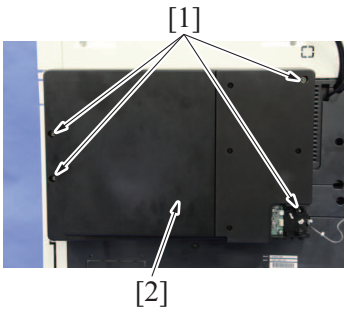
1. Remove the screw [1], and remove the cover [2].



2. Disconnect the connector [1], and remove the harness from two wire saddles [2].
NOTE
- **When connecting the connector [1], wind the harness two times around two wire saddles [2] as illustrated in the figure.**



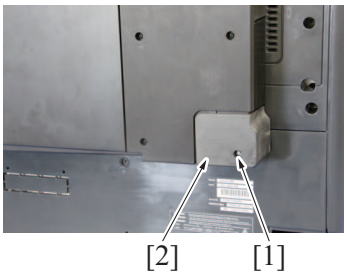
3. Remove four screws [1], and remove the clean unit [2].



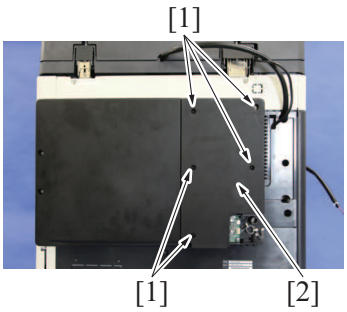
4. To reinstall, reverse the order of removal.

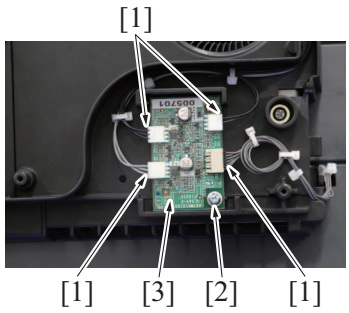
8.35.2 Clean unit drive board (CUDB)

1. Remove the screw [1], and remove the cover [2].



2. Remove five screws [1], and remove the cover [2].



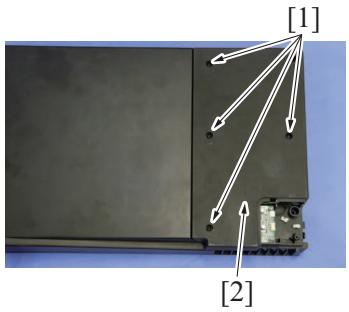


3. Disconnect four connectors [1].
4. Remove the screw [2], and remove the clean unit drive board [3].

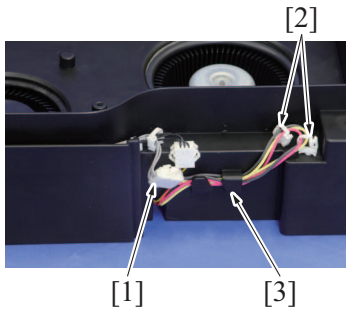
5. To reinstall, reverse the order of removal.

8.35.3 Exhaust fan/1 (FM14)

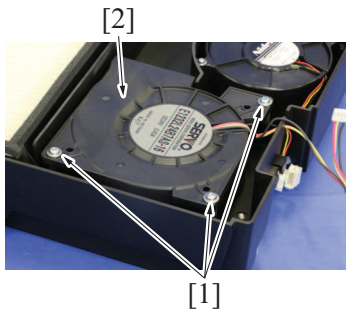
1. Remove the clean unit.
G.8.35.1 Clean unit (CU-102)



2. Remove four screws [1], and remove the cover [2].



3. Disconnect the connector [1], and remove the harness from two wire saddles [2] and harness guide [3].

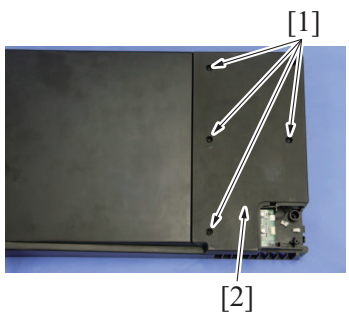


4. Remove three screws [1], and remove the exhaust fan/1 [2].

5. To reinstall, reverse the order of removal.

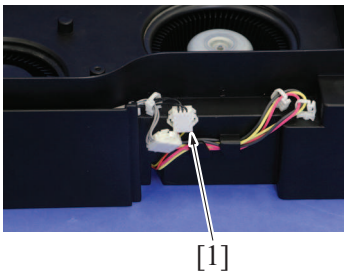
8.35.4 Exhaust fan/2 (FM15)

1. Remove the clean unit.
G.8.35.1 Clean unit (CU-102)

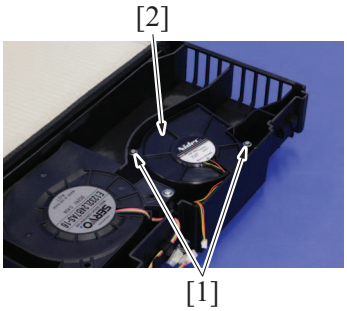


2. Remove four screws [1], and remove the cover [2].

3. Disconnect the connector [1].



4. Remove two screws [1], and remove the exhaust fan/2 [2].

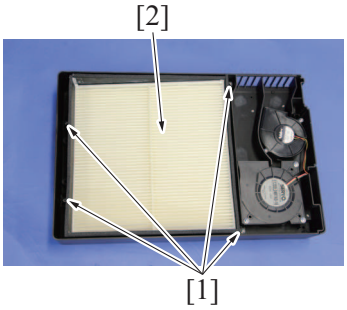


5. To reinstall, reverse the order of removal.

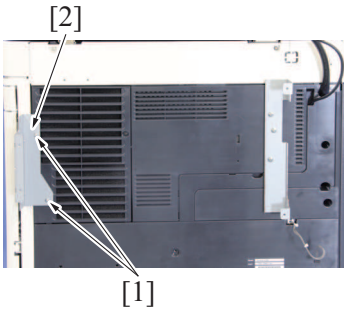
8.35.5 UFP filter

1. Remove the clean unit.
G.8.35.1 Clean unit (CU-102)

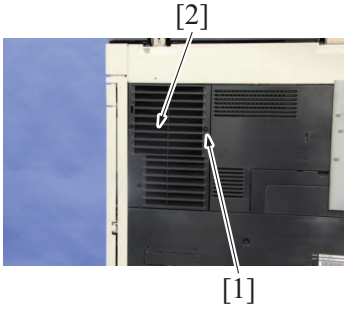
2. Remove four screws [1], and remove the UFP filter/1 [2].



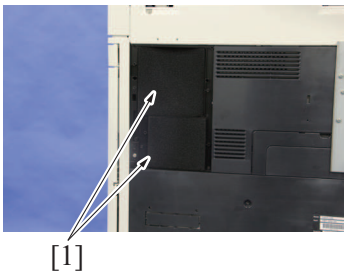
3. Remove two screws [1], and remove the clean unit mounting plate [2].



4. Remove the screw [1], and remove the louver [2].



5. Remove two UFP filters/2 [1].

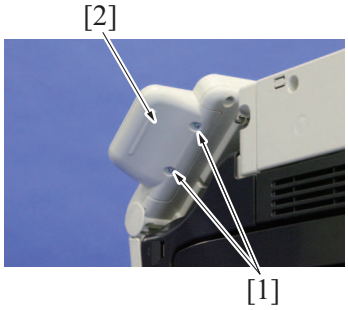


6. To reinstall, reverse the order of removal.

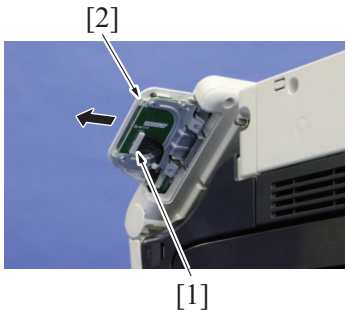
8.36 Disassembly/reassembly procedure (KP-101)

8.36.1 Keypad (KP-101)

1. Remove the two screws [1], and remove the cover [2].



2. Disconnect the connector [1] and remove the keypad [2].

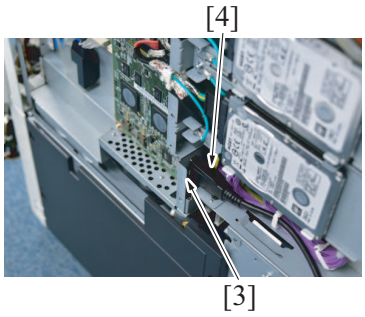


3. To reinstall, reverse the order of removal.

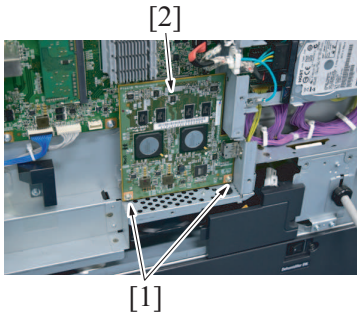
8.37 Disassembly/reassembly procedure (VI-508)

8.37.1 Video Interface Kit (VI-508)

1. Remove the lower rear cover.
   G.5.2.20 Lower rear cover
2. Remove the protective sheet.
   G.5.2.21 Protective sheet



3. Disconnect the video transfer cable [4].
4. Remove the screw [3].
5. Remove Two screws [1], and remove the relay board [2].

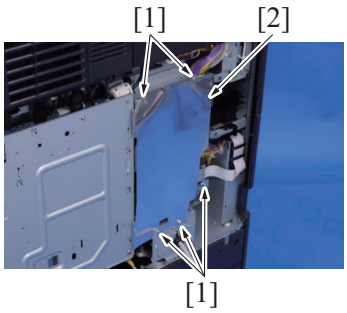


6. To reinstall, reverse the order of removal.

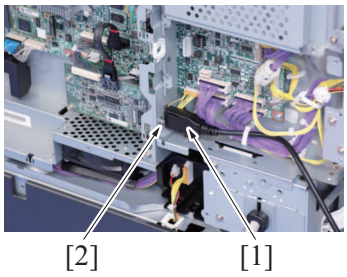
8.38 Disassembly/reassembly procedure (VI-510)

8.38.1 Video Interface Kit (VI-510)

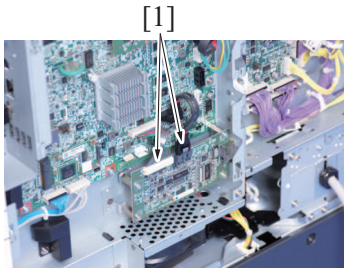
1. Remove the duct cover.
   G.6.2.23 Duct cover/1
   G.6.2.24 Duct cover/2, filter assy
2. Remove the toner filter.
   F.8.1.1 Replacing the toner filter
3. Remove the lower rear cover.
   G.6.2.21 Lower rear cover



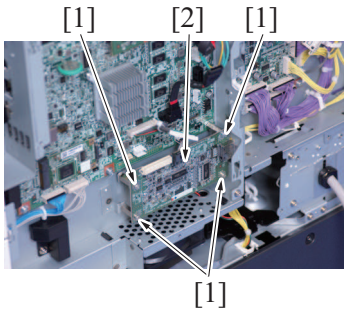
4. Remove five screws [1], and remove the aluminum sheet [2].
5. Remove the protective shield.
   G.6.2.26 Protective shield



6. Disconnect the video transfer cable [1].
7. Remove the screw [2].



8. Disconnect two connectors [1].



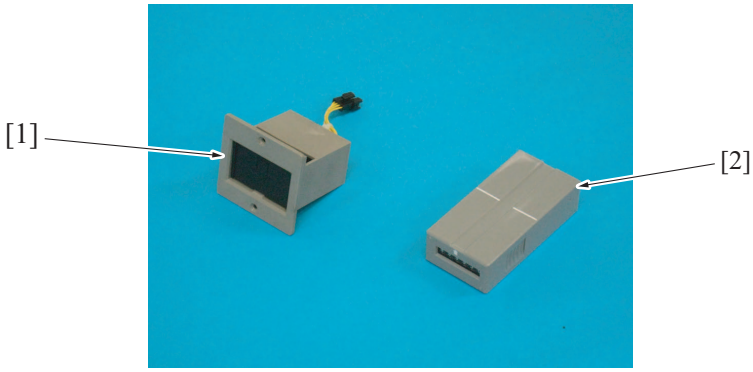
9. Remove four screws [1], and remove the relay board [2].

10. To reinstall, reverse the order of removal.

9. COMMERCIALLY AVAILABLE PARTS

9.1 Installing the key counter (bizhub C368/C308/C258)

9.1.1 Configuration



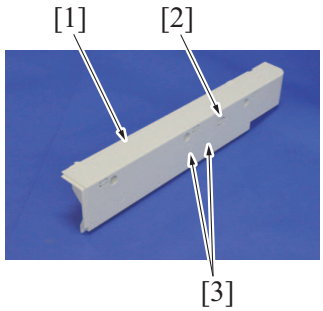
[1]	Key counter socket	[2]	Key counter

9.1.2 Procedure

NOTE

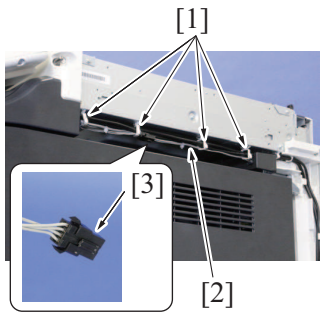
- **When mounting the key counter, the optional key counter kit KIT-1 (4623-474) or key counter kit KIT-CF (4623-484; only for Europe and Japan) is necessary.**
- **Procedure for directly mounting the key counter to the main unit is described below.**
  For mounting the key counter to the optional working table WT-506, refer to WT-506 installation manual.

(1) Key counter kit KIT-1 (4623-474)

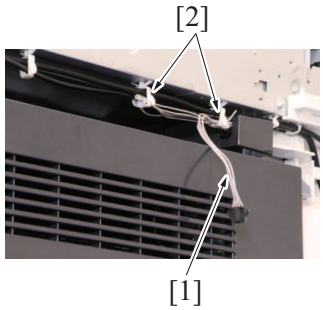


1. Remove the scanner right cover [1].
   G.5.2.2 Scanner right cover
2. Cut out the knockouts [2] of the scanner right cover.
3. Remove two caps [3].

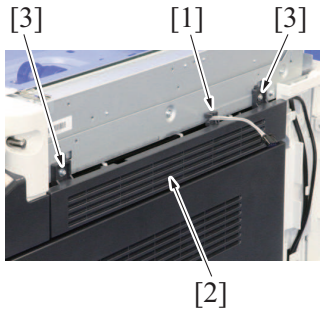
4. Remove the upper right cover.
   G.5.2.19 Upper right cover



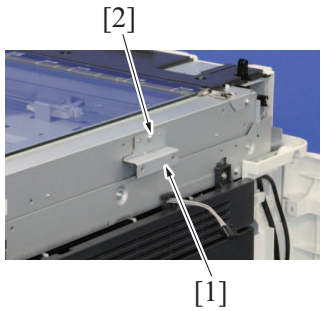
5. Remove the harness [2] for the key counter from the four wire saddles [1].
6. Remove the connector cover [3].



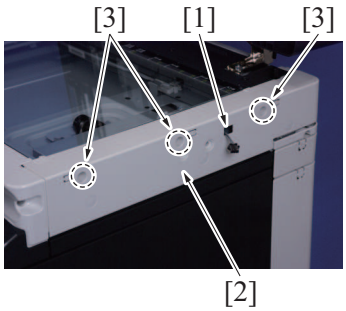
7. Route the harness [1] through two wire saddles [2] as shown in the illustration.



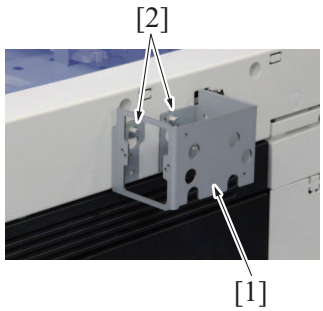
8. Route the harness through the hook [1] located at the middle of the upper right cover, and reinstall the upper right cover [2] using two screws [3].



9. Prepare one screw (M3 x 6).
10. Install the mounting plate (4623 1670 ##) [1] included in the key counter kit with the prepared screw [2].

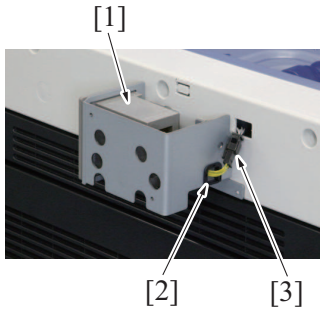


11. Mount the scanner right cover [1], and insert the harness for the key counter through the hole [2] knockouts were removed from.

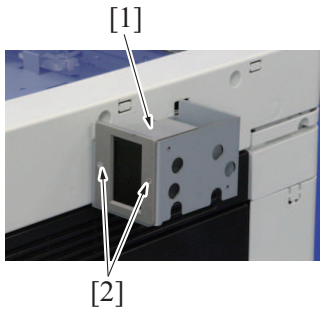


12. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Secure the counter mounting bracket passing the connector into the bracket.**
- **Use the two long screws (V116 0418 14: M4 x 18) in the key counter kit to secure the counter mounting bracket.**

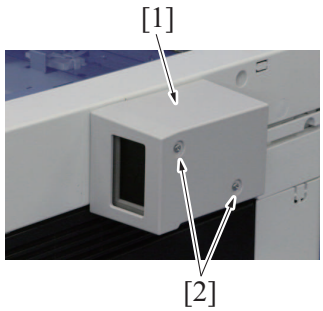
13. Insert the key counter socket [1].
14. Mount the edge cover [2] to the counter mounting bracket and set the harness to the edge cover.



15. Connect the key counter socket connector [3].



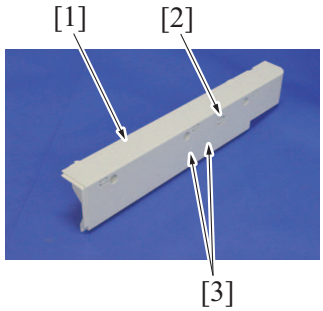
16. Using two screws [2], secure the key counter socket [1].



17. Using two screws [2], secure the key counter cover [1].

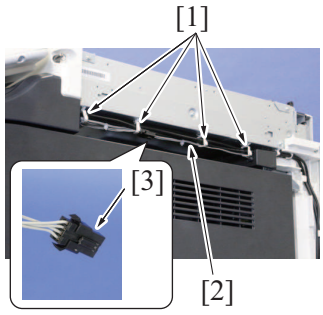
18. Select [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [Key Counter Only] or [Vendor 2] (Use the key counter and the vendor 2 together). Then, set the relative items.
For details on setting, see " I.8.3.2 Management Function Choice".

(2) Key counter kit KIT-CF (4623-484)

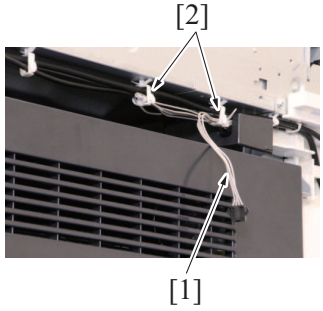


1. Remove the scanner right cover [1].
G.5.2.19 Upper right cover
2. Cut out the knockouts [2] of the scanner right cover.
3. Remove two caps [3].

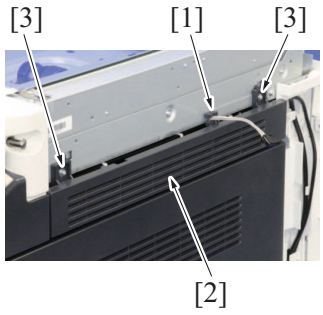
4. Remove the upper right cover.
G.5.2.2 Scanner right cover



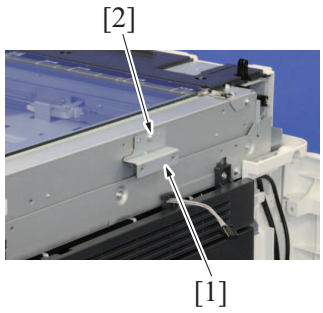
5. Remove the harness [2] for the key counter from the four wire saddles [1].
6. Remove the connector cover [3].



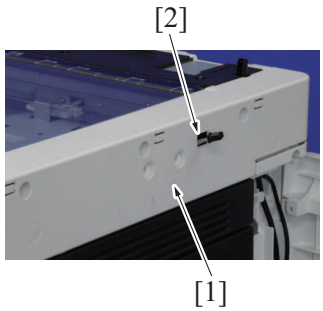
7. Route the harness [1] through two wire saddles [2] as shown in the illustration.



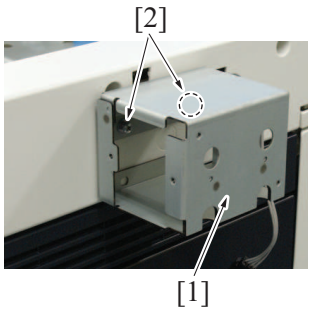
8. Route the harness through the hook [1] located at the middle of the upper right cover, and reinstall the upper right cover [2] using two screws [3].



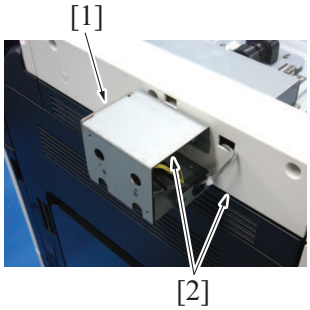
9. Prepare one screw (M3 x 6).
10. Install the mounting plate (4623 1670 ##) [1] included in the key counter kit with the prepared screw [2].



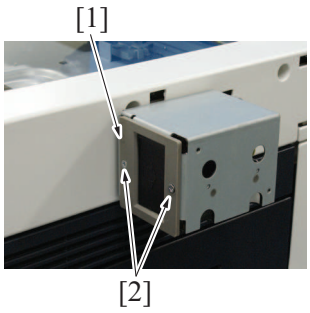
11. Mount the scanner right cover [1], and insert the harness for the key counter through the hole [2] knockouts were removed from.



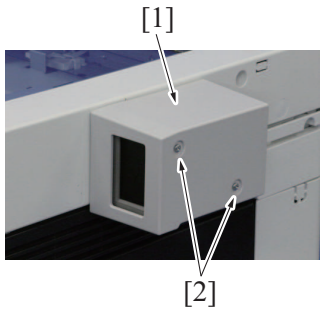
12. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Secure the counter mounting bracket passing the connector into the bracket.**
- **Use the two long screws (V116 0418 14: M4 x 18) in the key counter kit to secure the counter mounting bracket.**



13. Insert the key counter socket [1].
14. Mount the edge cover [2] to the counter mounting bracket and set the harness to the edge cover.
15. Connect the key counter socket connector [3].



16. Using two screws [2], secure the key counter socket [1].

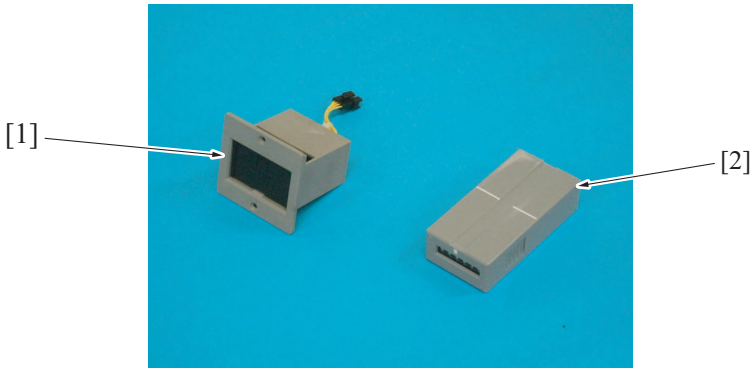


17. Using two screws [2], secure the key counter cover [1].

18. Select [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [Key Counter Only] or [Vendor 2] (Use the key counter and the vendor 2 together). Then, set the relative items.
For details on setting, see " I.8.3.2 Management Function Choice".

9.2 Installing the key counter (bizhub C658/C558/C458)

9.2.1 Configuration



[1]	Key counter socket	[2]	Key counter

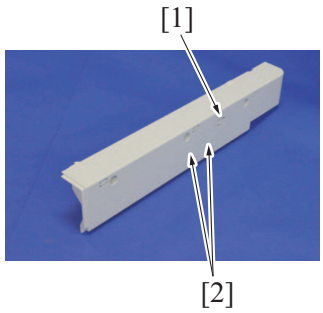
9.2.2 Procedure

NOTE

- **When mounting the key counter, the optional key counter kit KIT-1 (4623-474) or key counter kit KIT-CF (4623-484; only for Europe and Japan) is necessary.**
- **Procedure for directly mounting the key counter to the main unit is described below.**
  For mounting the key counter to the optional working table WT-506, refer to WT-506 installation manual.

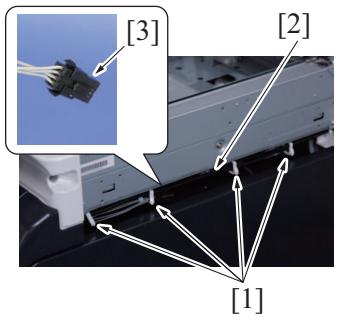
(1) Key counter kit KIT-1 (4623-474)

1. Remove the scanner right cover.
   G.6.2.2 Scanner right cover

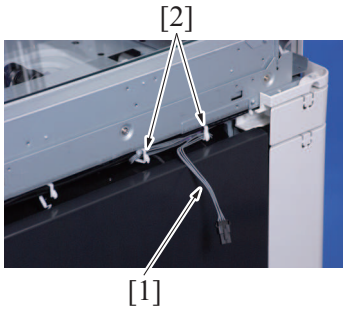


2. Cut out the knockouts [1] of the scanner right cover.
3. Remove two caps [2].

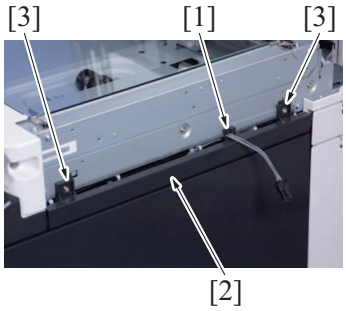
4. Remove the upper right cover.
G.6.2.20 Upper right cover



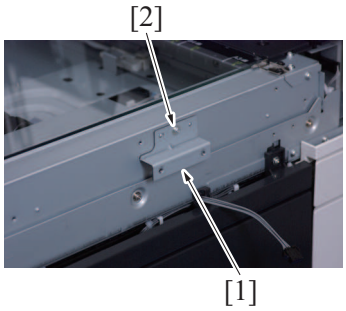
5. Remove the harness [2] for the key counter from four wire saddles [1].
6. Remove the connector cover [3].



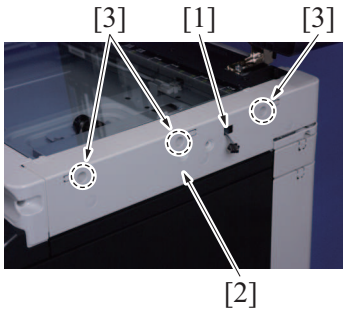
7. Route the harness [1] through two wire saddles [2] as shown in the illustration.



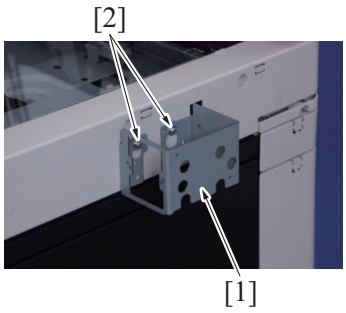
8. Route the harness through the hook [1] located at the middle of the upper right cover, and reinstall the upper right cover [2] using two screws [3].



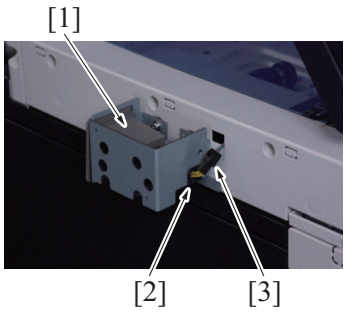
9. Prepare one screw (M3 x 6).
10. Install the mounting plate (4623 1670 ##) [1] included in the key counter kit with the prepared screw [2].



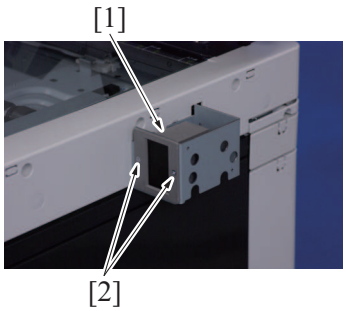
11. Pass the key counter harness through the hole [1] in the scanner right cover.
12. Mount the scanner right cover [2] using three screws [3].



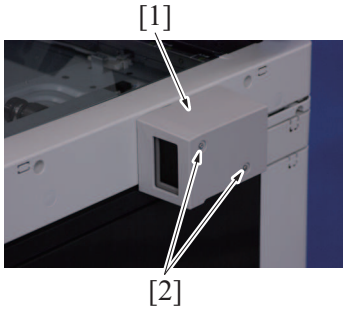
13. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Secure the counter mounting bracket passing the connector into the bracket.**
- **Use two long screws (V116 0418 14: M4 x 18) in the key counter kit to secure the counter mounting bracket.**



14. Insert the key counter socket [1].
15. Mount the edge cover [2] to the counter mounting bracket and set the harness to the edge cover.
16. Connect the key counter socket connector [3].



17. Using two screws [2], secure the key counter socket [1].

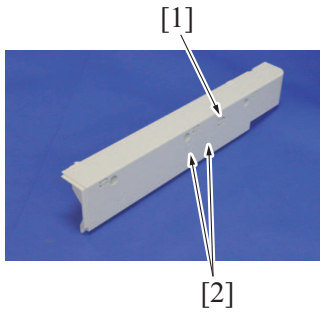


18. Using two screws [2], secure the key counter cover [1].

19. Select [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [Key Counter Only] or [Vendor 2] (Use the key counter and the vendor 2 together). Then, set the relative items.
For details on setting, see " I.8.3.2 Management Function Choice".

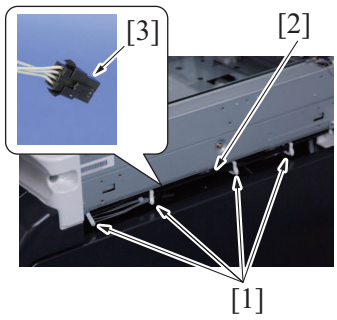
(2) Key counter kit KIT-CF (4623-484)

1. Remove the scanner right cover.
G.6.2.2 Scanner right cover

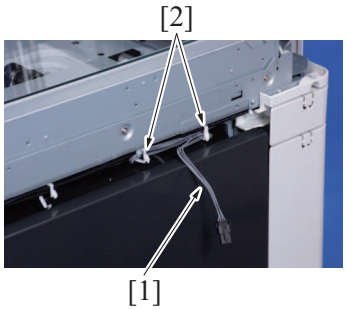


2. Cut out the knockouts [1] of the scanner right cover.
3. Remove two caps [2].

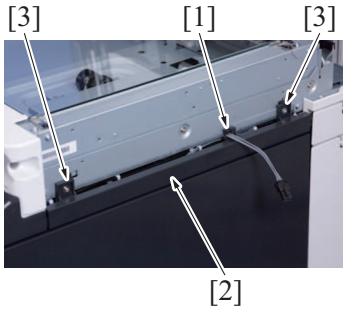
4. Remove the upper right cover.
G.6.2.20 Upper right cover



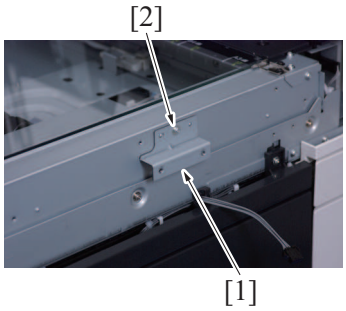
5. Remove the harness [2] for the key counter from four wire saddles [1].
6. Remove the connector cover [3].



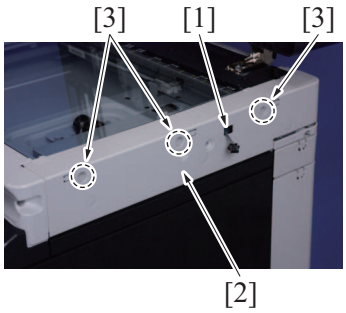
7. Route the harness [1] through two wire saddles [2] as shown in the illustration.



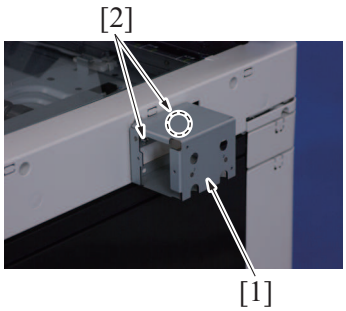
8. Route the harness through the hook [1] located at the middle of the upper right cover, and reinstall the upper right cover [2] using two screws [3].



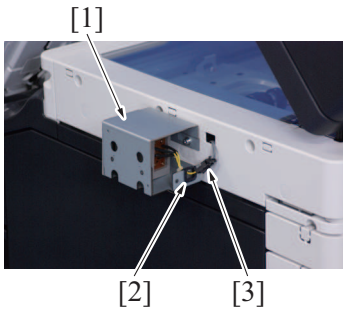
9. Prepare one screw (M3 x 6).
10. Install the mounting plate (4623 1670 ##) [1] included in the key counter kit with the prepared screw [2].



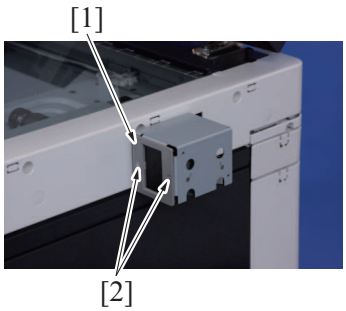
11. Pass the key counter harness through the hole [1] in the right scanner cover.
12. Mount the scanner right cover [2] using three screws [3].



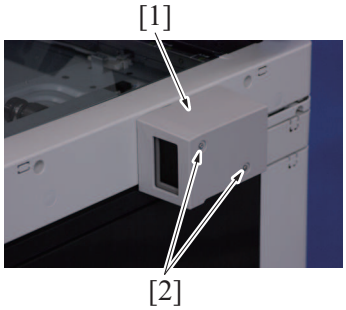
13. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Use two long screws (V116 0418 14: M4 x 18) in the key counter kit to secure the counter mounting bracket.**



14. Insert the key counter socket [1].
15. Mount the edge cover [2] to the counter mounting bracket and set the harness to the edge cover.
16. Connect the key counter socket connector [3].



17. Using two screws [2], secure the key counter socket [1].

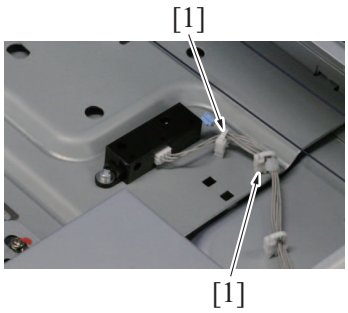


18. Using two screws [2], secure the key counter cover [1].

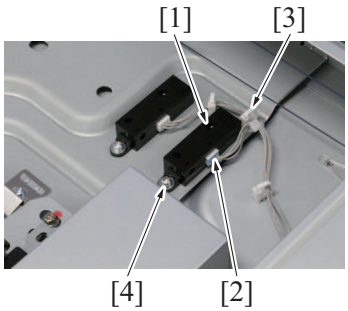
19. Select [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [Key Counter Only] or [Vendor 2] (Use the key counter and the vendor 2 together). Then, set the relative items.
For details on setting, see " I.8.3.2 Management Function Choice".

9.3 Installing the original size sensor/2 (Option)

1. Remove the scanner right cover.
G.5.2.2 Scanner right cover
G.6.2.2 Scanner right cover
2. Remove the original glass.
G.5.2.12 Original glass
G.6.2.11 Original glass



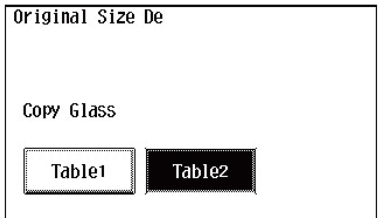
3. Remove the harness from two wire saddles [1].



4. Connect the connector [2] to the original size sensor/2 [1].
5. Attach the harness to the wire saddle [3].
6. Fix the original size sensor/2 (PS205) [1] with screw [4].

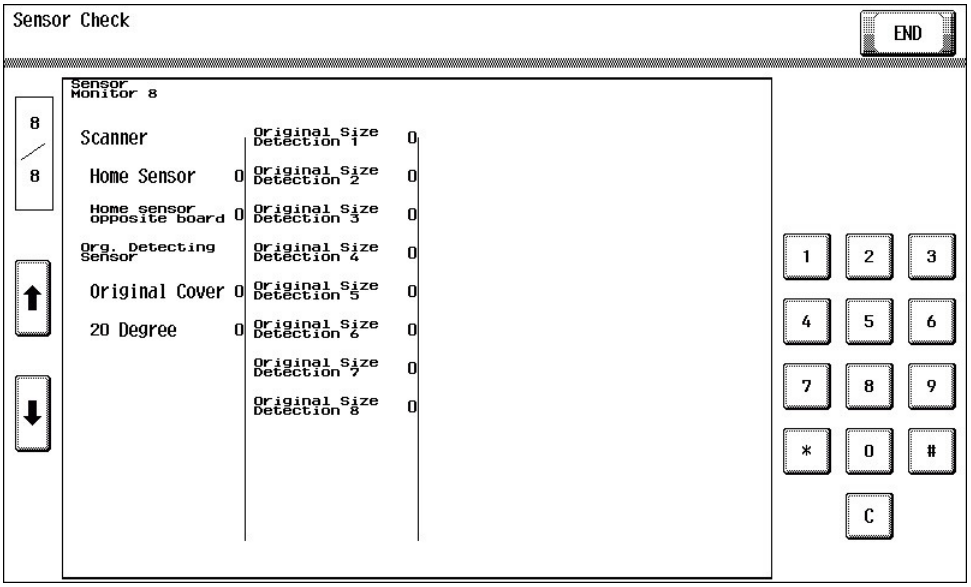
NOTE

- **Refer to the Parts Guide Manual for the part numbers of the wire saddle, screws, and original size sensor.**



7. Select [Service Mode] -> [System 1] -> [Original Size Detection] and then set the original glass to [Table 2].

8. Select [Service Mode] -> [State Confirmation] -> [Sensor Check].



9. Set the original on the original glass, and check that the data for “Original Size Detection 2” changes from “0” to “1” on the screen.

H CLEANING/LUBRICATION

1. bizhub C658/C558/C458/C368/C308/C258

1.1 Cleaning parts list

No.	Section	Part name	Ref. page
1	Processing section	Transfer belt unit	H.1.3.1 Transfer belt unit (bizhub C368/C308/C258) H.1.3.2 Transfer belt unit (bizhub C658/C558/C458)
2		PH window	H.1.3.3 PH window (bizhub C368/C308/C258) H.1.3.4 PH window (bizhub C658/C558/C458)
3	Tray 1	Tray 1 feed roller	H.1.3.5 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller (bizhub C368/C308/C258) H.1.3.6 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller (bizhub C658/C558/C458)
4		Tray 1 pick-up roller	
5		Tray 1 separation roller	
6	Tray 2	Tray 2 feed roller	H.1.3.7 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller (bizhub C368/C308/C258) H.1.3.8 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller (bizhub C658/C558/C458)
7		Tray 2 pick-up roller	
8		Tray 2 separation roller	
9		Tray 2 transport roller	H.1.3.9 Tray 2 transport roller
10	Manual bypass tray	Manual bypass tray feed roller	H.1.3.10 Manual bypass tray feed roller
11		Manual bypass tray separation roller	H.1.3.11 Manual bypass tray separation roller
12	Scanner section	Original glass	H.1.3.12 Original glass (bizhub C368/C308/C258) H.1.3.13 Original glass (bizhub C658/C558/C458)
13		Scanner rails	H.1.3.14 Scanner rails
14		Mirrors	H.1.3.15 Mirrors
15		Lens	H.1.3.16 Lens
16		CCD sensor	H.1.3.17 CCD sensor

1.2 Lubrication parts list

NOTE

- **With this machine, the lubrication is not necessary.**

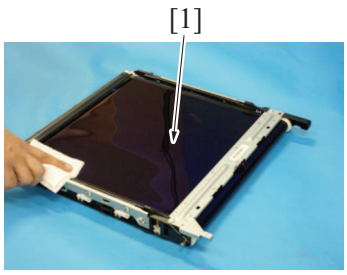
1.3 Cleaning procedure

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

1.3.1 Transfer belt unit (bizhub C368/C308/C258)

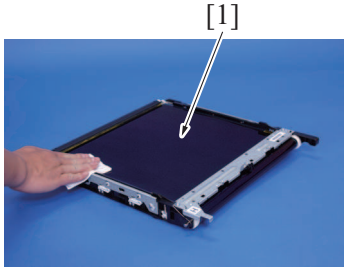
1. Remove the transfer belt unit.
   F.7.4.3 Replacing the transfer belt unit



2. Using a hydro-wipe (65AA-99##), wipe the transfer belt [1].
   NOTE
   - **Do not wipe out with water.**
   - **Do not wipe out with any solvents.**

1.3.2 Transfer belt unit (bizhub C658/C558/C458)

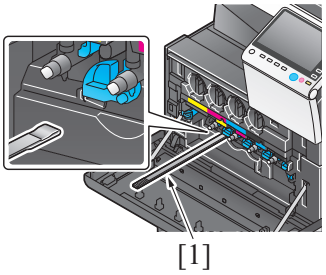
1. Remove the transfer belt unit.
   F.8.5.3 Replacing the transfer belt unit



2. Using a hydro-wipe (65AA-99##), wipe the transfer belt [1].
   NOTE
   - **Do not wipe out with water.**
   - **Do not wipe out with any solvents.**

1.3.3 PH window (bizhub C368/C308/C258)

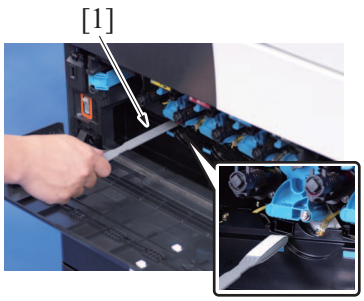
1. Open the front door.
2. Remove the waste toner box.
   F.7.6.1 Replacing the waste toner box



3. Clean the PH window by putting the PH window cleaning jig [1] back and forth a couple times.
   NOTE
   - **Clean every PH window of Y,M,C,K.**

1.3.4 PH window (bizhub C658/C558/C458)

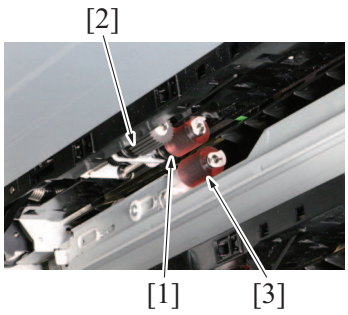
1. Open the front door.
2. Remove the waste toner box.
   F.8.7.1 Replacing the waste toner box



3. Clean the PH window by putting the PH window cleaning jig [1] back and forth a couple times.
   NOTE
   - **Clean every PH window of Y,M,C,K.**

1.3.5 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller (bizhub C368/C308/C258)

1. Remove the tray 1.
   G.5.2.23 Tray 1
2. Remove the tray 2.
   G.5.2.24 Tray 2

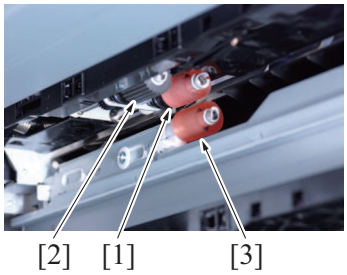


3. Using a cleaning pad dampened with alcohol, wipe the tray 1 feed roller [1], tray 1 pick-up roller [2], tray 1 separation roller [3] clean of dirt.

1.3.6 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller (bizhub C658/C558/C458)

1. Remove the tray 1.
   G.6.2.27 Tray 1
2. Remove the tray 2.
   G.6.2.28 Tray 2

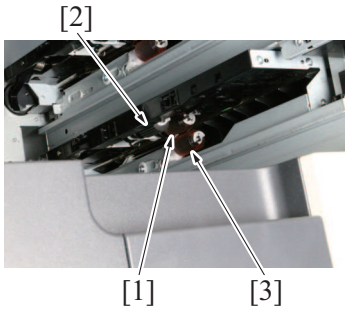
3. Using a cleaning pad dampened with alcohol, wipe the tray 1 feed roller [1], tray 1 pick-up roller [2], tray 1 separation roller [3] clean of dirt.



1.3.7 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller (bizhub C368/C308/C258)

1. Remove the tray 1.
   G.5.2.23 Tray 1
2. Remove the tray 2.
   G.5.2.24 Tray 2

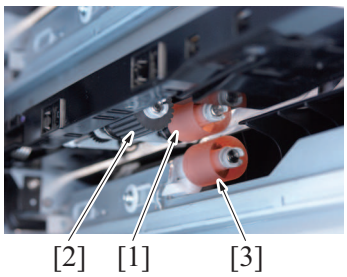
3. Using a cleaning pad dampened with alcohol, wipe the tray 2 feed roller [1], tray 2 pick-up roller [2], tray 2 separation roller [3] clean of dirt.



1.3.8 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller (bizhub C658/C558/C458)

1. Remove the tray 1.
   G.6.2.27 Tray 1
2. Remove the tray 2.
   G.6.2.28 Tray 2

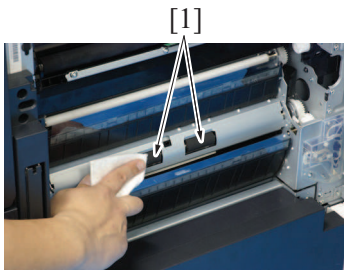
3. Using a cleaning pad dampened with alcohol, wipe the tray 2 feed roller [1], tray 2 pick-up roller [2], tray 2 separation roller [3] clean of dirt.



1.3.9 Tray 2 transport roller

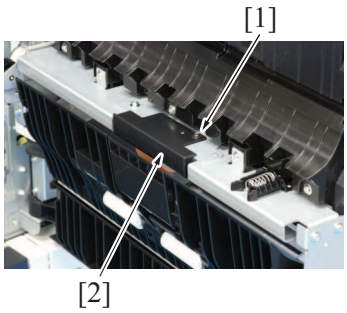
1. Open the right door.

2. Using a cleaning pad dampened with alcohol, wipe the tray 2 transport rollers [1] clean of dirt.

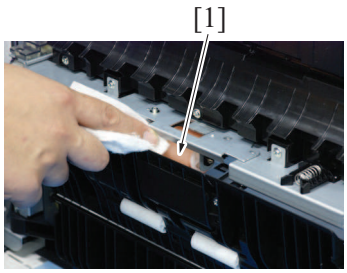


1.3.10 Manual bypass tray feed roller

1. Open the right door.
2. Open the registration unit.



3. Remove the screw [1], and remove the feed roller cover [2].

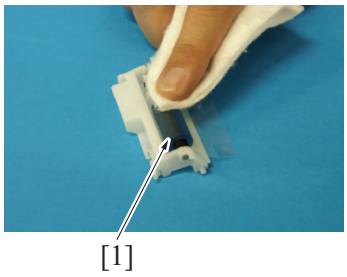


4. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray feed roller [1] clean of dirt.

1.3.11 Manual bypass tray separation roller

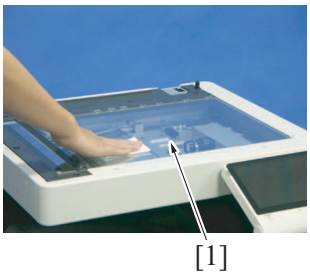
1. Remove the manual bypass tray separation roller unit.
F.7.7.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy

2. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray separation roller [1] clean of dirt.

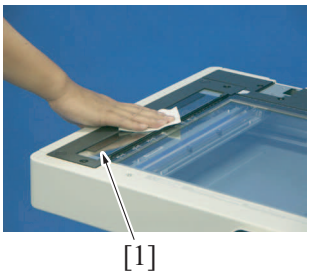


1.3.12 Original glass (bizhub C368/C308/C258)

1. Using a cleaning pad dampened with alcohol, wipe the original glass [1] clean of dirt.

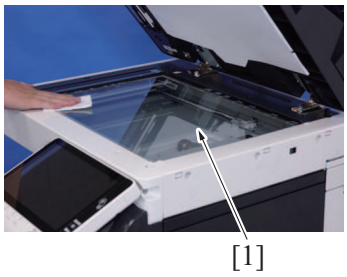


2. Using a cleaning pad dampened with alcohol, wipe the original reading glass [1] clean of dirt.

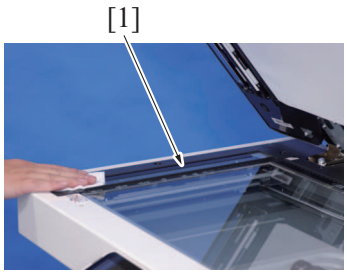


1.3.13 Original glass (bizhub C658/C558/C458)

1. Using a cleaning pad dampened with alcohol, wipe the original glass [1] clean of dirt.



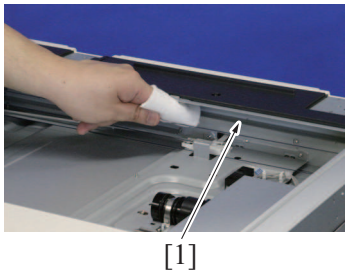
2. Using a cleaning pad dampened with alcohol, wipe the original reading glass [1] clean of dirt.

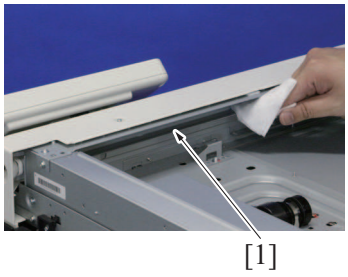


1.3.14 Scanner rails

1. Remove the original glass.
   G.5.2.12 Original glass

2. Using a cleaning pad dampened with alcohol, wipe the scanner rails [1] clean of dirt.
   NOTE
   - **Apply lubricant after cleaning.**

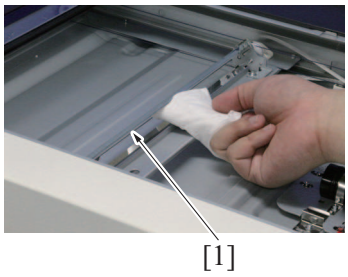




1.3.15 Mirrors

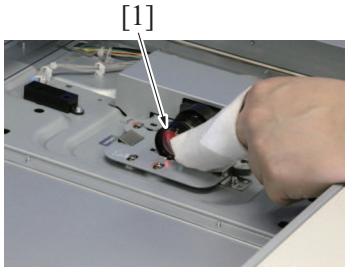
1. Remove the original glass.
   G.5.2.12 Original glass

2. Using a cleaning pad dampened with alcohol, wipe the mirrors [1].



1.3.16 Lens

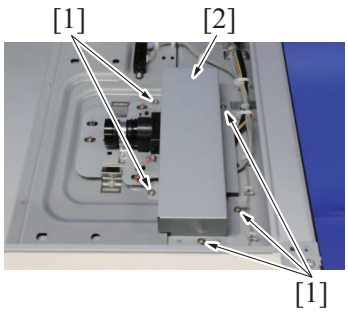
1. Remove the original glass.
   G.5.2.12 Original glass



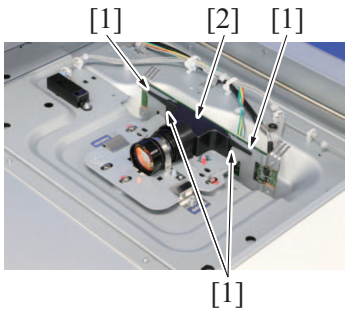
2. Using a cleaning pad dampened with alcohol, wipe the lens [1] clean of dirt.

1.3.17 CCD sensor

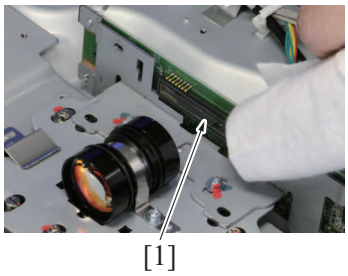
1. Remove the original glass.
   G.5.2.12 Original glass



2. Remove five screws [1], and remove the CCD board protective shield [2].



3. Remove four tabs [1] and remove the CCD sensor cover [2].



4. Using a cleaning pad dampened with alcohol, wipe the CCD sensor [1] clean of dirt.

2. Dual scan document feeder

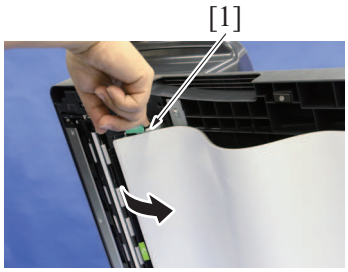
2.1 Cleaning parts list

No.	Section	Part name	Ref. page
1	Scanning section	Back side scanning glass	H.2.2.1 Back side scanning glass
		Back side scanning guide	H.2.2.2 Back side scanning guide/Back side scanning shading shaft
		Back side scanning shading shaft	

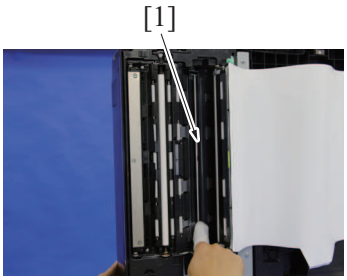
2.2 Cleaning procedure

2.2.1 Back side scanning glass

1. Open the dual scan document feeder.



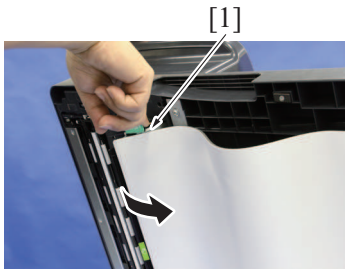
2. Open the opening and closing guide [1].



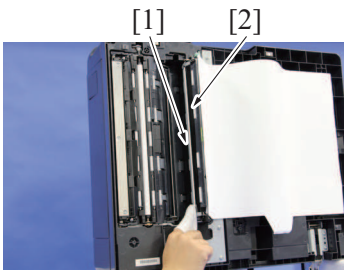
3. Using a cleaning pad, wipe the back side scanning glass [1].

2.2.2 Back side scanning guide/Back side scanning shading shaft

1. Open the dual scan document feeder.



2. Open the opening and closing guide [1].



3. Using a cleaning pad with alcohol, wipe the back side scanning guide [1] and back side scanning shading shaft [2] clean of dirt.

3. Option

3.1 Cleaning parts list (bizhub C368/C308/C258)

3.1.1 DF-704

No.	Section	Part name	Ref. page
1	Scanning section	Back side scanning glass	H.3.3.1 Back side scanning glass
		Back side scanning guide	H.3.3.2 Back side scanning guide/Back side scanning shading shaft
		Back side scanning shading shaft	

3.1.2 PC-110/PC-210

No.	Section	Part name	Ref. page
1	Feed section	Tray 3 feed roller	H.3.4.1 Tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller
2		Tray 3 pick-up roller	
3		Tray 3 separation roller	
4		Tray 4 feed roller	H.3.4.2 Tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller
5		Tray 4 pick-up roller	
6		Tray 4 separation roller	
7	Transport section	Tray 3 vertical transport roller	H.3.4.3 Tray 3 vertical transport roller, tray 4 vertical transport roller
8		Tray 4 vertical transport roller	

3.1.3 PC-410

No.	Section	Part name	Ref. page
1	Feed section	Feed roller	H.3.6.1 Feed roller, Pick-up roller, Separation roller
2		Pick-up roller	
3		Separation roller	
4	Transport section	Vertical transport roller	H.3.6.2 Vertical transport roller

3.1.4 LU-302

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller	H.3.9.1 Pick-up roller
2		Feed roller	H.3.9.2 Feed roller
3		Separation roller	H.3.9.3 Separation roller
4	Conveyance section	Conveyance roller	H.3.9.4 Duplex transport roller

3.2 Cleaning parts list (bizhub C658/C558/C458)

3.2.1 PC-115/PC-215

No.	Section	Part name	Ref. page
1	Feed section	Tray 3 feed roller	H.3.5.1 Tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller
2		Tray 3 pick-up roller	
3		Tray 3 separation roller	
4		Tray 4 feed roller	H.3.5.2 Tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller
5		Tray 4 pick-up roller	
6		Tray 4 separation roller	
7	Transport section	Tray 3 vertical transport roller	H.3.5.3 Tray 3 vertical transport roller, tray 4 vertical transport roller
8		Tray 4 vertical transport roller	

3.2.2 PC-415

No.	Section	Part name	Ref. page
1	Feed section	Feed roller	H.3.7.1 Feed roller, Pick-up roller, Separation roller
2		Pick-up roller	
3		Separation roller	
4	Transport section	Vertical transport roller	H.3.7.2 Vertical transport roller

3.2.3 LU-207

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller	H.3.8.1 Pick-up roller
		Feed roller	H.3.8.2 Feed roller
		Separation roller	H.3.8.3 Separation roller

No.	Section	Part name	Ref. page
2	Conveyance section	Conveyance roller	H.3.8.4 Conveyance roller

3.2.4 LU-302

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller	H.3.9.1 Pick-up roller
2		Feed roller	H.3.9.2 Feed roller
3		Separation roller	H.3.9.3 Separation roller
4	Conveyance section	Conveyance roller	H.3.9.4 Duplex transport roller

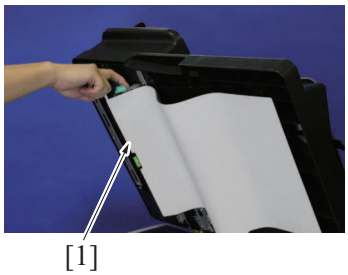
3.2.5 PI-507

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller/Lw	H.3.10.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
2		Feed roller/Lw	H.3.10.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
3		Separation roller/Lw	H.3.10.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
4	Conveyance section	Conveyance roller/Lw	H.3.10.2 Conveyance roller/Lw

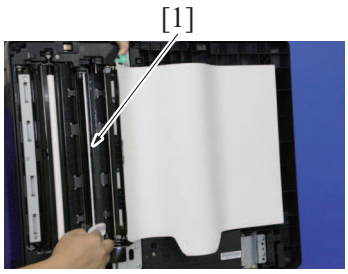
3.3 Cleaning procedure (DF-704)

3.3.1 Back side scanning glass

1. Open the dual scan document feeder.
2. Open the opening and closing guide [1].

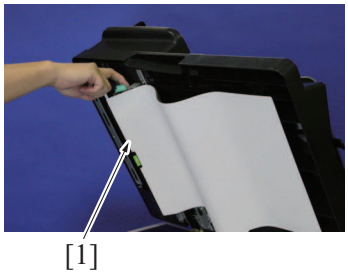


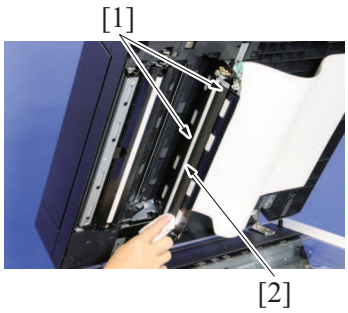
3. Using a cleaning pad, wipe the back side scanning glass [1].



3.3.2 Back side scanning guide/Back side scanning shading shaft

1. Open the dual scan document feeder.
2. Open the opening and closing guide [1].





3. Using a cleaning pad with alcohol, wipe the back side scanning guide [1] and back side scanning shading shaft [2] clean of dirt.

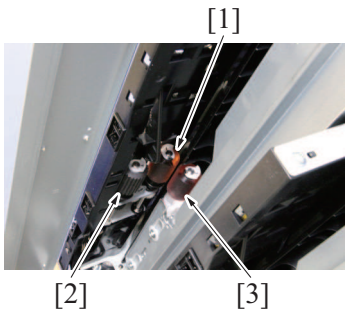
3.4 Cleaning procedure (PC-110/PC-210)

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.4.1 Tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller

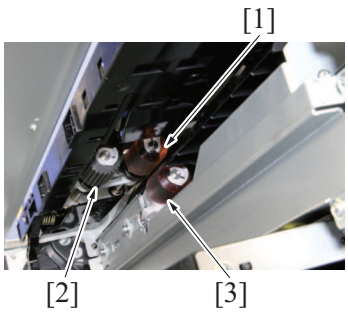
1. Remove the tray 3.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
2. Remove the tray 4 or storage box.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



3. Using a cleaning pad dampened with alcohol, wipe the tray 3 feed roller [1], tray 3 pick-up roller [2], tray 3 separation roller [3] clean of dirt.

3.4.2 Tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller

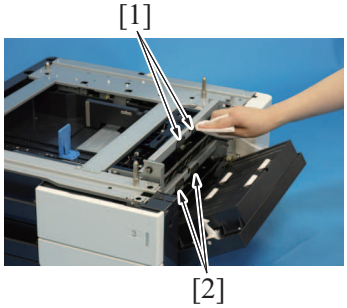
1. Remove the tray 3.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)
2. Remove the tray 4.
   G.8.5.4 Tray 3, tray 4 (PC-110/PC-210)



3. Using a cleaning pad dampened with alcohol, wipe the tray 4 feed roller [1], tray 4 pick-up roller [2], tray 4 separation roller [3] clean of dirt.

3.4.3 Tray 3 vertical transport roller, tray 4 vertical transport roller

1. Open the right door.



2. Using a cleaning pad dampened with alcohol, wipe the tray 3 vertical transport roller [1], tray 4 vertical transport roller [2] clean of dirt.

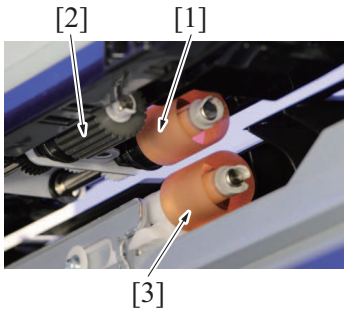
3.5 Cleaning procedure (PC-115/PC-215)

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.5.1 Tray 3 feed roller, tray 3 pick-up roller, tray 3 separation roller

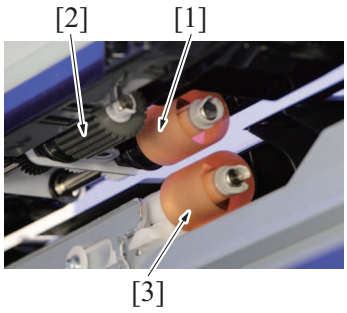
1. Remove the tray 3.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
2. Remove the tray 4 or storage box.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



3. Using a cleaning pad dampened with alcohol, wipe the tray 3 feed roller [1], tray 3 pick-up roller [2], tray 3 separation roller [3] clean of dirt.

3.5.2 Tray 4 feed roller, tray 4 pick-up roller, tray 4 separation roller

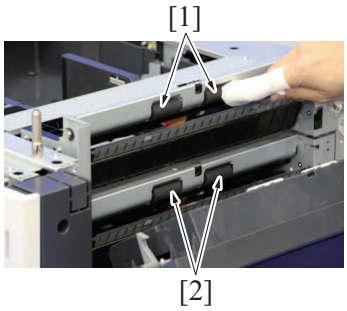
1. Remove the tray 3.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)
2. Remove the tray 4.
   G.8.6.4 Tray 3, tray 4 (PC-115/PC-215)



3. Using a cleaning pad dampened with alcohol, wipe the tray 4 feed roller [1], tray 4 pick-up roller [2], tray 4 separation roller [3] clean of dirt.

3.5.3 Tray 3 vertical transport roller, tray 4 vertical transport roller

1. Open the right door.



2. Using a cleaning pad dampened with alcohol, wipe the tray 3 vertical transport roller [1], tray 4 vertical transport roller [2] clean of dirt.

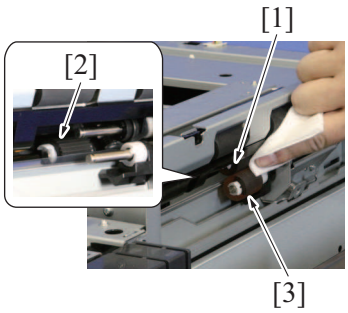
3.6 Cleaning procedure (PC-410)

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.6.1 Feed roller, Pick-up roller, Separation roller

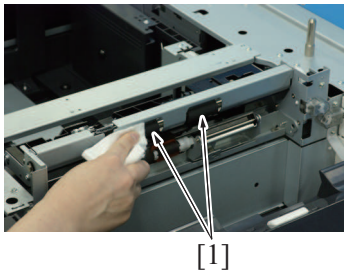
1. Slide out the tray.
2. Open the right door.



3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1], pick-up roller [2], separation roller [3] clean of dirt.

3.6.2 Vertical transport roller

1. Open the right door.



2. Using a cleaning pad dampened with alcohol, wipe the vertical transport roller [1] clean of dirt.

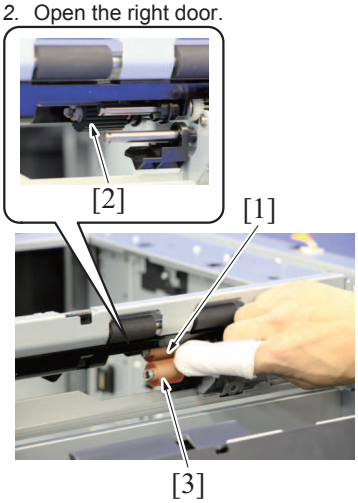
3.7 Cleaning procedure (PC-415)

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.7.1 Feed roller, Pick-up roller, Separation roller

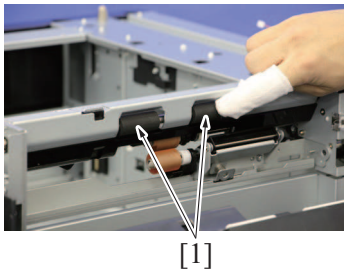
1. Slide out the tray.
2. Open the right door.



3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1], pick-up roller [2], separation roller [3] clean of dirt.

3.7.2 Vertical transport roller

1. Open the right door.



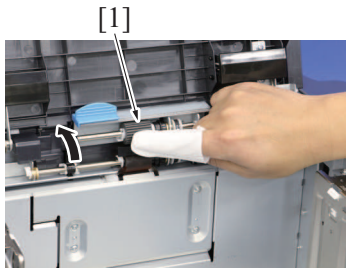
2. Using a cleaning pad dampened with alcohol, wipe the vertical transport roller [1] clean of dirt.

3.8 Cleaning procedure (LU-207)

NOTE

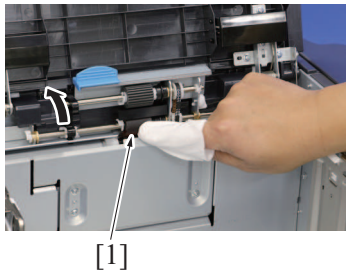
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.8.1 Pick-up roller



1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the pick-up roller [1] clean of dirt.

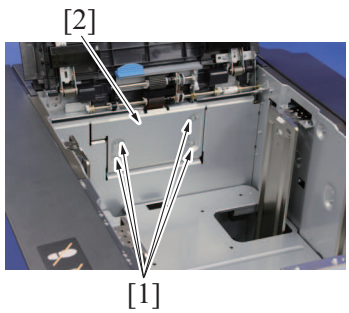
3.8.2 Feed roller



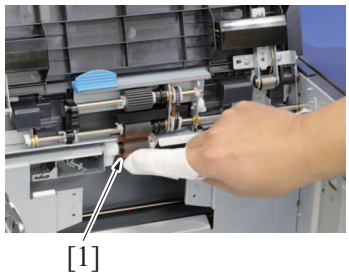
1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

3.8.3 Separation roller

1. Open the upper door.
2. Lift the pick-up roller.



3. Remove four screws [1] and remove the plate [2].

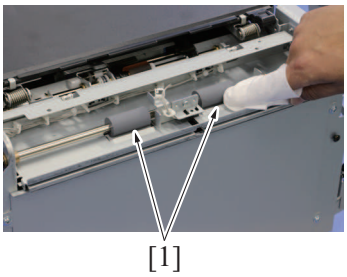


4. Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

3.8.4 Conveyance roller

1. Remove the paper feed cover.
   G.8.9.4 Feed cover (LU-207)

2. Using a cleaning pad dampened with alcohol, wipe the conveyance roller [1] clean of dirt.



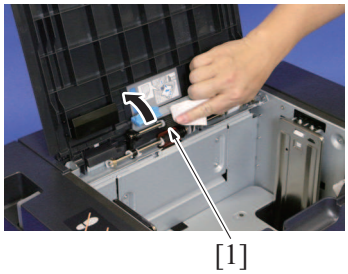
3.9 Cleaning procedure (LU-302)

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

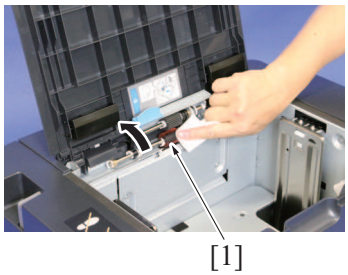
3.9.1 Pick-up roller

1. Open the upper door.
2. Move the feed roller assy up.
3. Using a cleaning pad dampened with alcohol, wipe the pick-up roller [1] clean of dirt.



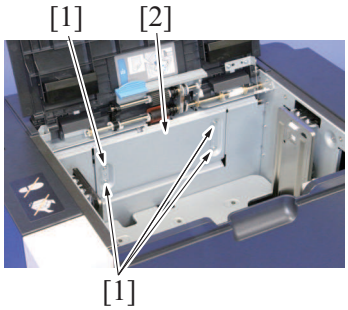
3.9.2 Feed roller

1. Open the upper door.
2. Move the feed roller assy up.
3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

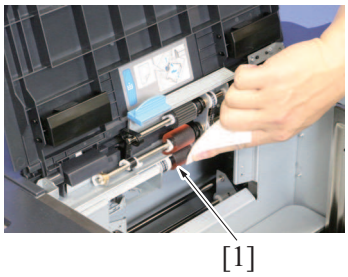


3.9.3 Separation roller

1. Open the upper door.
2. Move the feed roller assy up.
3. Remove four screws [1], and remove the plate [2].



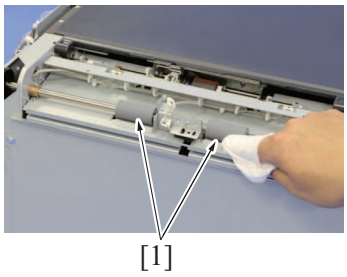
4. Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.



3.9.4 Duplex transport roller

1. Remove the paper feed cover.
   Feed cover (LU-303)

2. Using a cleaning pad dampened with alcohol, wipe the duplex transport roller [1] clean of dirt.



3.10 Cleaning procedure (PI-507)

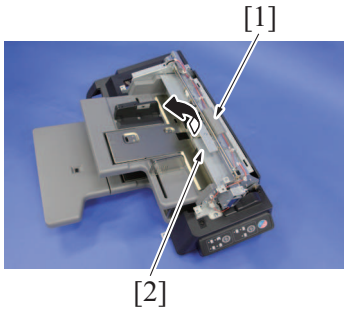
NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

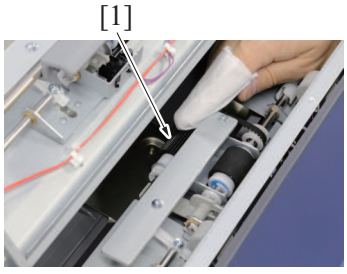
3.10.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw

1. Remove the upper cover.
   G.8.24.1 Upper cover (PI-507)

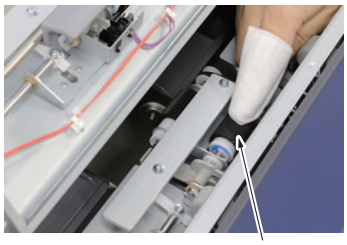
2. Pull the unlock lever [1] and open the upper door [2].



3. Clean the pick-up roller/Lw [1] with a cleaning pad dampened with alcohol.



4. Clean the feed roller/Lw [1] with a cleaning pad dampened with alcohol.



5. Remove the feed roller assy/Lw.
F.23.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)

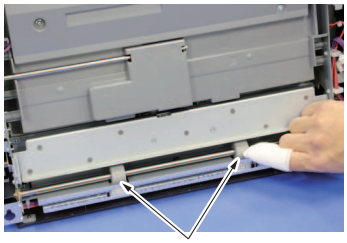
6. Clean the separation roller/Lw [1] with a cleaning pad dampened with alcohol.



3.10.2 Conveyance roller/Lw

1. Remove the post inserter.
G.8.24.4 Post Inserter (PI-507)

2. Clean the conveyance roller/Lw [1] with a cleaning pad dampened with alcohol.



I ADJUSTMENT/SETTING

1. How To Use The Adjustment/Setting Section

1.1 How to use the adjustment/setting section

- “Adjustment/Setting” contains detailed information on the adjustment items and procedures for this machine.

1.2 Advance checks

Before attempting to work adjustments and settings, the following advance checks must be made. Check to see if:

- The power supply voltage meets the specifications.
- The power supply is properly grounded.
- The machine shares the power supply with any other machine that draws large current intermittently. (e.g., elevator and air conditioner that generate electric noise)
- The installation site is environmentally appropriate:
  - High temperature, high humidity, direct sunlight, ventilation, etc.
  - Levelness of the installation site

  NOTICE
  - Installation Requirements
- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, original reading glass, or related part is dirty.
- Correct paper is being used for printing.
- The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
- Toner is not running out.

⚠WARNING

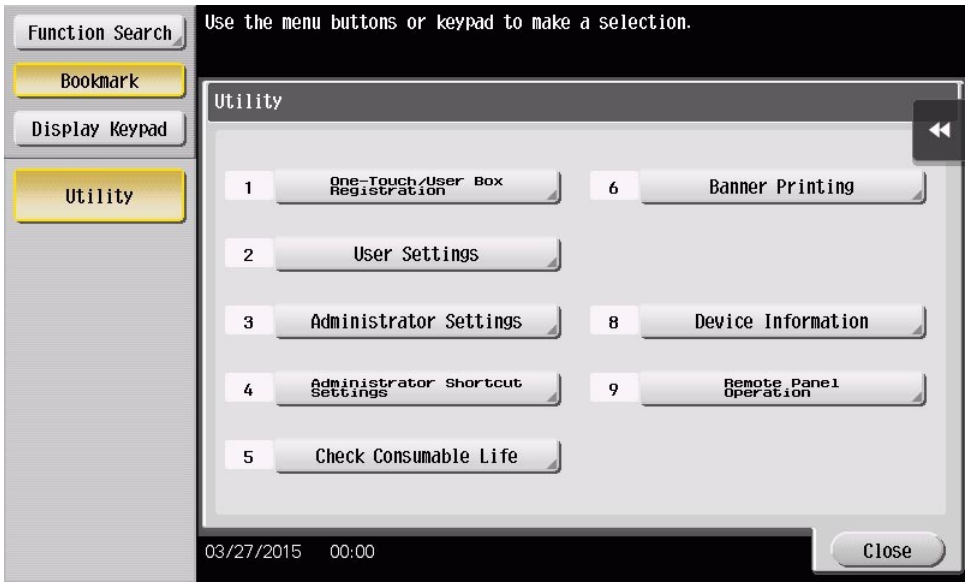
- To unplug the power cord of the machine before starting the service job procedures.
- If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.
- Special care should be used when handling the fusing unit which can be extremely hot.

⚠CAUTION

- The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
- Take care not to damage the PC drum with a tool or similar device.
- Do not touch IC pins with bare hands.

2. List of utility mode

2.1 List of utility mode (outline)



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**
- **One-Touch/User Box Registration**
  - **Create One-Touch Destination**
  - **Create User Box**
  - **Limiting Access to Destinations**
- **User Settings**
  - **System Settings**
  - **Custom Display Settings**
  - **Copier Settings**
  - **Scan/Fax Settings**
  - **Fax Settings**
  - **Printer Settings**
  - **Change Password**
  - **Change E-Mail Address**
  - **Register Authentication Information**
  - **Synchronize User Auth. and Account Track**
  - **Registered Application Settings**
  - **Change PIN Code**
- **Administrator Settings [1/2]**
  - **System Settings**
  - **Administrator/Machine Settings**
  - **One-Touch/User Box Registration**
  - **User Authentication/Account Track**
  - **Network Settings**
  - **Copier Settings**
  - **Printer Settings**
  - **Fax Settings**
  - **System Connection**
- **Administrator Settings [2/2]**
  - **Security Settings**
  - **License Settings**
  - **Authorization function Setting**
  - **Voice Guidance Settings**
  - **OpenAPI Certification Management Setting**
  - **External Memory Backup**
  - **Remote Access Setting**
  - **Eco Copier Settings**
- **Administrator Shortcut Settings**
  - **Register/Edit Shortcut**
- **Check Consumable Life**
  - **Print List**
- **Banner Printing**
- **My Panel Settings**
- **Device Information**
- **Remote Panel Operation**

2.1.1 Starting procedure

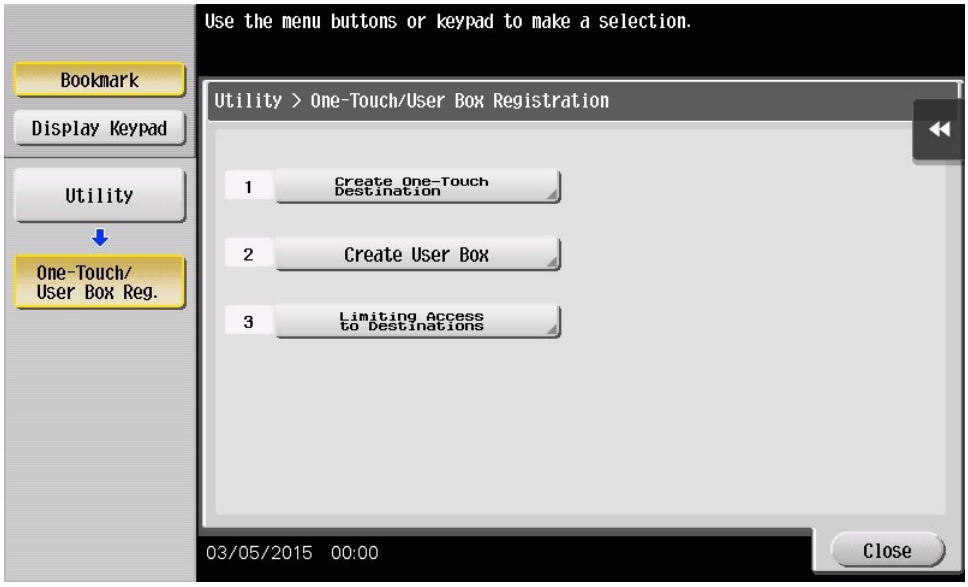
1. Touch Menu.
2. Touch [Utility].

3. The Utility Mode screen will appear.

2.1.2 Exiting procedure

1. Touch the [Close] key.

2.2 One-Touch/User Box Registration



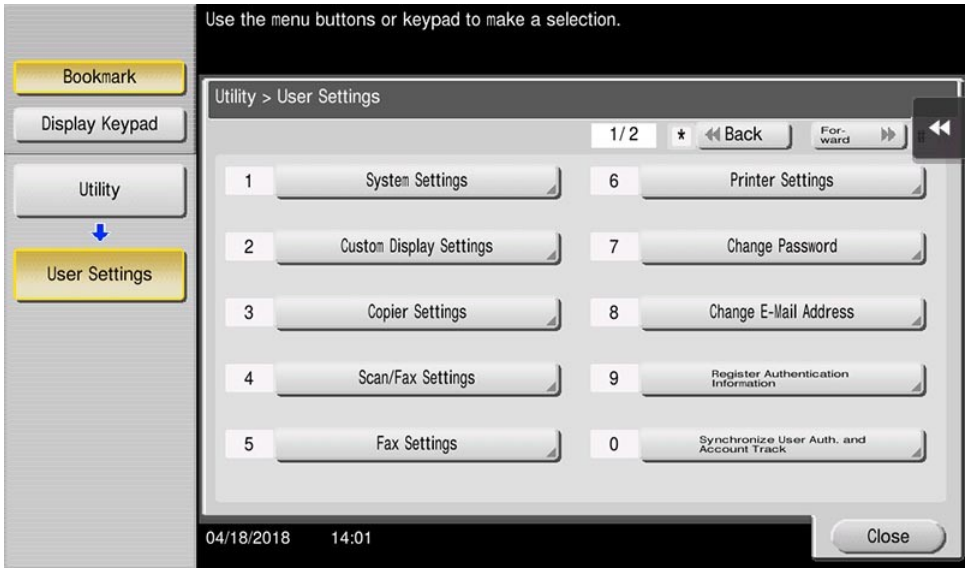
NOTE

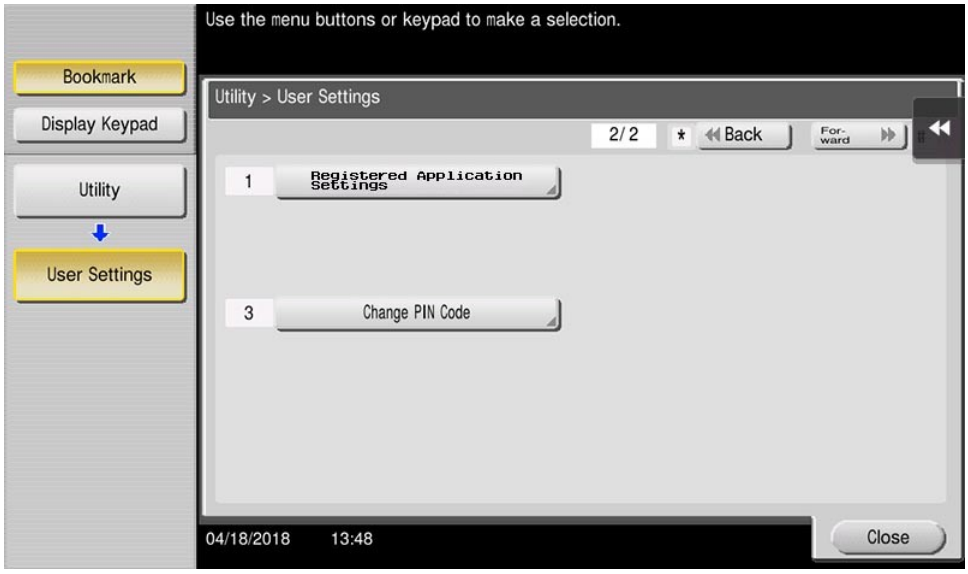
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**
- **In a machine where the user authentication function that uses an external server or MFP is set to ON, when you operate the machine without performing user authentication, this menu is not displayed.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.**

Key name	Function/Precondition		
Create One-Touch Destination	Address Book (Public)/ (Personal)	E-Mail	-
		User Box	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)
		Fax	-
		PC (SMB)	-
		FTP	-
		WebDAV	-
		IP Address Fax	Setting will be available when [IP Address Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
		Internet Fax	Setting will be available when [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
	Group		-
	E-Mail Settings	E-Mail Subject	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted.
		E-mail Body	
Create User Box	Public/Personal User Box		• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to “Restrict.” • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/Restrict User Box] is set to “Prohibit.”
	Bulletin Board User Box		• It will be displayed when the optional fax kit FK-514 is mounted.

Key name	Function/Precondition		
			• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to “Restrict.” • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/Restrict User Box] is set to “Prohibit.” • It will not be displayed due to functional restriction upon user authentication when [Fax] is set to “Restrict.”
	Relay User Box		• It will be displayed when the optional fax kit FK-514 is mounted. • It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to “Restrict.” • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/Restrict User Box] is set to “Prohibit.”
Limiting Access to Destinations	Apply Levels/Groups to Destinations	Address Book	-
		Group	-
		Program	-

2.3 User Settings List





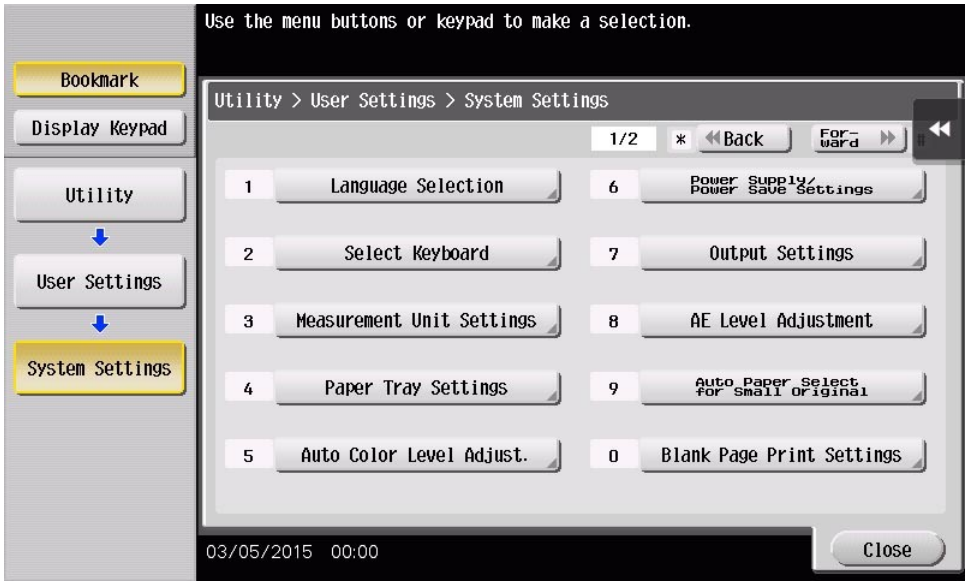
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

- User Settings
  - System Settings
  - Custom Display Settings
  - Copier Settings
  - Scan/Fax Settings
  - Fax Settings
  - Printer Settings
  - Change Password
  - Change E-Mail Address
  - Register Authentication Information
  - Synchronize User Auth. and Account Track
  - Registered Application Settings
  - Change PIN Code

2.3.1 System Settings

(1) User Settings > System Settings [1/2]



NOTE

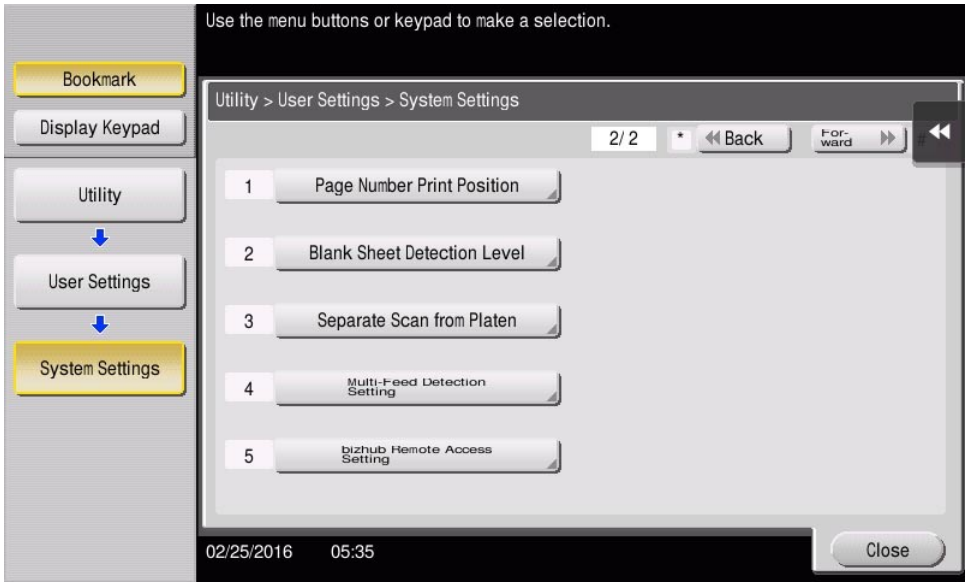
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Language Selection	The language as a default depend on the marketing area selected in [Marketing Area] available from [System 1] under Service Mode.
Select Keyboard	The type of keyboard to be displayed when [Local Keyboard] is selected depends on the language selected in [User Settings] -> [System Settings] -> [Language Selection].
Measurement Unit Settings	-

Key name	Function/Precondition		
Paper Tray Settings	Auto Tray Selection Settings	-	
	Auto Tray Switch ON/OFF	-	
	No Matching Paper in Tray Setting	-	
	Print Lists	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)	
	Post Inserter Settings *2	It will be displayed when optional post inserter PI-507 is mounted.	
Auto Color Level Adjust.	-		
Power Supply/Power Save Settings	Low Power Mode Settings Sleep Mode Settings	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. • The upper limit can be set up to 240 min. only when the switch number “157” is specified to “02” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].	
Output Settings	Print/Fax Output Settings	Print	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
		Fax	• It will be displayed when optional fax kit FK-514 is mounted. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
	Output Tray Settings		• It will be displayed when optional finisher FS-534 or FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is mounted. *2 • It will be displayed when optional job separator JS-506 is mounted. *3 • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
AE Level Adjustment	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.		
Auto Paper Select for Small Original	-		
Blank Page Print Settings	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.		

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only
- *3: Except for bizhub C658

(2) User Settings > System Settings [2/2]



NOTE

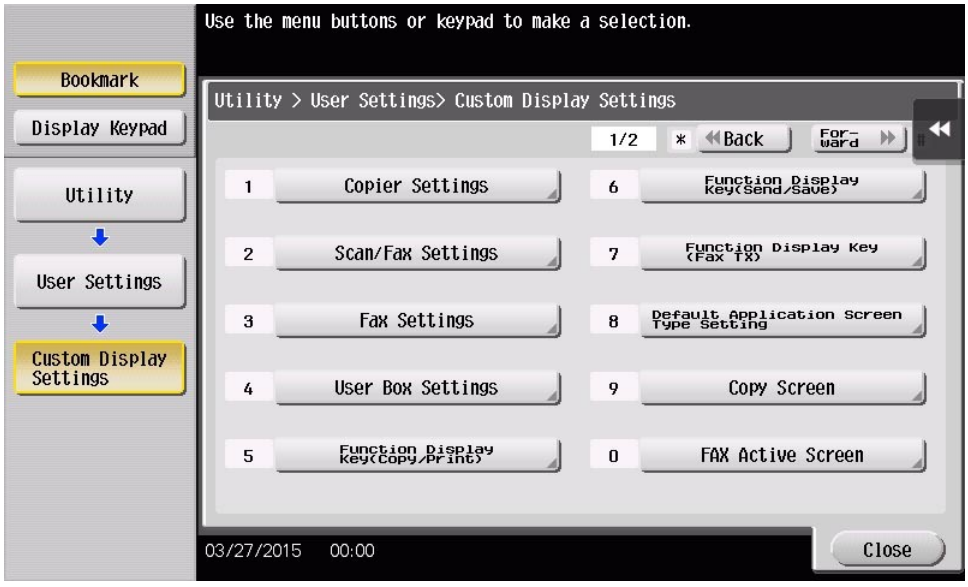
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Page Number Print Position	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.”
Blank Sheet Detection Level	-
Separate Scan from Platen	-
Multi-Feed Detection Setting *1	It will be displayed when optional double feed detection kit UK-501 is mounted.
bizhub Remote Access Setting	This is displayed when an Android tablet device is connected.

- *1: bizhub C658/C558/C458 only

2.3.2 Custom Display Settings

(1) User Settings > Custom Display Settings [1/2]



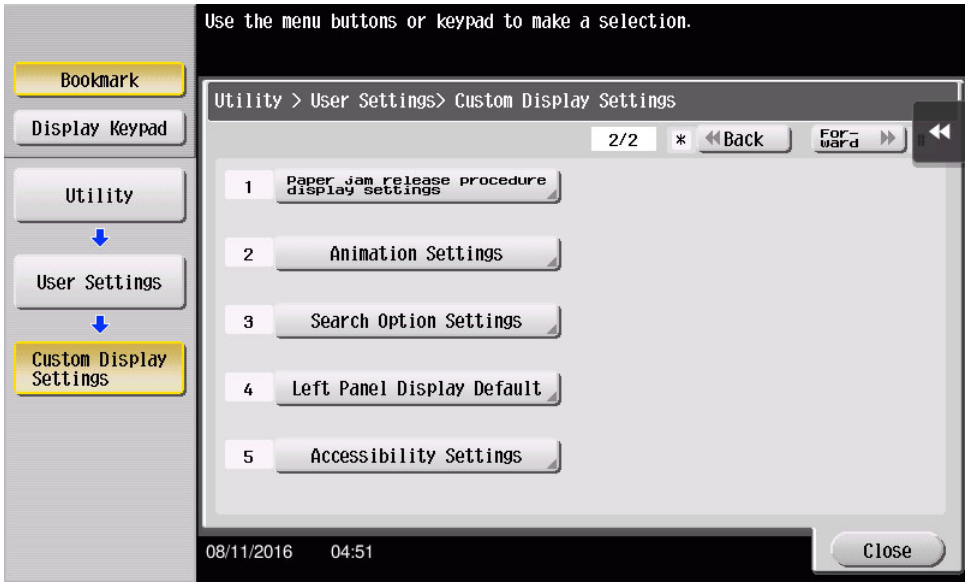
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Copier Settings	Default Tab	-
	Quick Settings 1	When this setting is set to ON, select the copy functions you wish to register.
	Quick Settings 2	
	Default Paper Type Display	This displays when a custom paper is registered.
Scan/Fax Settings	Default Tab	-

Key name	Function/Precondition	
	Program Default	-
	Address Book Index Default	-
	Default Address Sort Method	-
	Default Address Display Method	-
	Address Button Size Setting	-
Fax Settings	Default Tab	-
	Program Default	-
	Address Book Index Default	-
	Default Address Sort Method	-
	Default Address Display Method	-
	Address Button Size Setting	-
User Box Settings	Default Tab	-
	Shortcut Key 1	When this setting is set to ON, select auxiliary functions to get their shortcut keys displayed on the screen.
	Shortcut Key 2	
Function Display Key (Copy/Print)	This is not displayed when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Function Display Key Permission Setting] -> [Copy/Print] is set to “Restrict.”	
Function Display Key (Send/Save)	This is not displayed when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Function Display Key Permission Setting] -> [Send/Save] is set to “Restrict.”	
Function Display Key (Fax TX)		
Default Application Screen Type Setting	-	
Copy Screen	Copy Operating Screen	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted. However, this menu is available when the key counter is installed and [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [The next job reservation] is set to "License."
Fax Active Screen	TX Display	• It will be displayed when optional fax kit FK-514 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.
	RX Display	

(2) User Settings > Custom Display Settings [2/2]



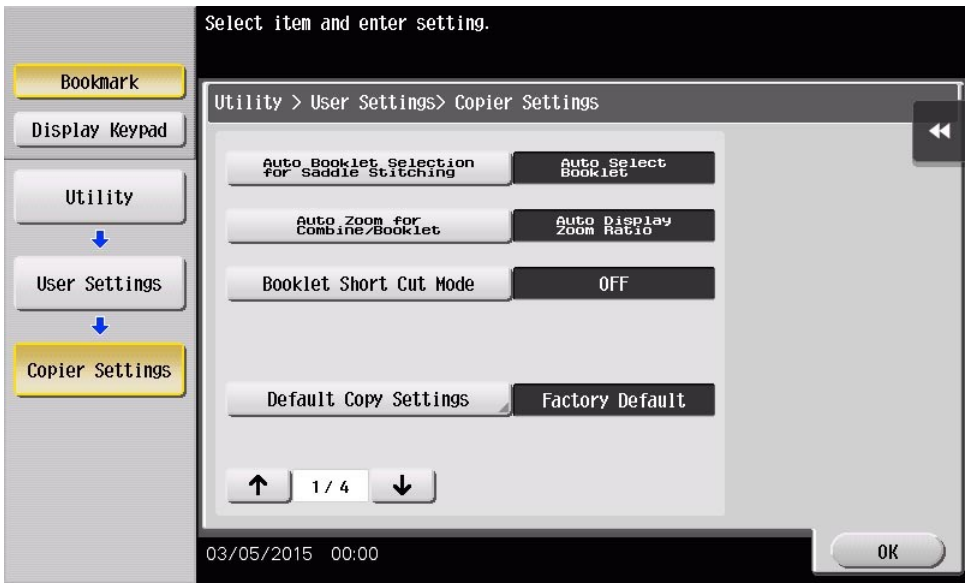
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Paper jam release procedure display settings	-
Animation Settings	-
Search Option Settings	-
Left Panel Display Default	-
Accessibility Settings	-

2.3.3 Copier Settings

(1) User Settings > Copier Settings [1/4]



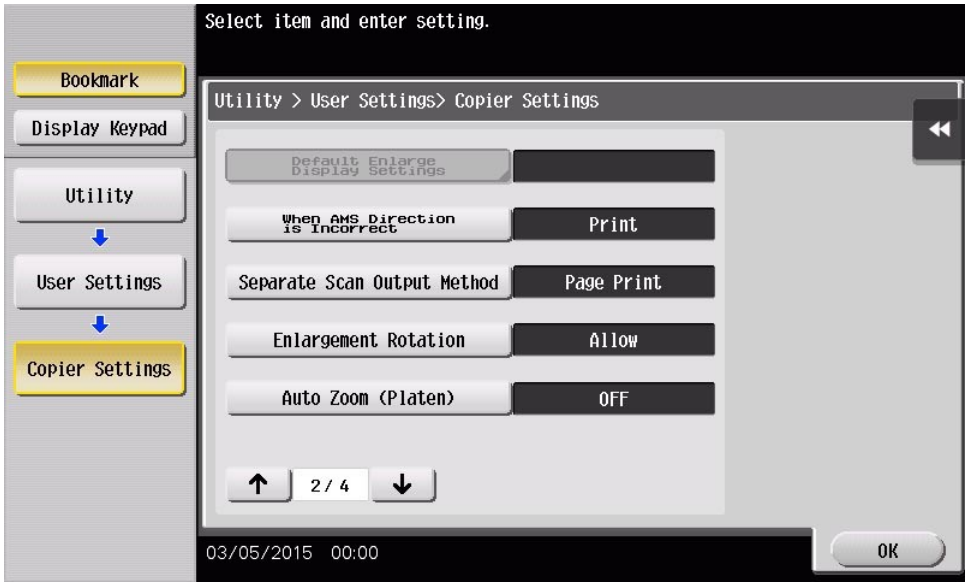
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Booklet Selection for Saddle Stitching	• It will be displayed when optional finisher FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536SD or FS-537SD is mounted. *2
Auto Zoom for Combine/ Booklet	-
Booklet Short Cut Mode	-
Default Copy Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only

(2) User Settings > Copier Settings [2/4]

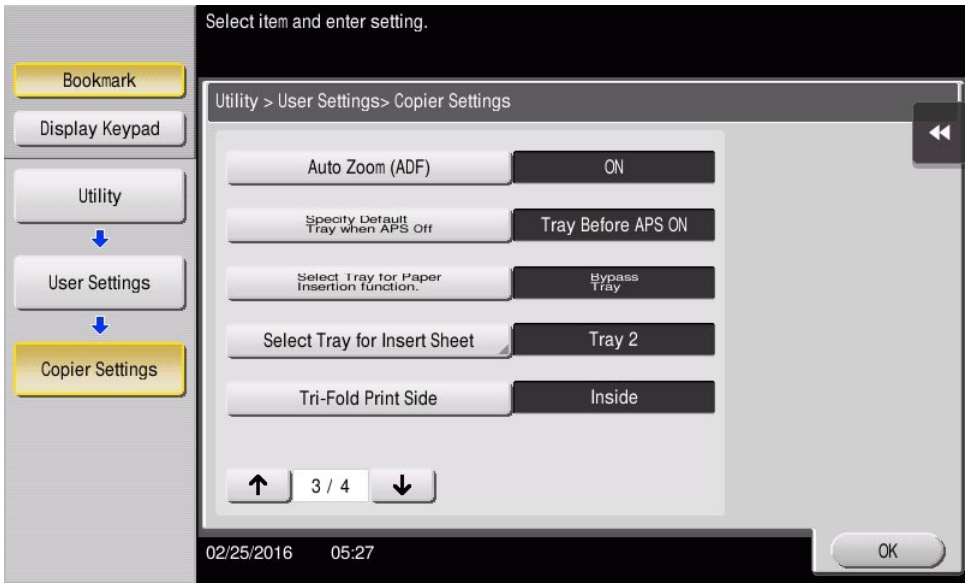


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Default Enlarge Display Settings	Displayed when you select [Utility] -> [User Settings] -> [Copier Settings] in the enlarge display mode.
When AMS Direction is Incorrect	-
Separate Scan Output Method	-
Enlargement Rotation	-
Auto Zoom (Platen)	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”

(3) User Settings > Copier Settings [3/4]



NOTE

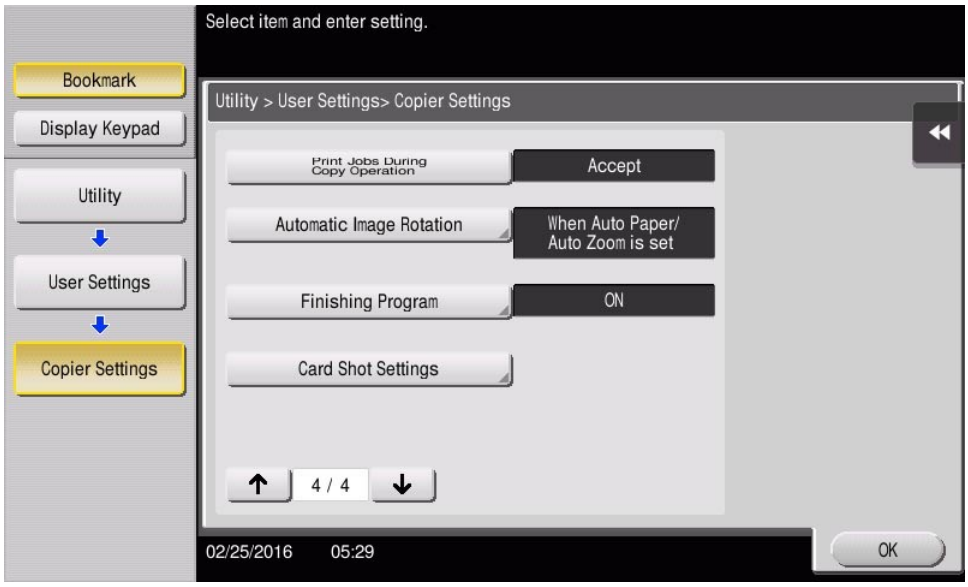
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Zoom (ADF)	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”
Specify Default Tray when APS Off	
Select Tray for Paper Insertion function.	-
Select Tray for Insert Sheet	-
Tri-Fold Print Side	• It will be displayed when optional finisher FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536SD or FS-537SD is mounted. *2

Key name	Function/Precondition
	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only

(4) User Settings > Copier Settings [4/4]



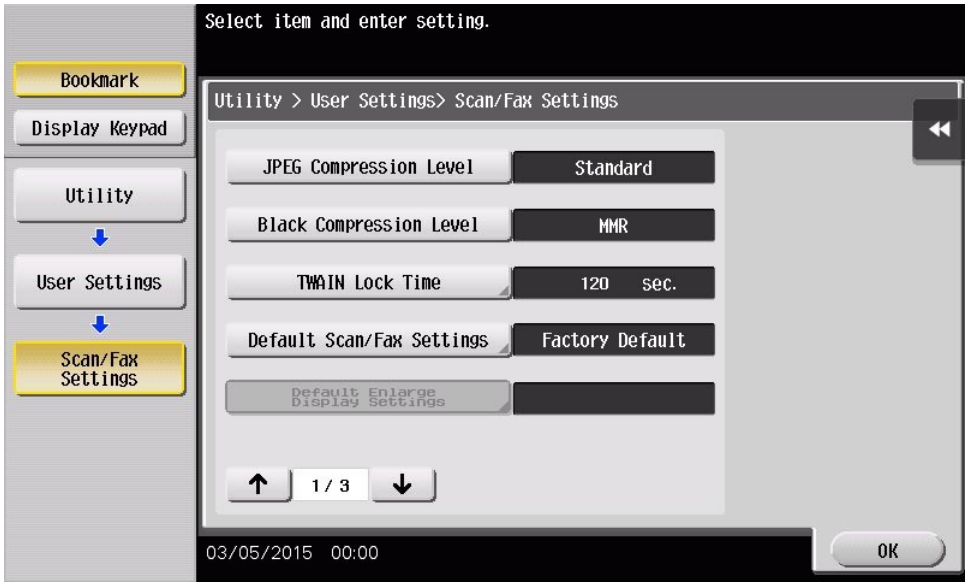
NOTE
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Print Jobs During Copy Operation	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to "Level 2."	
Automatic Image Rotation	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to "Level 1" or "Level 2."	
Finishing Program	• It will be displayed when optional finisher FS-534 or FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is mounted. *2 • It will be displayed when optional finisher FS-533 is mounted. *3 • When selecting “ON,” select the contents to be registered in the finishing program.	
Card Shot Settings	Layout	-
	Zoom	-
	Store Original Size	-

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only
- *3: Except for bizhub C658

2.3.4 Scan/Fax Settings

(1) User Settings > Scan/Fax Settings [1/3]

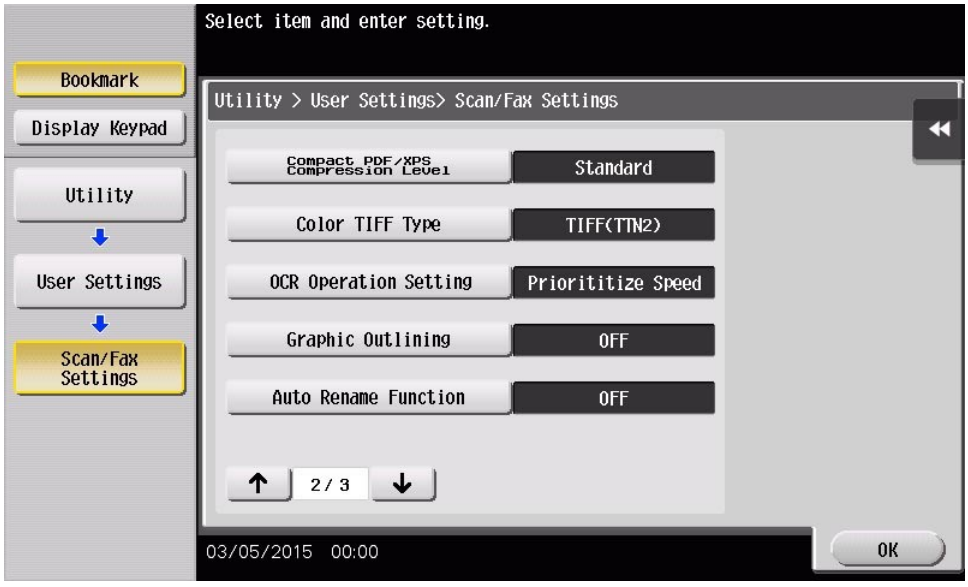


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
JPEG Compression Level	-
Black Compression Level	-
TWAIN Lock Time	-
Default Scan/Fax Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].
Default Enlarge Display Settings	Displayed when you select [Utility] -> [User Settings] -> [Scan/Fax Settings] in the enlarge display mode.

(2) User Settings > Scan/Fax Settings [2/3]



NOTE

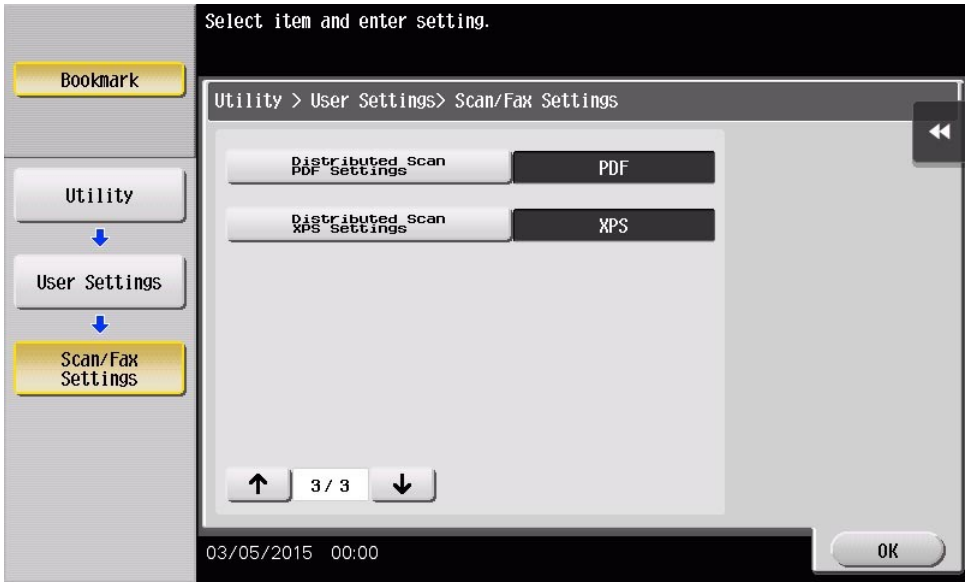
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Compact PDF/XPS Compression Level	-
Color TIFF Type	-
OCR Operation Setting	• It will be displayed when either optional i-Option LK-105 v4 and upgrade kit UK-211 *1 or optional i-Option LK-110 v2 and upgrade kit UK-211 *1 are enabled. • To specify the file type to DOCX or XLSX, optional i-Option LK-110 v2 and upgrade kit UK-211 *1 are required.

Key name	Function/Precondition
Graphic Outlining	-
Auto Rename Function	-

- *1: Upgrade kit UK-211 is not required for bizhub C658/C558/C458

(3) User Settings > Scan/Fax Settings [3/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Distributed Scan PDF Settings	This displays when the following conditions are satisfied. • The authentication server type is set to Active Directory. • [Distributed Scan Settings] is set to [Use] in [Administrator Settings] -> [Network Settings]. • User allows scan operation.
Distributed Scan XPS Settings	

2.3.5 Fax Settings

(1) User Settings > Fax Settings



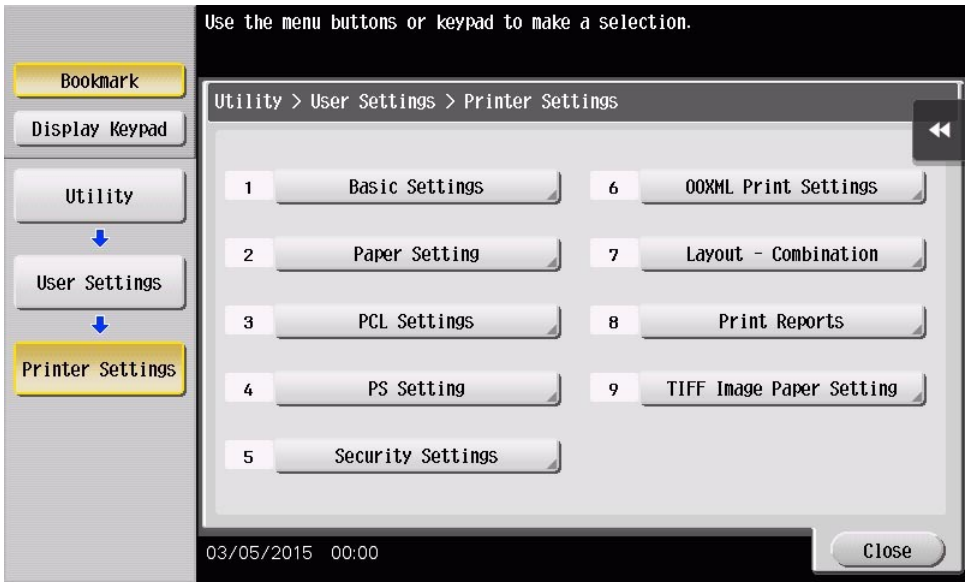
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Fax Default Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].

2.3.6 Printer Settings

(1) User Settings > Printer Settings



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Basic Settings	PDL Setting	-
	Color Setting	-
	Edge Enhancement	-
	Number of Copies	-
	Original Direction	-
	Gloss Mode	-
	Toner Save	-
	Fold Type Settings	• It will be displayed when optional finisher FS-534SD is installed. *1 • It will be displayed when optional finisher FS-536SD or FS-537SD is mounted. *2
	Half-Fold/Tri-Fold Specification Settings	
	Binding Direction Adjustment	-
	Spool Print Jobs in HDD before RIP	-
	A4/A3 <--> LTR/LGR Auto Switch	-
	Banner Sheet Setting	-
	Line Width Adjustment (600dpi)	-
	Line Width Adjustment (1200dpi)	-
	Gray Background Text Correction	-
	Gray Background Text Correction (Fiery)	-
	Minimal Print	-
	OOXML Print Mode	-
Paper Setting	Paper Tray	-
	Paper size	-
	Paper Type	-
	2-Sided Print	-
	Binding Position	-
	Staple	• It will be displayed when optional finisher FS-534 or FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is mounted. *2 • It will be displayed when optional finisher FS-533 is mounted. *3
	Punch	• It will be displayed when optional punch kit PK-520 is mounted in finisher FS-534 or FS-534SD. *1

Key name	Function/Precondition		
		• It will be displayed when optional punch kit PK-520 is mounted in finisher FS-536 or FS-536SD. *2 • It will be displayed when optional punch kit PK-523 is mounted in finisher FS-537 or FS-537SD. *2 • It will be displayed when optional punch kit PK-519 is mounted in finisher FS-533. *3 • The number of punch holes being set is available from [Service Mode] -> [Finisher].	
	Banner Paper Tray	-	
PCL Settings	Select Color	-	
	Font Settings	-	
	Symbol Set	-	
	Font Size	-	
	Line/Page	Default setting value differs depending on the values by setting [Utility] -> [User Setting] -> [Printer Setting] -> [Basic Settings] -> [Original Direction] and setting [Utility] -> [User Setting] -> [Printer Setting] -> [Paper Setting] -> [Paper Size].	
	Thin Line	-	
	CR/LF Mapping	-	
	Bar Code Font Settings	This is displayed when optional i-Option LK-106 and upgrade kit UK-211 *4 are enabled.	
	Auto Trapping	-	
PS Setting	Select Color	-	
	ICC Profile Settings	Photo - RGB Color	-
		Photo - Output Profile	-
		Text - RGB Color	-
		Text - Output Profile	-
		Figure/Table/Graph - RGB Color	-
		Figure/Table/Graph - Output Profile	-
		Simulation Profile	-
	Auto Trapping	-	
	Black Overprint	-	
	Print PS Errors	-	
Security Settings	Verify XPS/OOXML Digital Signature	-	
OOXML Print Settings	Print Sheet/Book	-	
	Paper size	The paper size selected in [Foolscap Size Setting] in service mode is displayed.	
	Paper Type	-	
Layout - Combination	-		
Print Reports	Configuration Page	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)	
	Demo Page		
	PCL Font List		
	PS Font List		
	OOXML Font List		
TIFF Image Paper Setting	Paper Selection	When “Auto Paper Select” is selected and paper larger than the image size is not in the paper trays, paper size error occurs.	

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only
- *3: Except for bizhub C658
- *4: Upgrade kit UK-211 is not required for bizhub C658/C558/C458

2.3.7 Change Password

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Change Password	• When conducting user authentication (MFP only), it will be displayed when the authentication is complete. • When conducting user authentication or account track input, it will be displayed when login is authenticated as user box administrator. • When [Password Rules] which can be displayed by [Utility] -> [Administrator Settings] -> [Security Settings] -> [Security Details] is set to “Enable”, password using the single letter or the password same with the previous one, less than 8-digit will not be modified.

Key name	Function/Precondition
	• When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, entering the incorrect password three times will cause access lock.

2.3.8 Change E-Mail Address

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Change E-Mail Address	• When conducting user authentication (MFP only), it will be displayed when the authentication is complete. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.”

2.3.9 Register Authentication Information

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Register Authentication Information	It will be displayed when user authentication (MFP) is completed and the following is met; • [Biometric/IC Card Info. Registration] is set to “Allow” in [Administrator Settings] -> [System Settings] -> [Restrict User Access] -> [Restrict Access to Job Settings]. • [Biometric/IC Card Info. Registration] is set to “Allow” in [Administrator Settings] -> [User Authentication/Account Track] -> [User Authentication Settings] -> [User Registration] -> [Edit] -> [Function Permission/Authority] -> [Function Permission].

2.3.10 Synchronize User Auth. and Account Track

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Synchronize User Auth. and Account Track	• When conducting user authentication (ON (MFP), External Server Authentication, or Main + External Server), it will be displayed only when the authentication is complete. • It will be displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is set to “Synchronize by User.”

2.3.11 Registered Application Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Select Default Start Application	This option is available when the OpenAPI application is registered in the machine while the registered user logs in to the machine with enhanced server authentication.

2.3.12 Change PIN Code

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

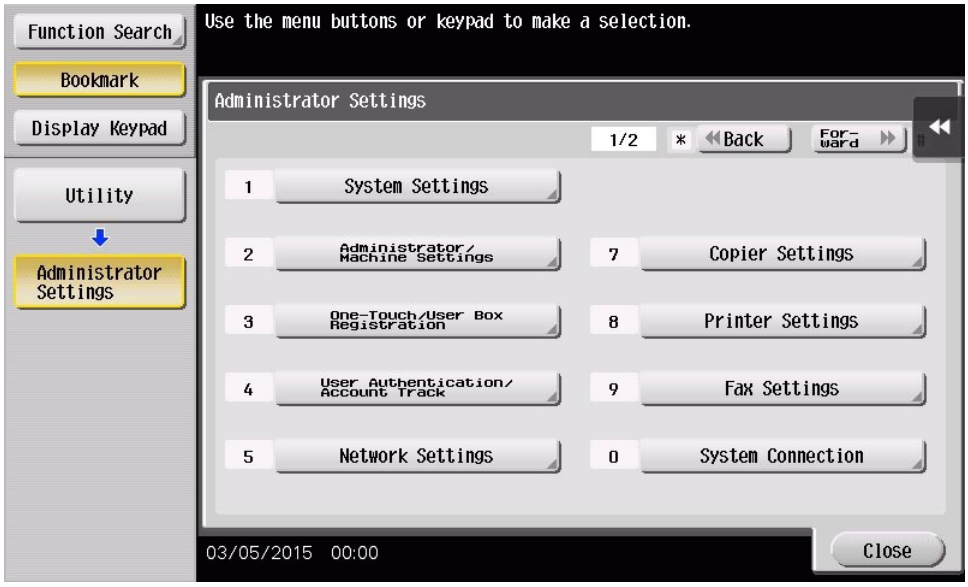
Key name	Function/Precondition
Change PIN Code	It will be displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is set the user's PIN code.

2.4 Administrator Settings List [1/2]

2.4.1 Administrator settings outline 1/2

NOTE

- **The Administrator Settings will be available by entering the administrator password (16 digits) set by the Administrator Settings or Service Mode. (The administrator password is initially set to “1234567812345678.”)**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, entering the incorrect administrator password three times will cause access lock. The access lock is released after the lapse of a predetermined period of time (Default setting: 5 min.) after the main power switch is turned OFF and then ON more than 10 seconds later. The access lock can be released by [Service Mode] -> [Enhanced Security] -> [Administrator unlocking].**
- **For details of the utility functions, refer to " User's Guide ."**



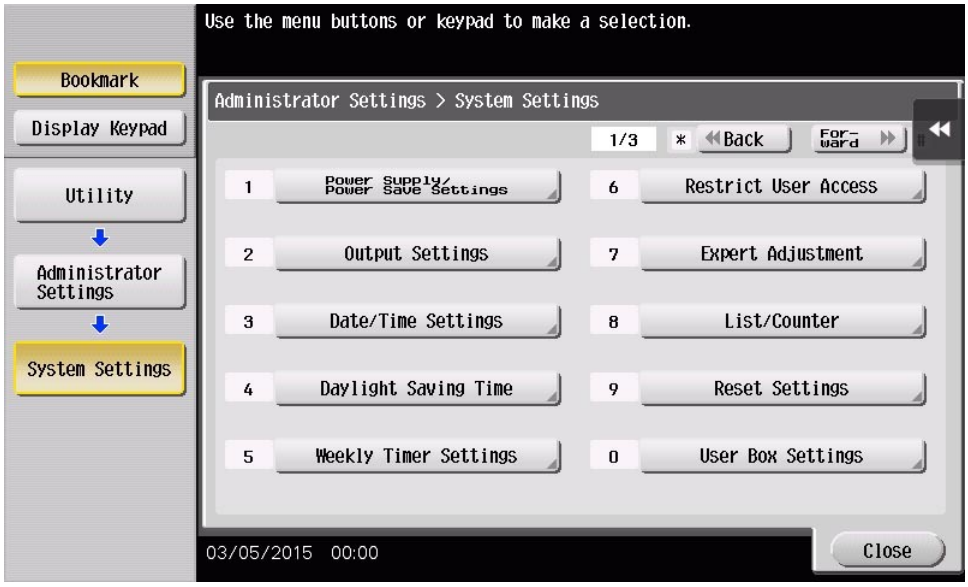
- Administrator Settings [1/2]
  - System Settings
  - Administrator/Machine Settings
  - One-Touch/User Box Registration
  - User Authentication/Account Track
  - Network Settings
  - Copier Settings
  - Printer Settings
  - Fax Settings
  - System Connection
- Administrator Settings [2/2]
  - Security Settings
  - License Settings
  - Authorization function Setting
  - Voice Guidance Settings
  - OpenAPI Certification Management Setting
  - External Memory Backup
  - Remote Access Setting
  - Eco Copier Settings

2.4.2 System Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**

(1) Administrator Settings > System Settings [1/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

(a) Power Supply/Power Save Settings

Key name	Function/Precondition
Low Power Mode Settings	The upper limit can be set up to 240 min. only when the switch number “157” is specified to “22” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].
Sleep Mode Settings	• When [Service Mode] -> [System 1] -> [Sleep ON/OFF Choice Setting] is allowed, the setting to turn sleep on and off displays and becomes selectable. • The sleep mode will begin in 48 hours even if it sets it to “OFF.” • The upper limit can be set up to 240 min. only when the switch number “157” is specified to “22” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].
Power Key Setting	• It will not be displayed when optional image controller IC-416 is mounted. • In ErP auto power OFF mode, this machine cannot receive data or faxes, and also it cannot scan or print an original.
Power Save Settings	-
Enter Power Save Mode	-
Power Consumption in Sleep Mode	It will not be displayed when optional image controller IC-416 is mounted.
Power Saving Fax/Scan	This function is available when the option other than “Copy” is selected in [Administrator Settings] -> [System Settings] -> [Reset Settings] -> [System Auto Reset] -> [Priority Mode].
Awake from Power Save Mode by Touching Control Panel	-

(b) Output Settings

Key name	Function/Precondition	
Print/Fax Output Settings	Print	-
	Fax	[Fax] will be displayed when optional fax kit FK-514 is mounted.
Output Tray Settings	• It will be displayed when optional finisher FS-534 or FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is mounted. *2 • It will be displayed when optional job separator JS-506 is mounted. *3	
Shift Output Each Job	• It will be displayed when optional finisher FS-534 or FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is mounted. *2 • It will be displayed when optional finisher FS-533 or job separator JS-506 is mounted. *3	

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only
- *3: Except for bizhub C658

(c) Date/Time Setting

Key name	Function/Precondition
Date/Time Setting	When [Administrator Settings] -> [Network Settings] -> [Detail Settings] -> [Time Adjustment Setting] is set to “ON”, [Set Date] will be displayed. Touch [Set Date] and modify the time.

(d) Daylight Saving Time

Key name	Function/Precondition
Daylight Saving Time	When setting to “Yes”, set the time difference to move up. • Default setting: 60 min. • Setting range: 1 to 150

(e) Weekly Timer Settings

NOTE

- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.**

Key name	Function/Precondition
Weekly Timer ON/OFF Settings	-
Time Settings	-
Date Settings	-
Select Time for Power Save	When “Yes” is selected, using the 10-key pad, input the Power Save Start Time and Power Save End Time.
Password for Non-Business Hours	When setting to “Yes”, enter the password (eight digits).
Tracking Function Settings	-
Display ON/OFF Time	-

(f) Restrict User Access

Key name	Function/Precondition	
Restrict Program Function Setting	-	
Copy Program Lock Settings	-	
Delete Saved Copy Program	-	
Restrict Access to Job Settings	Changing Job Priority	• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” for [Registering and Changing Addresses] cancels enhanced security mode. • The [Biometric/IC Card Info. Registration] key displays if authentication device 2 is mounted via [Service Mode] -> [Billing Setting], and [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to "ON (MFP)." • [Synchronize User Auth. and Account Track] does not display when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is set to “Synchronize by User.”
	Delete Other User Jobs	
	Registering and Changing Addresses	
	Changing Zoom Ratio	
	Changing the “From” Address	
	Change Registered Overlay	
	Biometric/IC Card Info. Registration	
	Synchronize User Authentication & Account Track	
Restrict Operation	Restrict Broadcasting	-

(g) Expert Adjustment

NOTE

- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/[01] at HEX assignment.)**

Key name	Function/Precondition	
AE Level Adjustment	-	
Printer Adjustment	Leading Edge Adjustment	This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice].
	Centering	
	Leading Edge Adjustment (Duplex Side 2)	
	Centering (Duplex 2nd Side)	
	Erase Leading Edge	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • The adjusted values from [Erase Leading Edge] are also updated to the service mode as the " I.5.4.12 Lead Edge Erase Adjustment" function in service mode is opened to administrators. • The adjusted values from [Vertical Adjustment] are also updated to the service mode as the " I.5.4.5 (5) Paper Feed Direction Adj." function in service mode is opened to administrators.
	Vertical Adjustment	
	Media Adjustment	This function is provided to open [2nd Transfer Adj] of Service Mode up to administrator and the fine-adjusted value is reflected in the Service Mode setting.
Finisher Adjustment	Center Staple Position	• It will be displayed when optional finisher FS-534SD is mounted. *1 • It will be displayed when optional finisher FS-536SD or FS-537SD is mounted. *2
	Half-Fold Position	
	1st Tri-Fold Position Adjustment	
	2nd Tri-Fold Position Adjustment	
	Tri-Fold Output Setting	It will be displayed when optional finisher FS-537SD is mounted. *2
	Punch Vertical Position Adjustment	• It will be displayed when optional punch kit PK-520 is mounted in finisher FS-536 or FS-536SD. *2 • It will be displayed when optional punch kit PK-523 is mounted in finisher FS-537 or FS-537SD. *2
	Punch Horizontal Position Adjustment	• It will be displayed when optional punch kit PK-520 is mounted in finisher FS-534 or FS-534SD. *1 • It will be displayed when optional punch kit PK-520 is mounted in finisher FS-536 or FS-536SD. *2 • It will be displayed when optional punch kit PK-523 is mounted in finisher FS-537 or FS-537SD. *2
	Paper Alignment Plate Settings	It will be displayed when optional finisher FS-533 is mounted. *3

Key name		Function/Precondition
	Punch Regist Loop Size Adjustment	• It will be displayed when optional punch kit PK-520 is mounted in finisher FS-534 or FS-534SD. *1 • It will be displayed when optional punch kit PK-520 is mounted in finisher FS-536 or FS-536SD. *2 • It will be displayed when optional punch kit PK-523 is mounted in finisher FS-537 or FS-537SD. *2 • It will be displayed when optional punch kit PK-519 is mounted in finisher FS-533. *3
	Punch Edge Sensor Adjustment	It will be displayed when optional punch kit PK-523 is mounted in finisher FS-537 or FS-537SD. *2
	Vertical Punch (Z-Fold) Position Adjustment	It will be displayed when optional Z fold unit ZU-609 and punch kit PK-523 are mounted in finisher FS-537 or FS-537SD. *2
	Horizontal Punch (Z-Fold) Position Adjustment	
	1st Z-Fold Position Adjustment	It will be displayed when optional Z folding unit ZU-609 is mounted in finisher FS-537 or FS-537SD. *2
	2nd Z-Fold Position Adjustment	
	Post Inserter Tray Size Adjustment	It will be displayed when optional post inserter PI-507 is mounted in finisher FS-537 or FS-537SD. *2
Density Adjustment	Thick - Yellow	-
	Thick - Magenta	-
	Thick - Cyan	-
	Thick - Black	-
	Black Image Density	-
Image Stabilization	Image Stabilization Only	-
	Image Stabilization Setting	-
Paper Separation Adjustment	-	
Color Registration Adjustment	Color Registration Adjust (Yellow)	This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice].
	Color Registration Adjust (Magenta)	
	Color Registration Adjust (Cyan)	
Gradation Adjustment	Image Stabilization Only	• This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice]. • Before executing Gradation adjust, be sure to perform Stabilizer.
	Printer (600dpi)	
	Printer (1200dpi)	
	Copy	
Density Balance Adjust *2	Reflect Adj Values	-
	Select screen	-
	Initialize Adjustment Values	-
Scanner Area	Scanner Adjustment: Leading Edge	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice]. • The adjusted values from [Scan Area] are also updated to the service mode as the " I.5.4.6 Scan Area" function in service mode is opened to administrators.
	Scanner Adjustment: Centering	
	Horizontal Adjustment	
	Vertical Adjustment	
ADF Adjustment	Centering	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”
	Original Stop Position	
	Centering Auto Adjustment	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • When the adjustment result is [Unable], confirm the orientation of the original document and manually adjust the [Original Stop Position].
	Auto Adj. of Stop Position	
Line Detection	Prior Detection Setting	Be aware that selecting “No” and performing the pre-detection with [Service Mode] -> [Machine] -> [ADF Scan Glass Contamination] will display “NG.”
	Feed Cleaning Settings	-
Trail Edge Adjust	-	
User Paper Settings	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • The feature available from [Service Mode] -> [System 2] -> [User Paper Settings] is extended to Administrator. However, the fusing temperature setting is not possible in Administrator Settings.	

Key name	Function/Precondition	
Erase Adjustment	Non-Image Area Erase Operation Settings	-
PS Designer Settings	-	

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only
- *3: Except for bizhub C658

(h) List/Counter

Key name	Function/Precondition	
Management List	Job Settings List	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/[01] at HEX assignment.)
Paper Size/Type Counter	-	
Meter Counter List	Setting will be available when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that management device 2 or vendor 2 is mounted.	
Check Consumables List		
Transmission Meter Count and Device Information	• The counter information is collected via CS Remote Care. • Though this setting is set to [Allow], the information is not sent if [Service Mode] -> [System 2] -> [Acquiring Settings] is set to “OFF.”	
TX Operation Log Output	This is displayed when [Administrator Settings] -> [Security Settings] -> [Security Details] -> [TX Operation Log] is set to “Save.”	

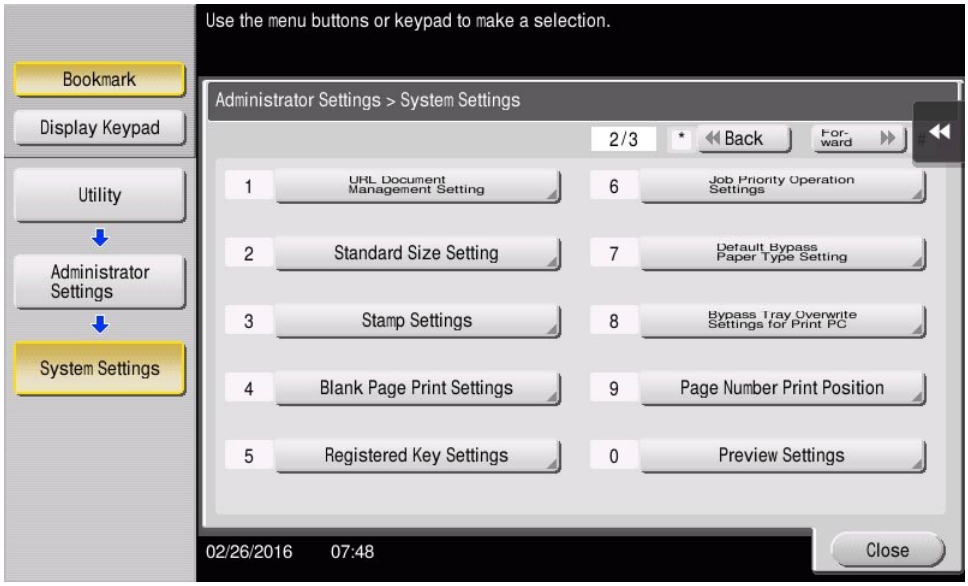
(i) Reset Settings

Key name	Function/Precondition		
System Auto Reset	The screen saver function displays when the screen saver application is registered.		
Auto Reset	-		
Job Reset	When Account is changed	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.	
	When original is set on ADF	-	
	Next Job	Staple Setting	-
		Original Set/Bind Direction	-
		Reset Data After Job	-
	Default Basic/Enlarge Display Common Setting	-	

(j) User Box Settings

Key name	Function/Precondition
Delete Unused User Box	-
Delete Secure Print Documents	-
Auto Delete Secure Document	-
Encrypted PDF Delete Time	-
ID & Print Delete Time	This is displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [User Authentication Settings] -> [Administrative Settings] -> [ID & Print Settings] is set to “ON.”
Document Hold Setting	-
External Memory Function Settings	-
Allow/Restrict User Box	-
ID & Print Delete after Print Setting	-
Document Delete Time Setting	-
Document in MFP Shared Folder Delete Time Setting	This is displayed when [Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [SMB Server Settings] -> [Share SMB File Setting] is set to “ON”.
Delete All Documents in the SMB Folder	This is displayed when [Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [SMB Server Settings] -> [Share SMB File Setting] is set to “ON”.

(2) Administrator Settings > System Settings [2/3]

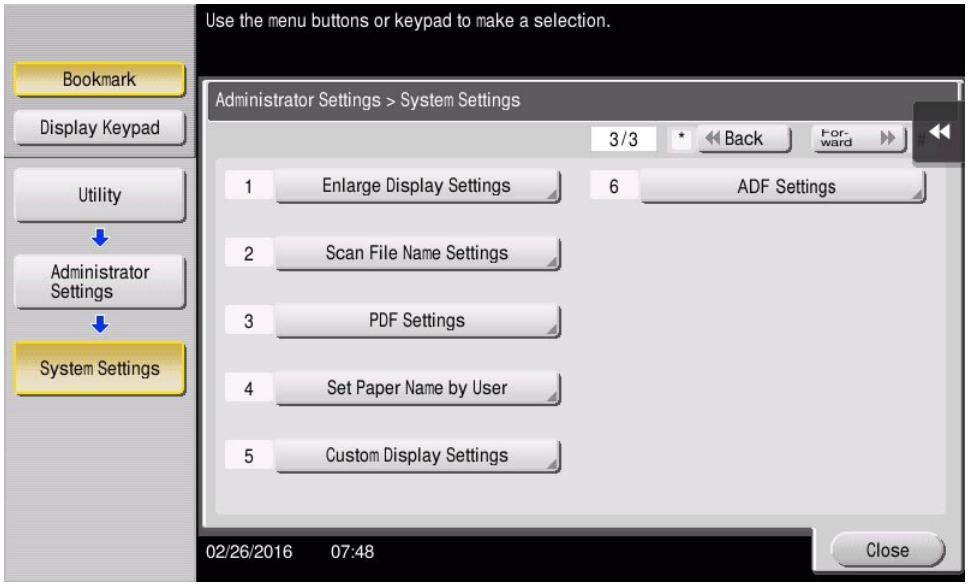


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
URL Document Management Setting	URL Delete Document	-
	URL Document Delete Time Setting	-
Standard Size Setting	Original Glass Original Size Detect	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”
	Foolscap Size Setting	
Stamp Settings	Header/Footer Settings	-
	Fax TX Settings	-
Blank Page Print Settings	-	
Registered Key Settings	Hard Key	-
	Softkey	-
Job Priority Operation Settings	Fax RX Job Priority	-
	Skip Job (Fax)	-
	Skip Job (Copy, Print)	-
Default Bypass Paper Type Setting	-	
Bypass Tray Overwrite Settings for Print PC	-	
Page Number Print Position	-	
Preview Settings	Original Direction Confirmation Screen	-
	Realtime Preview	-
	Set key Initial display	-
	Preview Display Conditions (Standard Application)	-
	Preview Display Conditions (Registered Application)	-

(3) Administrator Settings > System Settings [3/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

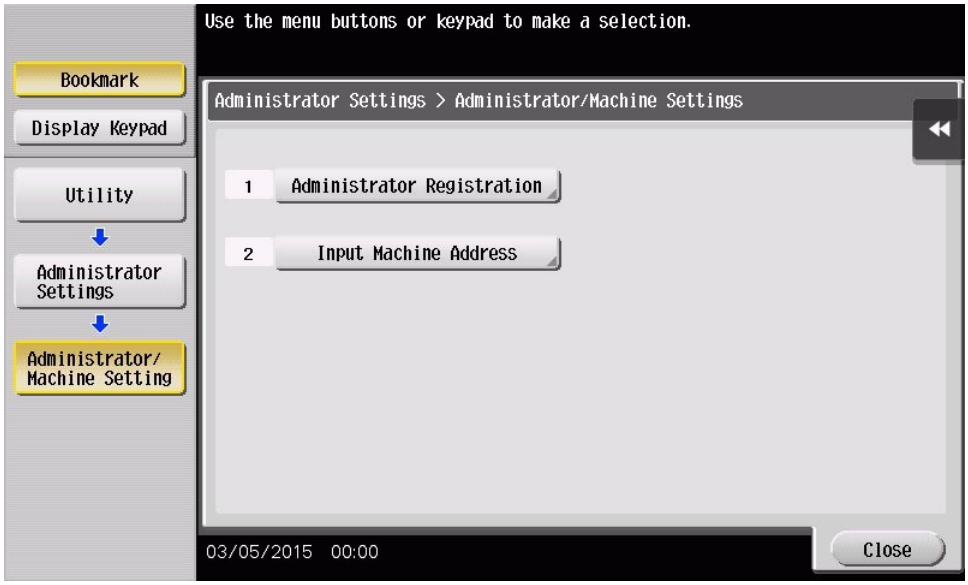
Key name	Function/Precondition		
Enlarge Display Settings	Display Default Settings	-	
	Apply Basic Setting to Enlarge Display	-	
Scan File Name Settings	Function Mode Initial	-	
	Supplementary File Name	-	
PDF Settings	Compact PDF Settings	• It will be displayed when either optional i-Option LK-102 v3 and upgrade kit UK-211 *2 or optional i-Option LK-110 v2 and upgrade kit UK-211 *2 are enabled. • To use the searchable PDF function, either optional i-Option LK-105 v4 and upgrade kit UK-211 or optional i-Option LK-110 v2 and upgrade kit UK-211 *2 are required.	
	PDF/A Default Settings		
	PDF Web Optimization Default Settings		
	Searchable PDF Settings		
Set Paper Name by User	-		
Custom Display Settings	Main Menu Default Settings	-	
	Main Menu Display Settings	-	
	Custom Function Pattern Selection	When a custom function pattern is registered or imported in [Service Mode] -> [System 2] -> [Custom Pattern], the pattern ([Custom Pattern 1] to [Custom Pattern 3]) also can be selected.	
	User/Admin Function Permissions	Setting is disabled if user authentication or account track is not performed.	
	Function Display Key Permission Setting	Copy/Print	When selecting [Allow], [Function Display Key (Copy/Print)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting.
		Send/Save	• When selecting [Allow], [Function Display Key (Send/Save)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting. • When selecting [Allow], [Function Display Key (Fax TX)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting.
	Temporary Change Language Setting	The temporarily enabled language is returned to the language configured in [User Settings] after any of the following operations. • Main power switch OFF • Power key OFF • Sleep mode • Low power mode • System Auto Reset • Logout	
	Display 10 Keypad when entering Number of Sets	-	
	Widget Settings	-	
	Slide Menu Settings	-	
	Network Selection Settings	This is displayed when [Administrator Settings] -> [Network Settings] -> [VLAN Settings] is set to “ON.”	

Key name	Function/Precondition
ADF Settings *1	-

- *1: bizhub C658/C558/C458 only
- *2: Upgrade kit UK-211 is not required for bizhub C658/C558/C458

2.4.3 Administrator/Machine Settings

(1) Administrator Settings > Administrator/Machine Settings



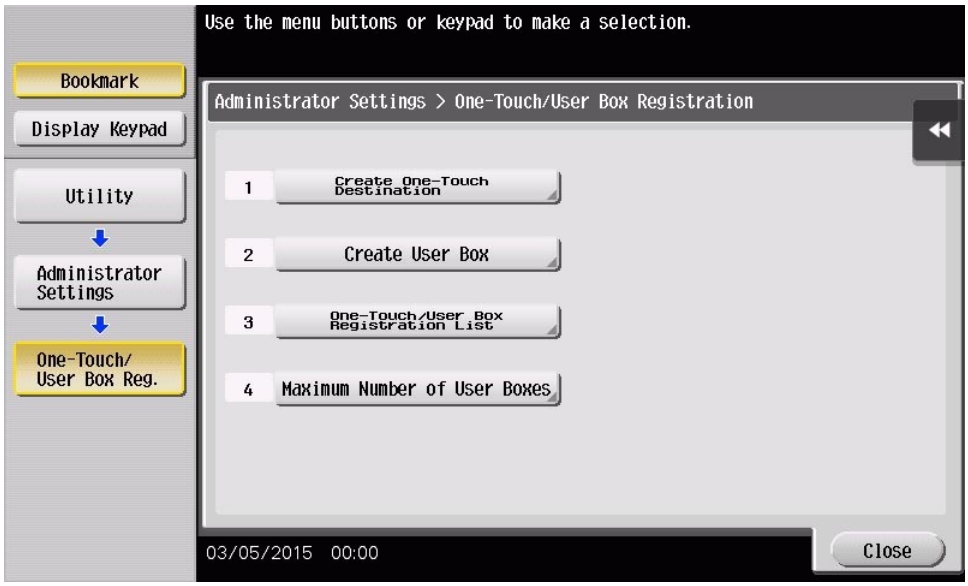
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Administrator Registration	-
Input Machine Address	-

2.4.4 One-Touch/User Box Registration

(1) Administrator Settings > One-Touch/User Box Registration



NOTE

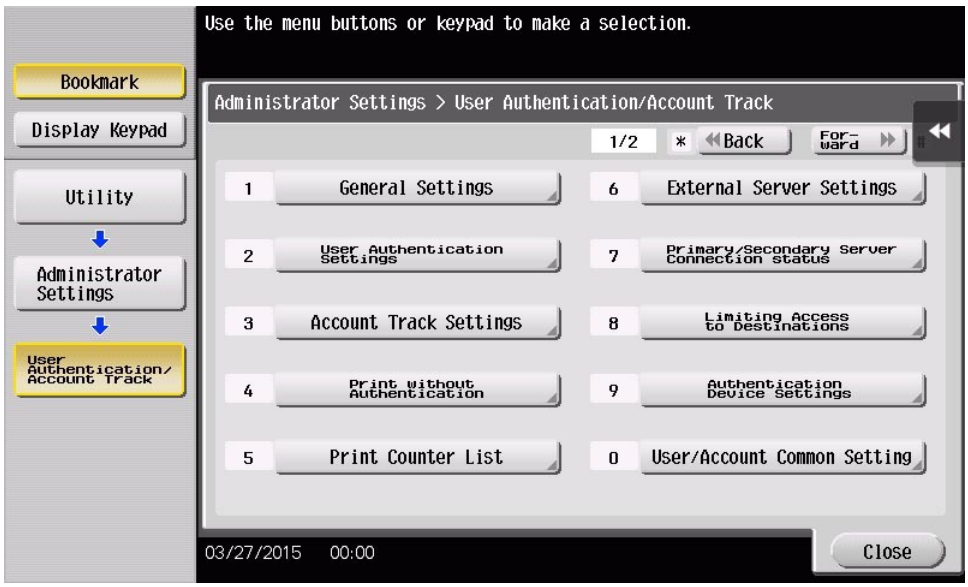
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
Create One-Touch Destination	Address Book (Public)/ (Personal)	E-Mail	-
		User Box	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.

Key name	Function/Precondition		
			• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
		Fax	It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that fax is set to “Set.”
		PC (SMB)	-
		FTP	-
		WebDAV	-
		IP Address Fax	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [IP Address Fax Function] is set to “ON.”
		Internet Fax	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON.”
	Group	-	
	E-Mail Settings	E-Mail Subject	-
		E-mail Body	-
Create User Box	Public/Personal User Box	-	
	Bulletin Board User Box	-	
	Relay User Box	-	
	Annotation User Box	-	
One-Touch/User Box Registration List	Address Book List	-	
	Group List	-	
	Program List	-	
	E-Mail Subject/Text List	-	
Maximum Number of User Boxes	• If the maximum number of user boxes is set to “0”, you cannot create new ones. • If the selected user has already created three user boxes, for example, you can set the maximum number of user boxes within the range of 3 to 1000.		

2.4.5 User Authentication/Account Track

(1) Administrator Settings > User Authentication/Account Track [1/2]



NOTE

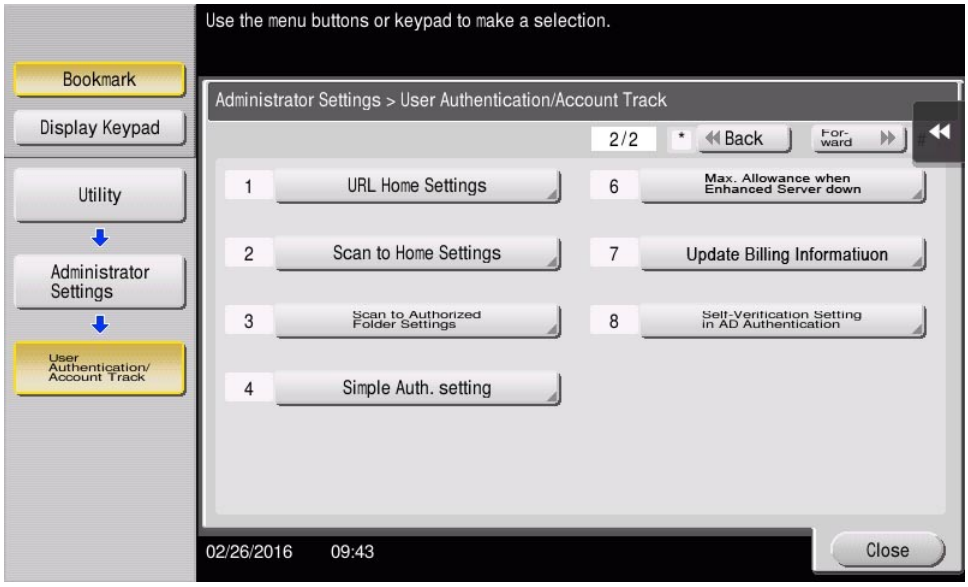
- **Keys displayed on screens are different depending on the setting.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**
- **Before registering a user, select an authentication method. If all management data is cleared after the authentication method was selected, the histories of the registered users, print, send, receive, and save jobs are deleted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
General Settings	User Authentication	Authentication Method	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “OFF” in this setting cancels enhanced security mode.

Key name	Function/Precondition		
		Default Authentication Method	• [External Server Authentication] cannot be selected when external servers are not registered in [Administrator Settings] -> [User Authentication/ Account Track] -> [External Server Settings]. • [External Server Authentication] cannot be selected when the presence of management device is set in [Service Mode] -> [Billing Setting] -> [Management Function Choice].
		Overwrite User Info	• When the external server authentication is used, authenticated user information is also managed on this machine. If the number of users who have executed the external server authentication reaches the maximum number of users this machine can manage, authentication of any new users will not be permitted. If you select [Allow], the oldest authenticated user information is erased and the new user is registered. • If [Enhanced Server Authentication] or [Main + Enhanced Server] is selected with [Authentication Method], [Allow] is specified forcibly.
		Temporarily Save Authentication Info.	-
	Public User Access	• This setting is not available without user authentication. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “ON” in this setting cancels enhanced security mode.	
	Prohibited Function Login Setting	-	
	Account Track	-	
	Account Track Input Method	• This setting is not available without the account track. • “Password Only” cannot be set when using both user authentication and account track.	
	Synchronize User Authentication & Account Track	The setting is available only when carrying out the user authentication and account track.	
	When # of Jobs Reach Maximum	-	
	Number of Counters Assigned	• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted. • The setting is available only when carrying out the user authentication and account track.	
	Ticket Hold Time Setting	This setting takes effect only when the authentication server type is set to active directory.	
	LDAP-IC Card Authentication Setting	Setting Up LDAP	• It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication] or [Main + External Server], this function is available.
		LDAP Server Connection Settings	
		Secondary Auth. server setting	
		Card Information Registration Settings	
	Enable NFC	This setting is synchronized with [Administrator Settings] -> [System Connection] -> [Mobile Connection Settings] -> [Simple Connection Setting] -> [Enable NFC].	
	Enable Bluetooth LE	• It will be displayed when optional local interface kit EK-609 is mounted. • This setting is synchronized with [Administrator Settings] -> [System Connection] -> [Mobile Connection Settings] -> [Simple Connection Setting] -> [Enable Bluetooth LE].	
User Authentication Settings	Administrative Settings	User Name List	• This setting is not available without user authentication. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “ON” in this setting cancels enhanced security mode.
		Default Function Permission	This setting is not available without user authentication.
		ID & Print Settings	
		ID & Print Operation Settings	• This setting is not available without user authentication. • It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.

Key name	Function/Precondition		
		Auth. Operation Setting when print Documents are Stored	-
		Login Allowed with Administrative Rights	-
		Web Browser Default Settings	-
	User Registration	• It cannot be entered when conducting authentication by external server. • [Register Auth. Info.] does not appear when the presence of Authentication Device 2 is unset in [Service Mode] -> [Billing Setting]. • [Custom Pattern Function] does not appear when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [User/Admin Function Permissions] is unset to “Allow.” • [Synchronize Account Track] does not appear when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is unset to “Synchronize by User.” • [Permission Setting] in [Function Permission/Authority] does not appear when [Administrator Settings] -> [User Authentication/Account Track] -> [User Authentication Settings] -> [Administrative Settings] -> [Login Allowed with Administrative Rights] is unset to “Allow.”	
	User Counter	-	
Account Track Settings	Account Track Registration	• When the “Password Only” is selected for [Account Track Input Method], [Account Name] does not appear. • When the “Account Name & Password” is selected for [Account Track Input Method], [Name] does not appear. • [Custom Pattern Function] does not appear when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [User/Admin Function Permissions] is unset to “Allow.”	
	Account Track Counter	-	
Print without Authentication	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode.		
Print Counter List	• The setting is available only when carrying out the user authentication or account track. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter, vendor 2, or management device 2 is mounted.		
External Server Settings	Neither [NTLM v1] nor [NTLM v2] appear when “OFF” is selected in [Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [Client Settings] -> [User Authentication (NTLM)].		
Primary/Secondary Server Connection Status	-		
Limiting Access to Destinations	Create Group	-	
	Apply Levels/Groups to Destinations	-	
	Apply Levels/Groups to Users	-	
Authentication Device Settings	General Settings	• It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will be displayed when [Administrator Settings] -> [Network Settings] -> [IWS Settings] is set to “ON.” • For details of the functions, refer to " I.2.11.1 User Authentication/Account Track-Authentication Device Settings."	
	Logoff Settings		
User/Account Common Setting	Logout Confirmation Screen Display Setting	-	
	Single Color > 2 Color Output Management	-	
	Counter Remote Control	-	

(2) Administrator Settings > User Authentication/Account Track [2/2]



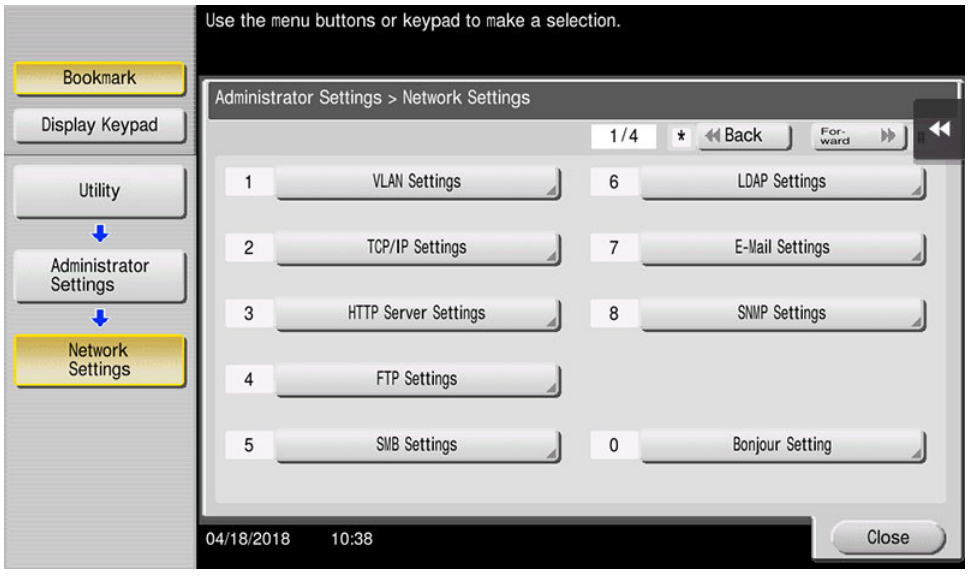
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**
- **Before registering a user, select an authentication method. If all management data is cleared after the authentication method was selected, the histories of the registered users, print, send, receive, and save jobs are deleted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
URL Home Settings	-	
Scan to Home Settings	-	
Scan to Authorized Folder Settings	-	
Simple Auth. setting	Authentication Setting	-
	Register Authentication Server	When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication], this function is available.
	Secondary Auth. server setting	-
Max. Allowance when Enhanced Server down	It will be displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] -> [Temporarily Save Authentication Info.] is set to “Enable.”	
Update Billing Information	-	
Self-Verification Setting in AD Authentication	If you change [Host Name] or [Domain Name] while Active Directory's single sign-on is enabled on this machine, [Administrator Settings] -> [Network Settings] -> [Single Sign-On Setting] -> [Domain Login Setting] is changed to [OFF].	

2.4.6 Network Settings

(1) Administrator Settings > Network Settings [1/4]



NOTE

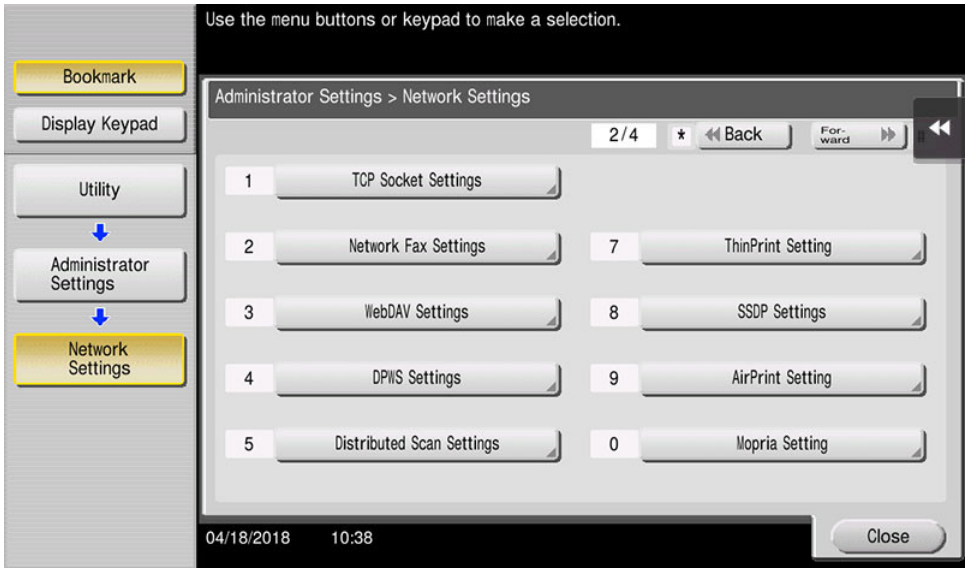
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
VLAN Settings - VLAN ID Settings	Network 1	-	
	Network 2	-	
TCP/IP Settings TCP/IP Settings - Wired Setting *1	IPv4 Settings	-	
	IPv6 Settings	-	
	DNS Host	-	
	DNS Domain	-	
	DNS Server Settings (IPv4)	-	
	DNS Server Settings (IPv6)	-	
	IPsec Settings	-	
	Filtering Settings	IP Address Filtering	IPv4 Filtering (Permit Access)	Setting will be available when [Administrator Settings] -> [Network Settings] -> [TCP/IP Settings] -> [Filtering Settings] -> [Quick IP Filtering] is set to “No Filtering”.
			IPv4 Filtering (Deny Access)	
			IPv6 Filtering (Permit Access)	
			IPv6 Filtering (Deny Access)	
		Quick IP Filtering	-	
		Packet Filtering	-	
		No Filtering	-	
	RAW Port Number	-	
	LLMNR Setting	-	
TCP/IP Settings - Wireless Setting *1	IPv4 Settings	-	
	IPv6 Settings	-	
HTTP Server Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • To use the PageScope Web Connection, enable "JavaScript" and "Cookie" of the Web browser. If this machine is connected to the internet via a proxy server, register the Proxy Settings of the Web browser as "Exceptions". When the PageScope Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.		
FTP Settings	FTP TX Settings	-	
	FTP Server Settings	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] or [Image Log Transfer Settings] is set to “ON”, selecting “ON” for the [FTP Server Settings] cancels enhanced security mode.	
SMB Settings	Client Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • Select [ON] for [DFS Setting] when using SMB transmission under an environment that uses a distributed file system (DFS). DFS function is supported only in the environment that structured with the following Windows server operating systems. :Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2	
	SMB Server Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.	
	WINS/NetBIOS Settings		
	SMB Browsing setting		
LDAP Settings	Enabling LDAP	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.	
	Setting Up LDAP	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • The [Check Connection] does not display when [Enabling LDAP] is set to “OFF.” • [Check Connection] does not display when [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Manual Destination Input] is set to “Restrict.” • [Login Name] and [Password] cannot be configured when authentication method is set to anonymous.	
	Default LDAP Server Setting	-	
	Default Search Result Display Setting		
E-Mail Settings	E-Mail TX (SMTP)	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • When [SMTP Authentication] is set to "ON", enter the [User ID], [Password], [Domain Name], [Authentication Setting], and [SMTP Authentication Method].	

Key name	Function/Precondition	
	E-Mail RX (POP)	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • [Check for New Messages] and [Polling Interval] do not display when [Administrator Settings] -> [Network Setting] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “OFF”.
	E-mail RX Print	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • This is displayed when the optional i-Option LK-110 v2 and upgrade kit UK-211 are enabled. • [E-Mail Body Print] displays only when Switch No. “152” is set to “01” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
	S/MIME Communication Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
SNMP Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, enabling [SNMP v1/v2 Settings] cancels enhanced security mode. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, setting [Security Level] to [OFF] cancels enhanced security mode.	
Bonjour Setting	-	

• *1: It will be displayed when the optional upgrade kit UK-212 or UK-215 and local interface kit EK-608/EK-609 are mounted.

(2) Administrator Settings > Network Settings [2/4]



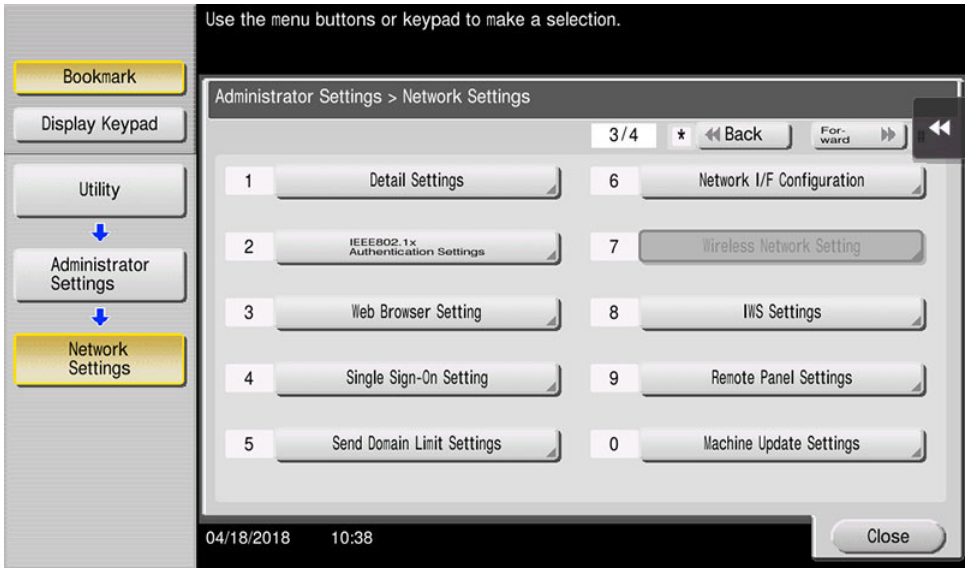
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
TCP Socket Settings	TCP Socket	-	
	TCP Socket (ASCII Mode)	-	
Network Fax Settings	Network Fax Function Settings	IP Address Fax Function	• This setting is available when [IP Address Fax] or [Internet Fax] is set to “ON” from [Service Mode] -> [System 2] -> [Network Fax Settings]. • For details of the functions, refer to I.2.11.2 Network Settings-Network Fax Settings.
		Internet Fax Function	
	SMTP TX Settings	-	
	SMTP RX Settings	-	
WebDAV Settings	WebDAV Client Settings	-	
	WebDAV Server Settings	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, setting [SSL Setting] to [SSL Only] cancels enhanced security mode. • Press [Initial Password] under [Password Setting] to initialize the password. (Default password: sysadm)	
	Proxy Setting for Remote Access	To configure the settings of the proxy server used when MFP accesses to KM license server via WebDAV connection from [Administrator Settings] -> [License Settings] -> [Install License] (WebDAV connection) or [Service Mode] -> [Billing Setting] to activate i-Option function.	
DPWS Settings	DPWS Common Settings	-	
	DPWS Extension Settings	-	

Key name	Function/Precondition	
	Printer Settings	-
	Scanner Settings	-
Distributed Scan Settings	• It will be displayed when [Administrator Settings] -> [Network Settings] -> [DPWS Settings] -> [Scanner Settings] is set to “ON.” • It will be displayed when [Administrator Settings] -> [Network Settings] -> [DPWS Settings] -> [DPWS Common Settings] -> [Enable SSL] is set to “ON.”	
ThinPrint Setting	This is displayed only when the optional i-Option LK-111 is enabled.	
SSDP Settings	-	
AirPrint Setting	Print Settings	-
	Scanner Setting	-
Mopria Setting	-	

(3) Administrator Settings > Network Settings [3/4]



NOTE

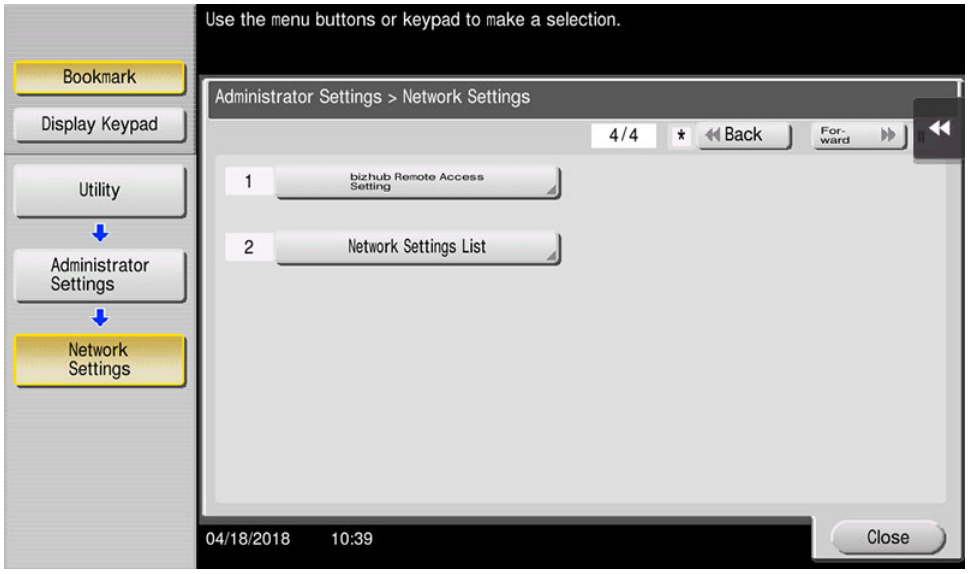
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
Detail Settings	Device Setting	-	
	Time Adjustment Setting	-	
	Status Notification Setting	Register Notification Address	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
	Total Counter Notification Settings	-	
	PING Confirmation	-	
	SLP Setting	-	
	LPD Setting	-	
	Prefix/Suffix Setting	ON/OFF Setting	-
		Prefix/Suffix Setting	-
		Prefix/Suffix Default Sett.	-
	Error Code Display Setting	-	
IEEE802.1X Authentication Settings	IEEE802.1X authentication settings are made with PageScope Web Connection.		
IEEE802.1x Setting	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration] is set to “Wireless Only.”		
Web Browser Setting	Web Browser Usage Settings	To enable the Web browser function, this machine is automatically connected to the License Management Server (LMS) on the Internet in order to register the license. Check that this machine can be connected to the Internet before beginning this procedure.	
	File Operation Permission Setting		
Single Sign-On Setting	Domain Login Setting	When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication] or [Main + External Server], this function is available.	
	Applications and Settings		
	Auto Log Out Time		

Key name	Function/Precondition		
Send Domain Limit Settings	Send Permission Setting	-	
	Send Deny Setting	-	
	Limitation check of Shared address	-	
Network I/F Configuration *1	For details of the functions, refer to I.2.11.3 Network Settings-Network I/F Configuration.		
Wireless Network Setting *1	For details of the functions, refer to Network Settings-Wireless Network Setting.		
IWS Settings	For details of the functions, refer to I.2.11.5 Network Settings-IWS Settings.		
Remote Panel Settings	For details of the functions, refer to "Network Settings - Remote Panel Settings (outline) ", " I.2.11.7 Network Settings - Remote Panel Settings (Server Settings) ", and" I.2.11.8 Network Settings - Remote Panel Settings (Client Settings) ".		
Machine Update Settings	Internet ISW Settings	Update Firmware at Specified Time	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.
		FTP Server Settings	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [FTP data acquisition setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [FTP Setting]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.
		Firmware Update Parameters	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • To download the firmware, in addition to the necessary proxy settings configured in [FTP Server Settings], you need to configure appropriate settings in [Service Mode] -> [Machine Update Setting] ->[Internet ISW] -> [HTTP Setting], [FTP Setting], and [Forwarding Access Setting]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.
	Machine Auto Update setting	Auto Update Settings for This Machine	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This function is same (I.5.31.7 Machine Auto Update setting - Auto Update setting) as that of the service mode, but it will not be used together with the function of the service mode. • For details of the functions, refer to I.2.11.10 Machine Update Settings - Machine Auto Update setting.
		Relay Server Function Setting	
		Log TX setting	
		Log Confirmation	
		Immediate Update	
		Machine Update Password	
	HTTP Proxy Settings	For details of the functions, refer to I.2.11.11 Machine Update Settings - HTTP Proxy Settings.	

- *1: It will be displayed when the optional upgrade kit UK-212 or UK-215 and local interface kit EK-608/EK-609 are mounted.

(4) Administrator Settings > Network Settings [4/4]



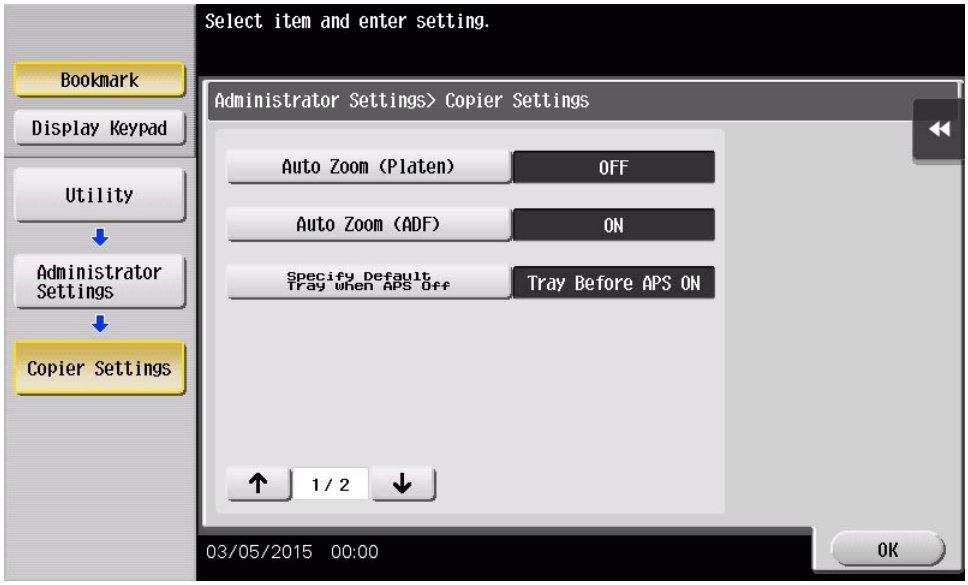
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
bizhub Remote Access Setting	• To remote-control the Control Panel of this machine using an Android/iOS device, you need to install Remote Access on the Android/iOS device. Also, [TCP Socket] must be set to [ON] for [Administrator Settings] -> [Network Settings] -> [TCP Socket Settings]. • To connect the device to this machine through bizhub Remote Access using NFC, configure a setting to enable NFC on this machine in advance. • To connect the device to this machine through bizhub Remote Access using Bluetooth LE, configure a setting to enable Bluetooth LE on this machine in advance.
Network Settings List	-

2.4.7 Copier Settings

(1) Administrator Settings > Copier Settings [1/2]

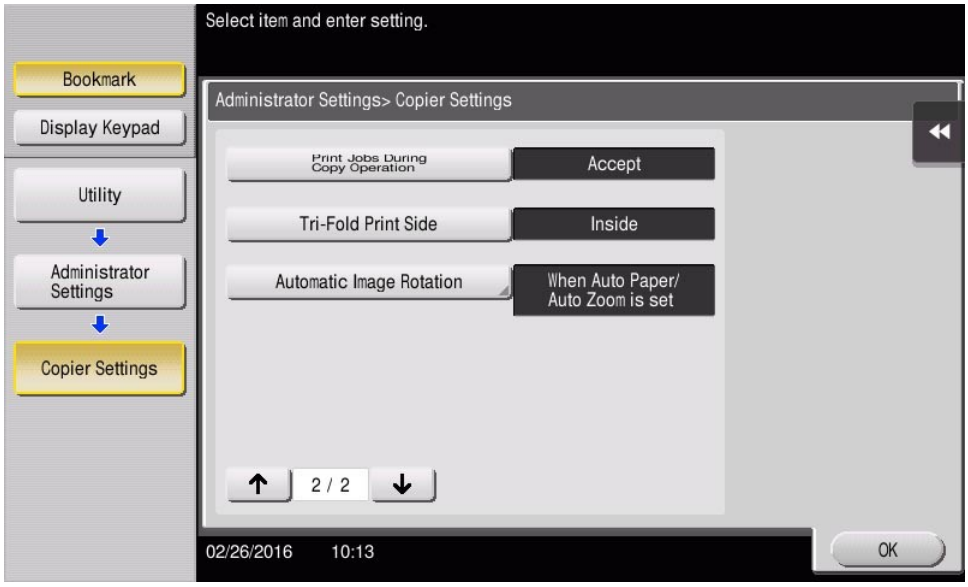


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Zoom (Platen)	-
Auto Zoom (ADF)	-
Specify Default Tray when APS Off	-

(2) Administrator Settings > Copier Settings [2/2]



NOTE

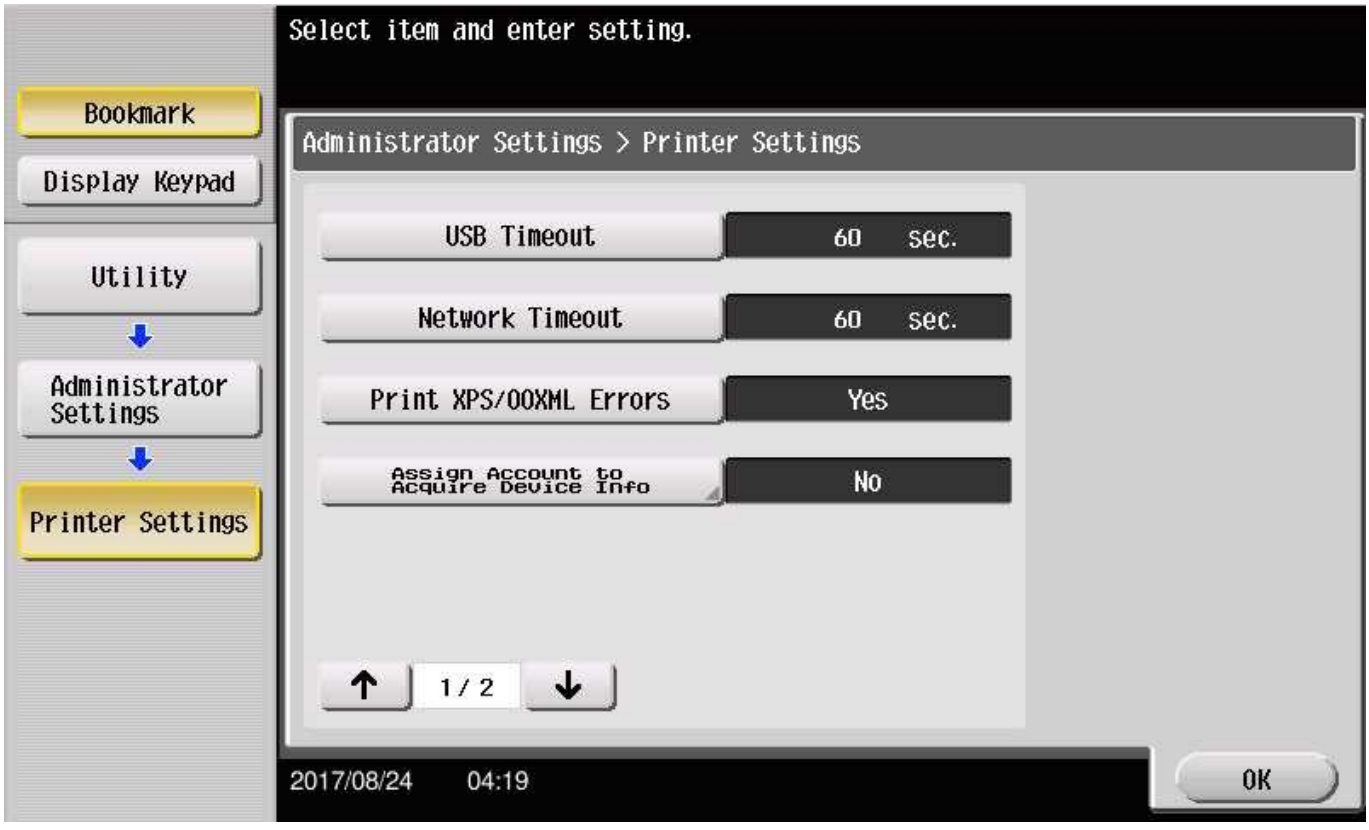
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Print Jobs During Copy Operation	-
Tri-Fold Print Side	It will be displayed when optional finisher FS-534SD is mounted. *1 It will be displayed when optional finisher FS-536SD or FS-537SD is mounted. *2
Automatic Image Rotation	-

- *1: bizhub C368/C308/C258 only
- *2: bizhub C658/C558/C458 only

2.4.8 Printer Settings

(1) Administrator Settings > Printer Settings [1/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
USB Timeout	-

Key name	Function/Precondition
Network Timeout	-
Print XPS/OOXML Errors	-
Assign Account to Acquire Device Info	-

(2) Administrator Settings > Printer Settings [2/2]



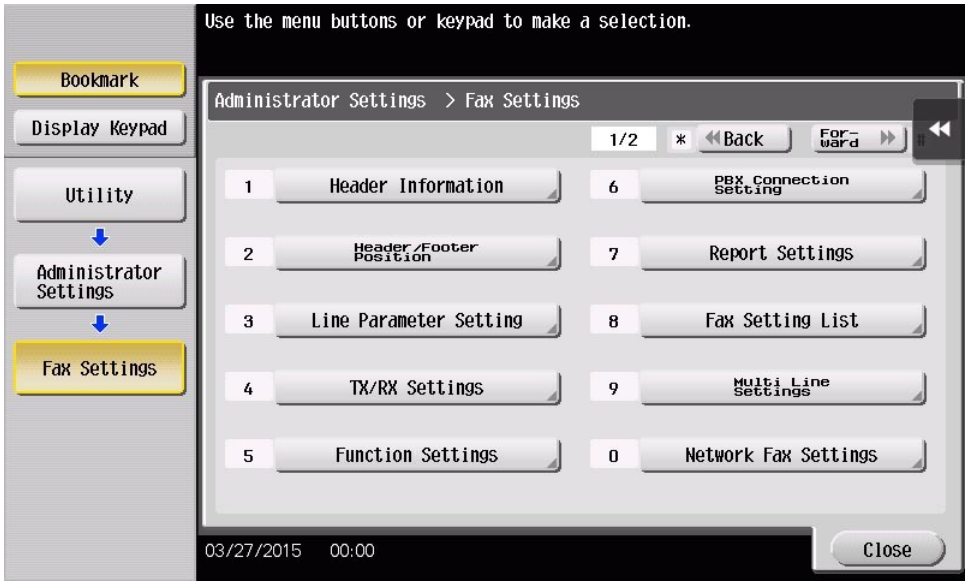
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
PCL Settings	-
PS Settings	-

2.4.9 Fax Settings

(1) Administrator Settings > Fax Settings [1/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will be displayed when optional fax kit FK-514 is mounted.**
- **For details of the utility functions, refer to "User's Guide."**

(a) Header Information

Key name	Function/Precondition
Header Information	-

(b) Header/Footer Position

Key name	Function/Precondition
Header Position	[OFF] cannot be used on the USA and Hong Kong models.
TTI Print Position and Character Size	-
Print Receiver's Name	This setting is not available on the USA and Hong Kong models.
Footer Position	-

(c) Line Parameter Setting

Key name	Function/Precondition
Dialing Method	-
Receive Mode	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted.
Number of RX Call Rings (Receive Time Interval Setting)	When [Service Mode] -> [FAX] -> [Network] -> [Network Setting 1] -> [Receive Signal Detection Mode] is set to "Time", [Receive Time Interval Setting] will be displayed.
Number of Redials	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
Redial Interval	
Line Monitor Sound	-
Line Monitor Sound Volume (Send)	-
Line Monitor Sound Volume (Receive)	-
Manual RX V34 Settings	-
Ring Detection Pattern	This setting is available only on the New Zealand model.

(d) TX/RX Settings

Key name	Function/Precondition
Duplex Print (RX)	It will not be displayed when [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Print Separate Fax Pages] is set to "ON."
Letter/Ledger over A4/A3	-
Print Paper Selection	-
Print Paper Size	To make the setting of Print Paper Size enable, set [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Tray Selection for RX Print] to "Auto."
Incorrect User Box No. Entry	-
Paper Tray Settings	-
Min. Reduction for RX Print	-
Print Separate Fax Pages	It will not be displayed when [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Duplex Print (RX)] is set to "ON."
File After Polling TX	-
No. of Sets (RX)	-
Individual Receiving Line Setup	It will be displayed only when multiple lines are used and [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to "TX and RX" or "RX Only".
Individual Sender Line Setup	It will be displayed only when multiple lines are used and [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to "TX and RX" or "TX Only".
RX Document Print Settings	-

(e) Function Settings

Key name	Function/Precondition	
Function ON/OFF Setting	F-Code TX	When the setting is changed, turn off the main power switch and turn it on again more than 10 seconds after.
	Relay RX	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to "ON."
	Relay Printing	
	Destination Check Display Function	-
	Confirm Address (TX)	-
	Confirm Address (Register)	-

Key name	Function/Precondition	
	PIN Code Display Mask Function	-
Memory RX Setting	• It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] - [Compulsory Memory RX] is set to “ON.” • It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [PC-Fax RX Setting], [Forward TX Setting], or [TSI User Box Setting] is set to “ON.”	
RX Data Deletion Restriction Settings	Password Deletion	• This setting is not available without user authentication. • This setting is not available without the account track. • This function cannot be set if the User Box Administrator has not been set.
	Administrator User Box Deletion	
Closed Network RX	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Closed area RX] is set to “ON.”	
Forward TX Setting	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. • It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [PC-Fax RX Setting], [Memory RX Setting], or [TSI User Box Setting] is set to “ON.” • A forwarding address except a case of the fax, specify [File Type] a fax can be converted into a file. The file types able to be specified are PDF, XPS, and TIFF. However, when a received job is an Internet Fax or IP Address Fax, you can specify other file types by changing the switch No.124 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].	
Incomplete TX Hold	• It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Re-Transmission] is set to “ON.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.	
PC-Fax Permission Setting	-	
PC-Fax RX Setting	It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [TSI User Box Setting] is set to “ON.”	
TSI User Box Setting	It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [PC-Fax RX Setting] is set to “ON.”	
TSI All File Type Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that vendor 2 or key counter IF vendor is mounted. • It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [PC-Fax RX Setting] is set to “ON.” • This is displayed when optional i-Option LK-110 v2 and upgrade kit UK-211 *1 are enabled.	
TX-Line Auto Switch Setting	-	

- *1: Upgrade kit UK-211 is not required for bizhub C658/C558/C458.

(f) PBX Connection Setting

Key name	Function/Precondition
PBX Connection Setting	-

(g) Report Settings

Key name	Function/Precondition
TX Result Report	-
TX Result Report Print Confirmation screen	-
Sequential TX Report	-
Broadcast Result Report	-
Bulletin TX Report	-
Relay TX Result Report	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.”
TX Result Report Print Settings	• This function can be set if E-mail address has been set in [Administrator Settings] -> [Administrator/Machine Settings] -> [Administrator Registration]. • This function can be set if "ON" is set for [E-Mail TX (SMTP)] and "ON" is set for [Scan to E-mail] in [Administrator Settings] -> [Network Settings] -> [E-Mail Settings].
Activity Report	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
Relay Request Report	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.”
PC-Fax TX Error Report	-
Timer Reservation TX Report	-
Confidential RX Report	-

Key name	Function/Precondition
Network Fax RX Error Report	It will be displayed when either [IP Address Fax Function] or [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
Print Job Number	• It will not be displayed when the report addition information is set to “Diagnosis Code” or “Dial Number” by [Service Mode] -> [FAX] -> [List Output] -> [Report Addition]. • It will not be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.77 is set to [00000100] at Bit assignment/[04] at HEX assignment.
Legend display Settings	-
MDN Message	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON”.
DSN Message	
Print E-mail Message Body	

(h) Fax Setting List

Key name	Function/Precondition
Fax Setting List	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/[01] at HEX assignment.)

(i) Multi Line Settings

NOTE

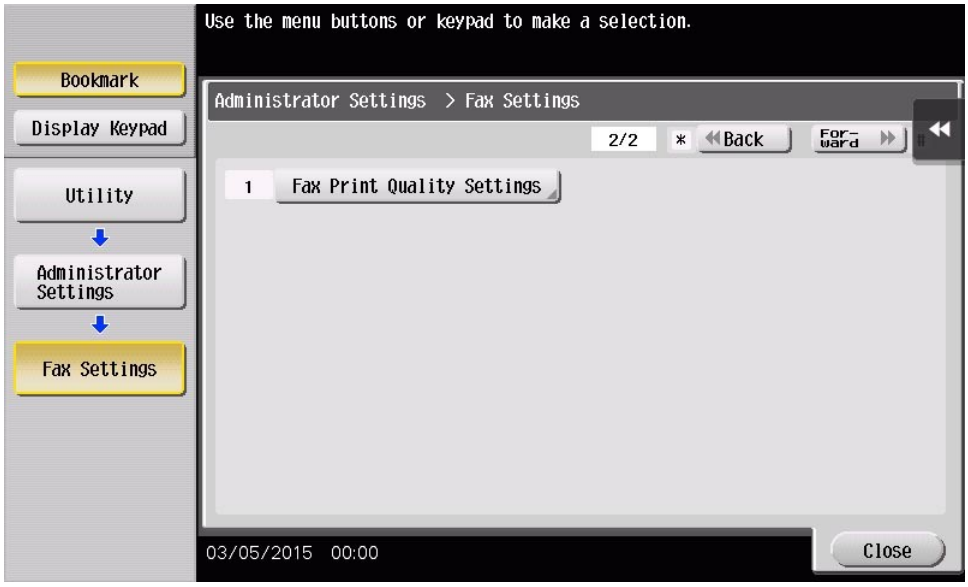
- **It will be displayed each only when optional fax kit FK-514 (line 2) or FK-515 (line 3 or line 4) is mounted.**

Key name			
PC-FAX TX Line Setting	• It will be not displayed when [PC-Fax Permission Setting] is set to “Restrict” in [Administrator Settings] -> [Fax Settings] -> [Function Settings]. • Line 2 to 4 will be displayed when [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to “TX and RX” or “TX Only”.		
Fax Line 2 Fax Line 3 Fax Line 4	Line Parameter Setting	Dialing Method	-
		Number of RX Call Rings (Receive Time Interval Setting)	When [Service Mode] -> [FAX] -> [Line2 to 4] -> [Network] -> [Network Setting 1] -> [Receive Signal Detection Mode] is set to “Time”, [Receive Time Interval Setting] will be displayed.
		Line Monitor Sound	-
	Function Settings	-	
	Multi Line Settings	-	
	Sender Fax No.	-	

(j) Network Fax Settings

Key name	Function/Precondition
Black Compression Level	It will be displayed when either [IP Address Fax Function] or [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
Color/Grayscale Multi-Value Compression Method	
Internet Fax Self RX Ability	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON”.
Internet Fax Advanced Settings	
IP Address Fax Operation Settings	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [IP Address Fax Function] is set to “ON”.

(2) Administrator Settings > Fax Settings [2/2]



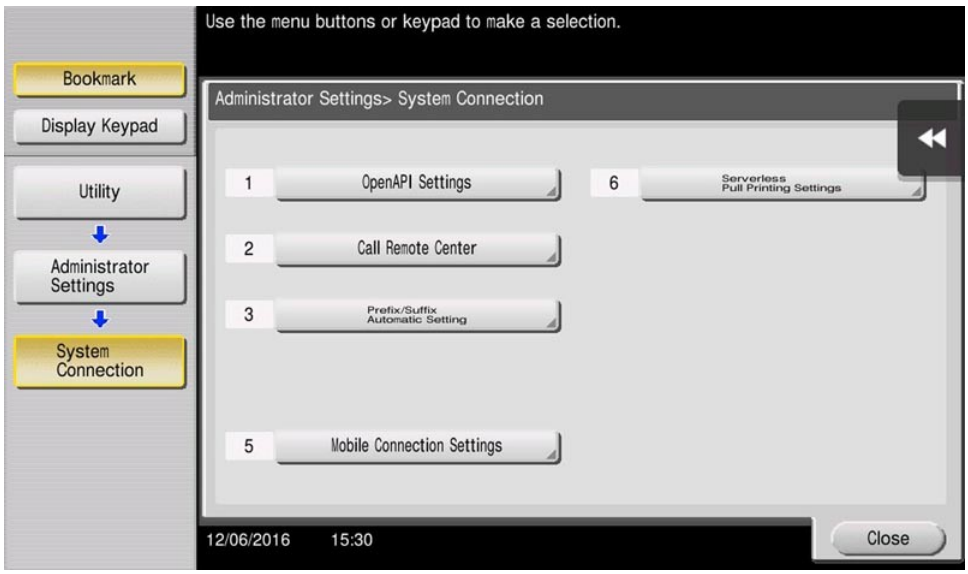
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will be displayed when optional fax kit FK-514 is mounted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Fax Print Quality Settings	-

2.4.10 System Connection

(1) Administrator Settings > System Connection



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
OpenAPI Settings	Access Setting	-	
	SSL/Port Settings	-	
	Authentication	-	
	External Application Connection	-	
	Proxy Settings	-	
	Specified Application Start Setting	It will be displayed when [Service Mode] -> [System 2] -> [Application Change Setting] is set to “Permit.”	
	Single Sign-On Setting	This displays when an authentication application is registered.	
Call Remote Center	For details of the functions, refer to " I.5.7 CS Remote Care (Outlines)".		
Prefix/Suffix Automatic Setting	-		
Mobile Connection Settings	Simple Connection Setting	QR Code Display Setting	-

Key name	Function/Precondition		
		Enable NFC	This setting is synchronized with [Administrator Settings] - [User Authentication/Account Track] -> [General Settings] -> [Enable NFC].
		Enable Bluetooth LE	• It will be displayed when optional local interface kit EK-609 is mounted. • This setting is synchronized with [Administrator Settings] - [User Authentication/Account Track] -> [General Settings] -> [Enable Bluetooth LE].
	Wireless Connection Setting	• This setting is available when [Simple Connection Setting] -> [QR Code Display Setting] is set to “ON.” • When [Network Settings] -> [Network I/F Configuration] is set to [Wireless Only], a pairing is established by applying the wireless settings of this machine; therefore, this setting is not displayed.	
	Touch Link Application Settings	-	
Serverless Pull Printing Settings *1	Client Function Settings	-	
	Store Print Documents Setting	-	
	Topology Function Setting	-	
	IPP Authentication Settings	-	
	Group settings	-	
	Status of devices in Group	-	

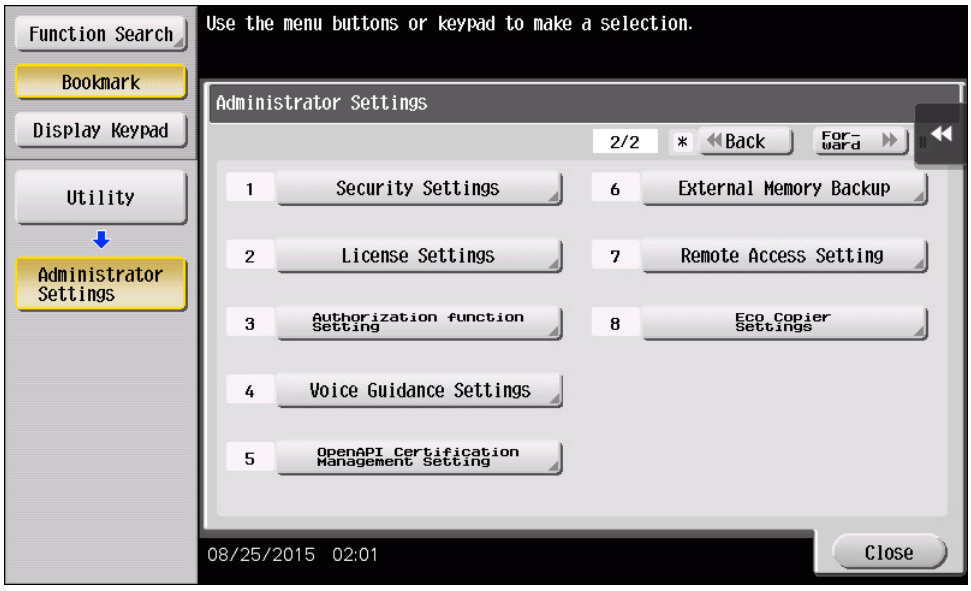
- *1: This setting will be available when optional i-Option LK-114 and upgrade kit UK-211 are enabled. Upgrade kit UK-211 is not required for bizhub C658/C558/C458.

2.5 Administrator Settings List [2/2]

2.5.1 Administrator settings outline 2/2

NOTE

- **The Administrator Settings will be available by entering the administrator password (16 digits) set by the Administrator Settings or Service Mode. (The administrator password is initially set to “1234567812345678.”)**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, entering the incorrect administrator password three times will cause access lock. The access lock is released after the lapse of a predetermined period of time (Default setting: 5 min.) after the main power switch is turned OFF and then ON more than 10 seconds later. The access lock can be released by [Service Mode] -> [Enhanced Security] -> [Administrator unlocking].**
- **For details of the utility functions, refer to "User's Guide."**

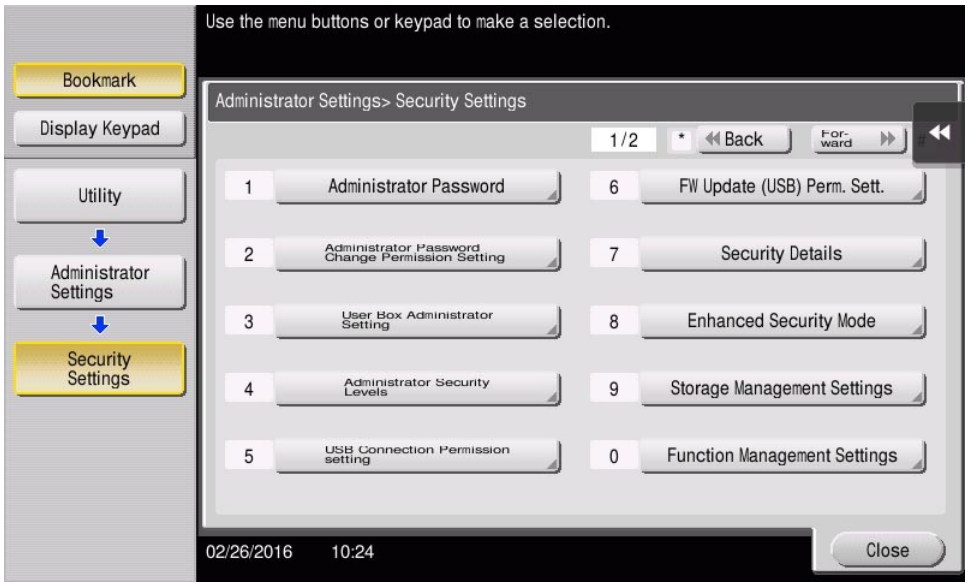


- Administrator Settings [1/2]
  - System Settings
  - Administrator/Machine Settings
  - One-Touch/User Box Registration
  - User Authentication/Account Track
  - Network Settings
  - Copier Settings
  - Printer Settings
  - Fax Settings
  - System Connection
- Administrator Settings [2/2]
  - Security Settings

- License Settings
- Authorization function Setting
- Voice Guidance Settings
- OpenAPI Certification Management Setting
- External Memory Backup
- Remote Access Setting
- Eco Copier Settings

2.5.2 Security Settings

(1) Administrator Settings > Security Settings [1/3]



NOTE

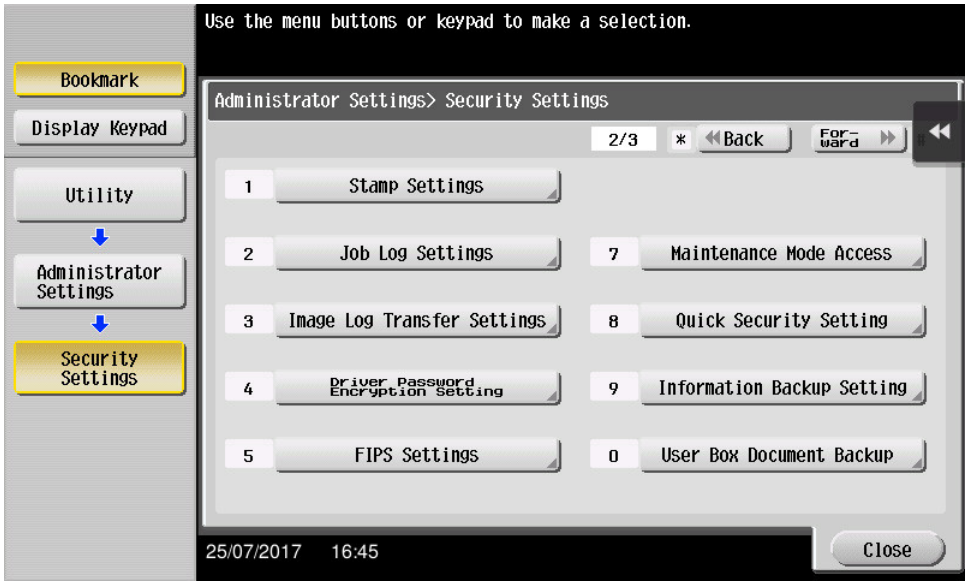
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Administrator Password	When “Enable” is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].	
Administrator Password Change Permission Setting	-	
User Box Administrator Setting	• [Allow] cannot be selected when user authentication and account track are not conducted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode. • When “Enable” is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].	
Administrator Security Levels	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.	
USB Connection Permission setting	• If [Restrict] is selected in [External Memory (Administrator)], [TPM Key Backup] is restricted in addition to the functions that can be set in [Individual Settings]. • Also, USB memory is not available for the following functions. [TX Operation Log Output], [Main Menu Display Settings], [License Settings], [Authorization function Setting]	
FW Update (USB) Perm. Sett.	-	
Security Details	Password Rules	• [Enable] cannot be selected when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to “OFF.” “OFF” setting of [CE Authentication] will not be displayed and cannot be set to “OFF” when [Password Rules] is set to “Enable.” • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Disable” in this setting cancels enhanced security mode. • When the password rule is set to [Enable], the password cannot be changed or registered unless it follows the above conditions.
	Prohibited Functions When Authentication Error	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Mode 1” in this setting cancels enhanced security mode. Only the number of times for trials up to the access lock can be changed. • For details of the functions, refer to " I.2.11.12 Security Settings - Prohibited Functions When Authentication Error."
	Confidential Document Access Method	It cannot be changed at the operator’s option since it will automatically be set according to the [Prohibited Functions When Authentication Error] setting.

Key name	Function/Precondition	
		• It will be set to [Mode 1] when [Prohibited Functions When Authentication Error] is set to [Mode 1]. • It will be set to [Mode 2] when [Prohibited Functions When Authentication Error] is set to [Mode 2].
	Manual Destination Input	-
	Print Data Capture	• To be used when carrying out [Service Mode] -> [System 2] -> [Data Capture]. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode.
	Job Log Settings	When “ON” is selected in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode], this setting is automatically set to “Yes.”
	Restrict Fax TX	-
	Address Selection Confirmation Display	It will be displayed when [Administrator Settings] -> [System Settings] -> [Restrict User Access] -> [Restrict Operation] -> [Restrict Broadcasting] is set to “OFF.”
	Personal Data Security Settings	-
	Hide Personal Information (MIB)	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “OFF” in this setting cancels enhanced security mode.
	Display Activity Log	-
	Initialize	-
	Secure Print Only	-
	Copy Guard	It will be displayed when optional security kit SC-508 is mounted.
	Password Copy	
	Web browser contents access	When using the application where server authentication is carried out by web browser extensions, [Allow] is automatically selected.
	Web browser setting change	-
	TX Operation Log	To print the saved sending operation logs or save them in USB memory, select [Utility] -> [Administrator Settings] -> [System Settings] -> [List/Counter] -> [TX Operation Log Output] on the Control Panel.
	Hardware Encryption	-
	Export Debug Log	• This is displayed when Switch No. “155” is set to “01” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting]. • Use: To select whether or not allow CE to export debug information (logs) from the MFP to use the information to analyze problem in the MFP. • Default setting: Restrict
	Write the Configuration from USB	-
	Storage data backup	• To set whether to permit our service representative to back up or restore the storage on this machine. • For details of the functions, refer to [Service Mode] -> [Enhanced Security] -> [HDD Data Backup].
	Remote Service setting	When this setting is set to [Allow], [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Machine Auto Update Settings] -> [Machine Auto Update setting] -> [Auto Update Settings for This Machine] is not displayed.
Enhanced Security Mode	Enhanced Security Mode	For details of the functions, refer to " I.2.11.13 Security Settings - Enhanced Security Mode."
Storage Management Settings	Check Capacity	-
	Overwrite HDD Data	It is necessary to make HDD format when encryption priority/overwrite priority setting is changed. Make sure to configure the following settings after formatting the HDD. • Installing the firmware. • Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts from [Service Mode] -> [System 2] -> [Install Data].
	Overwrite All Data	-
	Overwrite All Data-Report Settings	-
	HDD Lock Password	• Don't forget the password. • After setting a lock password, if you replace the HDD due to its breakage or other reasons and install a new HDD, an error message is displayed. In that case, clear the HDD lock password and set a new password using this function.
	Format	• It is subject to logical formatting here, therefore if starting with physical formatting, follow as [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format]. • Make sure to configure the following settings after formatting the HDD. Installing the firmware. Next, reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts from [Service Mode] -> [System 2] -> [Install Data]. • Make sure to install the firmware after the format of the hard disk. Otherwise a trouble code “C-D012 mount error due to unformatted HDD” will appear.

Key name	Function/Precondition	
	HDD Encryption Setting	For details of the functions, refer to " I.2.11.14 Security Settings - HDD Encryption Setting."
	Debug Log Encryption Settings	• Use: To set a password used to encrypt debug data when storing it into the HDD. • Default setting: 01234567890123456789 • For details of the functions, refer to " I.2.11.15 Security Settings - Debug Log Encryption Settings."
Function Management Settings	Usage Setting for Each Function	It will be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that vendor 2 or management device 2 is mounted.
	Maximum Job Allowance	
	Network Function Usage Settings	When the vendor or management device setting in the Service Mode is set, this setting is set to “OFF.” Exercise caution since it will stay in “OFF” setting even when “unset” is selected on vendor or management device setting in Service Mode later.

(2) Administrator Settings > Security Settings [2/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Stamp Settings	Apply Stamps	-
	Delete Registered Stamp	-
Job Log Settings	Job Log Usage Set.	-
	Automatic Log Distr Set.	-
Image Log Transfer Settings	• This is displayed only when Switch No. “63” is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting]. • For details of the functions, refer to [I.2.11.16 Security Settings - Image Log Transfer Settings (Type1).] • For details of the functions, refer to [I.2.11.17 Security Settings - Image Log Transfer Settings (Type2).]	
Driver Password Encryption Setting	For details of the functions, refer to [I.2.11.18 Security Settings - Driver Password Encryption Setting.]	
FIPS Settings	-	
Maintenance Mode Access	To enable Maintenance Mode Access, set [Maintenance Mode] of Service Mode to [Effective]. [Service Mode] -> [System 2] -> [Maintenance Mode]	
Quick Security Setting	For details of the functions, refer to Quick Security setting.	
Information Backup Setting	Server Backup	-
	Restore from Server	-
	HDD Backup	-
User Box Document Backup	-	

(3) Administrator Settings > Security Settings [3/3]



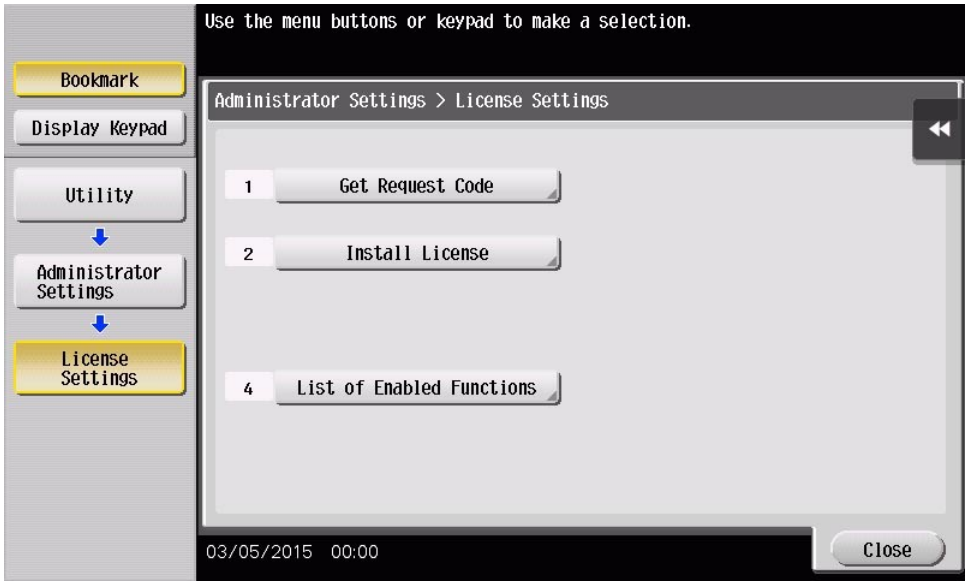
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Delete Data Backup	--

2.5.3 License Settings

(1) Administrator Settings > License Settings



NOTE

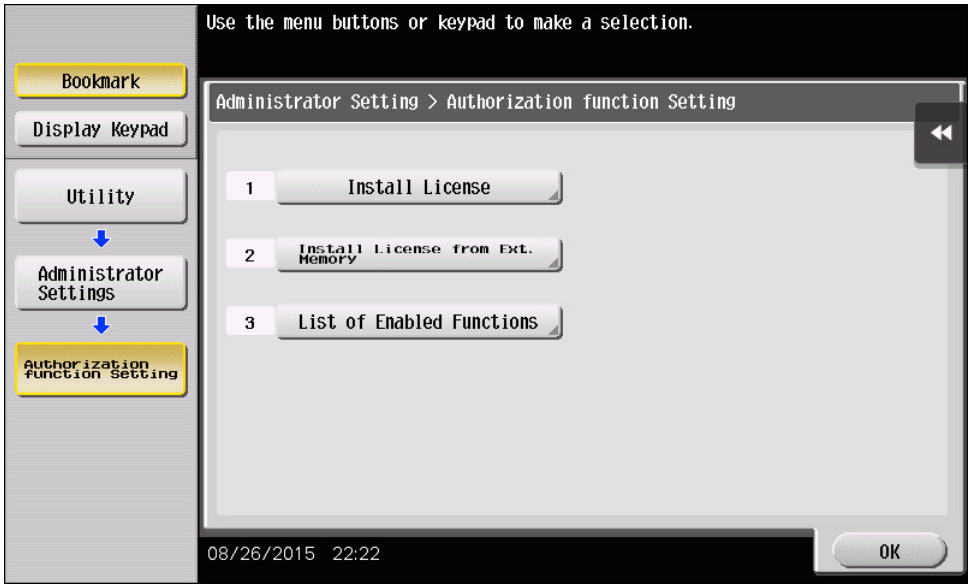
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Get Request Code	-
Install License	• By making settings in [Service Mode] -> [Billing Setting], CE can also activate functions provided by i-Option. • When activating i-Option, MFP accesses to KM license server via WebDAV connection. Set the proxy server setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access] as occasion demands. • For accessing to KM license server, it is necessary to select “Fixed Address” in [Service Mode] -> [Billing Setting] -> [WebDAV Server Setting]. • For details of the functions, refer to License Settings.
List of Enabled Functions	It is displayed when this machine is equipped with an optional upgrade kit UK-211 *1.

- *1: Not required for bizhub C658/C558/C458

2.5.4 Authorization function Setting

(1) Administrator Settings > Authorization function Setting



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Authorization function Setting	Install License	-
	Install License from Ext. Memory	This appears when an external memory device (USB memory) that contains the license installation file is connected to the machine.
	List of Enabled Functions	This appears if there are activated functions.

2.5.5 Voice Guidance Settings

NOTE

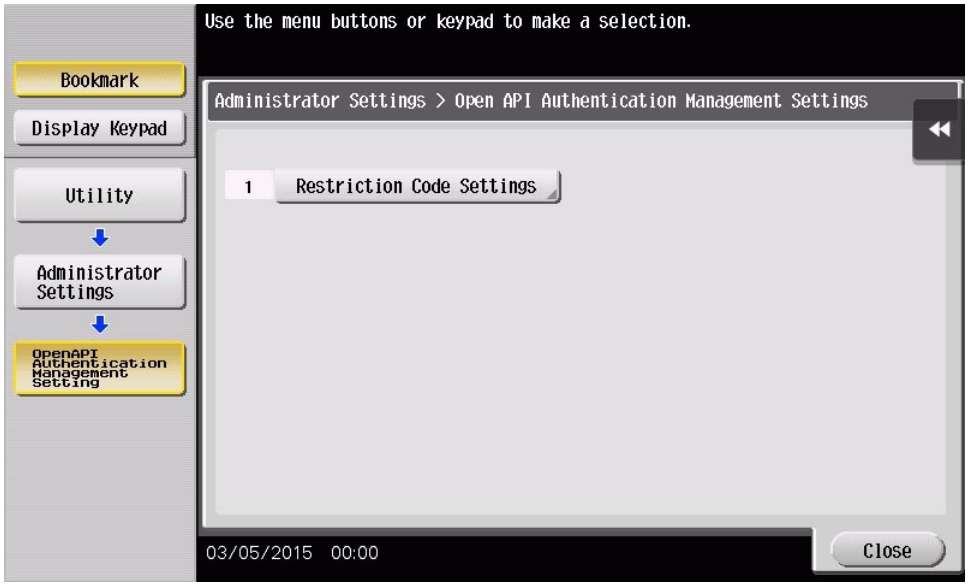
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Voice guidance	• To use voice guidance, the optional upgrade kit UK-211 *1 and i-Option LK-104 v3 must be activated, and the optional local interface kit EK-608 must be mounted. • For details of the functions, refer to Voice Guidance Settings-Voice Guidance.

- *1: Not required for bizhub C658/C558/C458

2.5.6 OpenAPI Certification Management Setting

(1) Administrator Settings > OpenAPI Certification Management Setting



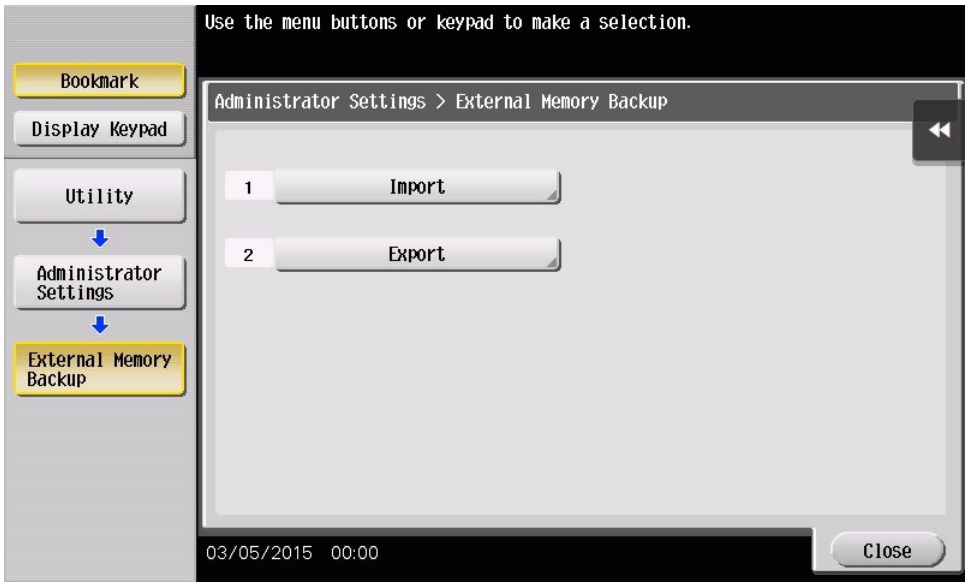
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Restriction Code Settings	These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

2.5.7 External Memory Backup

(1) Administrator Settings > External Memory Backup



NOTE

- **Keys displayed on screens are different depending on the setting.**

Key name	Function/Precondition
Import	• It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.72 is set to [00000100] at Bit assignment/[04] at HEX assignment. • For details of the functions, refer to "External Memory Backup - Import/Export".
Export	

2.5.8 Remote Access Setting

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Import/Export User Data	Allow	This displays when using the CS Remote Care system.
	Restrict	

2.5.9 Eco Copier Settings

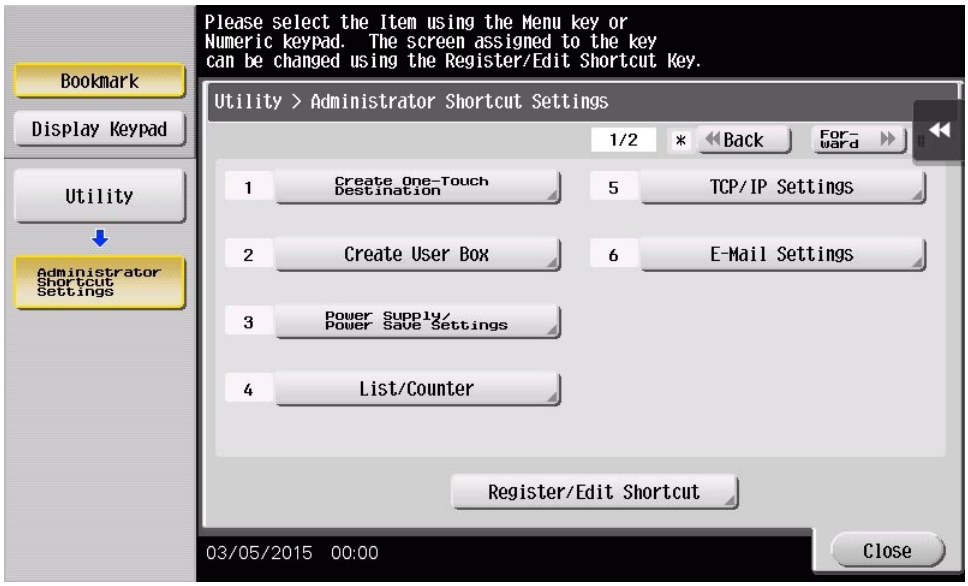
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Eco Copier Settings	-

2.6 Administrator Shortcut Settings

2.6.1 Administrator Shortcut Settings [1/2]

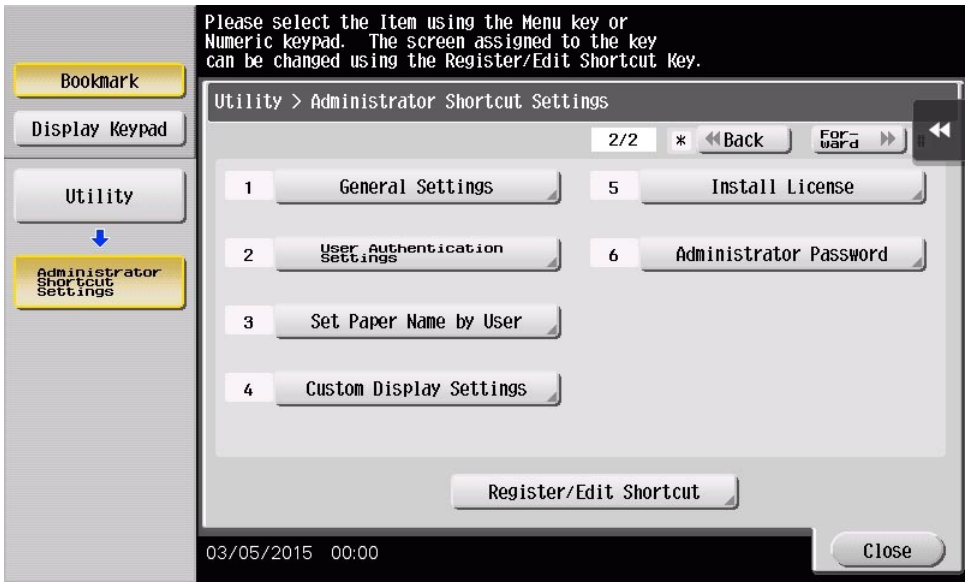


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Key name	Function/Precondition
Create One-Touch Destination	The default setting for short cut keys 7/8 is "Do Not Use".
Create User Box	
Power Supply/Power Save Settings	
List/Counter	
TCP/IP Settings	
E-Mail Settings	

2.6.2 Administrator Shortcut Settings [2/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Key name	Function/Precondition
General Settings	The default setting for short cut keys 15/16 is "Do Not Use".
User Authentication Settings	
Set Paper Name by User	
Custom Display Settings	

Key name	Function/Precondition
Install License	
Administrator Password	

2.7 Banner Printing

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Function Name	Function/Precondition
Allow	-
Restrict	-

2.8 My Panel Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**

Function Name	Function/Precondition
Language Setting	• It is displayed when the optional upgrade kit UK-211 *1 is validated and PageScope My Panel Manager is installed. • This is displayed when a registered user is logging in after user authentication. However, this is not displayed when both management device 2 and user authentication are used. • Use : To make various settings about My Panel. To customize My Panel screen for individual registered users. • Registering, editing, and deleting My Panel settings are allowed when logging in as a registered user. • When My Panel is not customized, the settings for machine take effect in the three of the control panel settings, Language setting, Measurement unit setting, and Color selection setting. • Depending on the functions provided by each machine and the optional device configuration, not all My Panel settings may not take effect.
Measurement Unit Setting	
Copier Settings	
Scan/Fax Settings	
User Box Settings	
Function Display Key (Copy/Print)	
Function Display Key (Send/Save)	
Main Menu Settings	
Initial Screen Setting	

- *1: Not required for bizhub C658/C558/C458

2.9 Device Information List

2.9.1 Device Information [1/2]

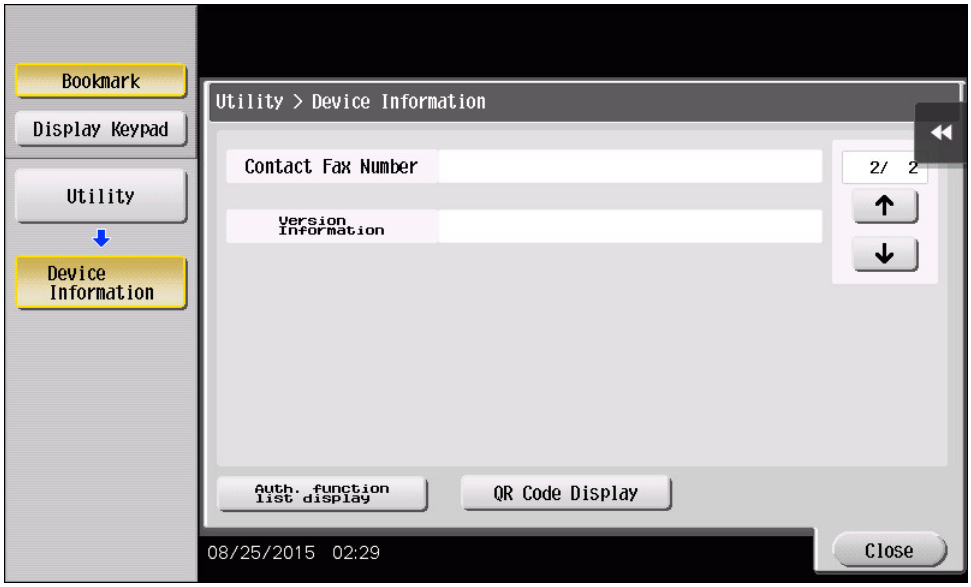


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Function Name
Function Version
IPv4 Address
IPv6 Address
Serial Number
Contact Telephone Number
Auth. Function list display
QR Code Display

2.9.2 Device Information [2/2]



NOTE
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Function Name
Contact Fax Number
Version Information

2.10 Remote Panel Operation List

NOTE
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to " User's Guide ."**

Key name	Function/Precondition
Start	• It will be displayed when [Administrator Settings] -> [Network Settings] -> [Remote Panel Settings] -> [Client Settings] is set to “ON.” • To start remote operations of the control panel of the machine.

2.11 Supplementary explanation of utility mode

2.11.1 User Authentication/Account Track-Authentication Device Settings

- It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
- It will be displayed when [Administrator Settings] -> [Network Settings] -> [IWS Settings] is set to “ON.”

(1) General Settings

(a) Use

- Specifies a device used for user authentication.

Card Authentication	IC Card type setting	Select the type of the required IC card. • To use the FeliCa card, select [FeliCa], [SSFC], [FCF], [FCF (Campus)], or [FeliCa (Proprietary Card)]. When [SSFC] is selected, detailed information such as the company code or company identification code is registered. • To use the Type A card, select [Type A]. • To use the FeliCa and Type A cards together, select [FeliCa+TypeA], [SSFC+TypeA], [FCF +Type A], [FCF(Campus)+Type A], or [FeliCa(Proprietary Card)+Type A]. When [SSFC +TypeA] is selected, detailed information such as the company code or company identification code is registered. • To use NFC, select [NFC(HCE)]. • To use the Type A card with NFC, select [TypeA+NFC(HCE)]. • To use the FeliCa card with NFC, select [FeliCa+NFC(HCE)], [SSFC+NFC(HCE)], [FCF +NFC(HCE)], [FCF(Campus)+NFC(HCE)], or [FeliCa(Proprietary Card)+NFC(HCE)]. When [SSFC+NFC(HCE)] is selected, detailed information such as the company code or company identification code is registered.
		Card Detail Settings	The settings information of for the registered IC card loadable driver can be changed via the Web browser on the machine. This does not display if any of the following conditions are satisfied. • A driver other than the AU-201S loadable driver is installed.
	IC Card Type	The type of the IC card which has been set will be displayed. • This is displayed when the loadable driver used for the YSoft card reader has been installed.	
	Operation Settings	Set how to log in to this machine.	

		• [Card Authentication]: Logs in simply by placing your IC card or NFC-compatible Android device on the authentication unit. • [Card Authentication + Password]: Logs in by placing the IC card or NFC-compatible Android device on the authentication unit and entering the password. [Card Authentication] is specified by default.
	Authentication Card ID Number	• Specify whether to notify the counter, which collects the use status of this machine, of the authentication card ID. • [Ignore] is specified by default.
Bio Authentication	Beep Sound	• Set whether to give a "blip" sound when the finger vein pattern is scanned successfully. • [ON] is specified by default.
	Operation Settings	Set how to log in to this machine. • [1-to-many authentication]: A user simply needs to place his or her finger to log in. • [1-to-1 authentication]: A user needs to enter the user name and place his or her finger to log in. [1-to-many authentication] is specified by default.

(b) Procedure

- Select either one of the authentication devices and press the corresponding key to go to the individual operation setting screen.
- The screen displays the authentication device that is selected in [Service Mode] -> [Billing Setting] -> [Authentication Device 2].
- If SSFC (Shared Security Formats Cooperation) is selected in Card Authentication, set [Company Code], [Company Identification Code], [Area No.], [Building No.], [Floor No.], [Room No.], and [Security Level].

(c) Setting items for SSFC card information

- When using SSFC card, acquire the following information from the administrator and convert the value to input using the control panel.

Information to be obtained from the administrator		
Items of FeliCa SSFC detail setting	Sample-data (decimal number)	Setting value (hexadecimal number)
Room number	37	00 25
Floor number	15	00 0F
Building number	50	00 32
Area number	85	00 55
Security level	2	00 02
Company identification code (CL code) *1	06BGLQVX17 (ASCII code)	30 36 42 47 4C 51 56 58 31 37
Company code *2	CompanyA (ASCII code)	CompanyA

*1: The character length of the company code is 10 bytes.
*2: Use alphabetical upper case/lower case characters and numeric characters for Company code. When the company code is not set, this space will be left blank.

(2) Logoff Settings

(a) Use

- Select whether or not the user is logged off after a scan or fax is sent or after the copy document is scanned.

(b) Default setting

- Do not log off

(c) Setting item

- Do not log off
- Log off

2.11.2 Network Settings-Network Fax Settings

- It will not be displayed on the screen when all items are set to “OFF” in [Service Mode] -> [System 2] -> [Network Fax Settings].

(1) Network Fax Function Settings

(a) IP Address Fax Function

- Setting will be available when [IP Address Fax] is set to “ON” in [Service Mode] -> [System 2] -> [Network Fax Settings].

Use

- To set whether or not to use IP address fax function.

Default setting

- OFF

Setting item

- ON
- OFF

(b) Internet Fax Function

- Setting will be available when [Internet Fax] is set to “ON” in [Service Mode] -> [System 2] -> [Network Fax Settings].

Use

- To set whether or not to use Internet fax function.

Default setting

- OFF

Setting item
- ON
- OFF

(2) SMTP TX Settings

(a) Use
- To set SMTP TX when network fax function is being used.
- To set SMTP TX port number and connecting time out period when network fax function is being used.

(b) Port No.
Procedure
1. Touch [Input].
2. Enter the port number between 1 and 65535 using the 10-key pad.

(c) Connection Timeout
Procedure
1. Touch [Input].
2. Enter the connection timeout time between 5 and 1000 (sec.) using the 10-key pad.

(3) SMTP RX Settings

(a) Use
- To set SMTP RX when network fax function is being used.
- To set SMTP RX port number and connecting time out period when network fax function is being used.

(b) SMTP RX
Default setting
- OFF

Setting item
- ON
- OFF

(c) Port No.
Procedure
1. Touch [Input].
2. Enter the port number between 1 and 65535 using the 10-key pad.

(d) Connection Timeout
Procedure
1. Touch [Input].
2. Enter the connection timeout time between 5 and 1000 (sec.) using the 10-key pad.

2.11.3 Network Settings-Network I/F Configuration
- It will be displayed when the optional upgrade kit UK-212 or UK-215and local interface kit EK-608 are mounted.

(1) Use
- To add a network interface to this machine, set a network interface configuration.

Wired Only	Select this option to use this machine only in the wired LAN environment.
Wireless Only	Select this option to use this machine only in the wireless LAN environment. This machine runs as a wireless LAN adapter in the wireless LAN environment.
Wired + Wireless (Secondary Mode)	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a wireless LAN adapter in the wireless LAN environment.
Wired + Wireless (Primary Mode) *1	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a wireless LAN access point in the wireless LAN environment.
Wired + Wireless (Simple AP Mode) *2	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a wireless LAN access point in a wireless LAN environment.
Wired + Wireless (Wi-Fi Direct)	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a group owner of Wireless LAN Direct in the wireless LAN environment.

*1: It will be displayed when optional upgrade kit UK-212 is mounted.
*2: It will be displayed when optional upgrade kit UK-215 is mounted.

(2) Default setting
- Wired Only

2.11.4 Network Settings-Wireless Network Setting
- Configure settings to use this machine as a wireless LAN access point or wireless LAN adapter.
- It will be displayed when the optional upgrade kit UK-212 or UK-215is mounted.

(1) Use

(a) [Wireless Only] or [Wired + Wireless (Secondary Mode)]

- [Wireless Only] or [Wired + Wireless (Secondary Mode)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default.
Easy Setting (WPS)	Configure a setting to automatically obtain connection information from an access point. The access point must support the WPS function. [Push Button Method]: Select [Push Button Method], and touch [Start Operation] to try a connection with an access point. If you press the WPS setting button at the access point, settings such as SSID and security required for a connection are configured automatically. [PIN Method]: Select [PIN Method], and tap [Start Operation] to display the PIN code. If you enter the displayed PIN code at the access point, settings such as SSID and security required for a connection are configured automatically. This function requires a computer that contains Windows 7 or later as the operating system.
Manual Setting	Manually configure settings items such as SSID and the encryption scheme that are required for a connection. • [SSID]: Enter the SSID of the wireless LAN access point connected to the machine (using up to 32 characters). • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default. *1 • [Authentication/Encryption Algorithm]: Select the algorithm used for authentication or encryption. • If [WEP] is selected, specify [Key Input Method] and [WEP Key]. To specify multiple WEP keys, select the required WEP keys in [Use key settings]. • If an algorithm other than WEP is selected, specify [Key Input Method] and [Passphrase].
Connection Status	Allows you to check the access point connected to this machine, the radio field intensity of the access point, and the current communication speed.
Device Setting	Allows you to check the MAC address of the wireless network adapter.

*1: It will be displayed when optional upgrade kit UK-212 is mounted.

(b) [Wired + Wireless (Primary Mode)]

- [Wired + Wireless (Primary Mode)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]
- When optional upgrade kit UK-212 is mounted.

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default. Set [Awake with ARP + Unicast Communication] for this function.
AP Mode Setting	Manually configure settings to use this machine as a wireless LAN access point. • [SSID]: Enter the SSID of this machine (using up to 32 bytes). When [Wired + Wireless (Primary Mode)] is selected in Network I/F Configuration, the SSID of the access point is used. When [Wired + Wireless (Wi-Fi Direct)] is selected in Network I/F Configuration, the SSID for Wi-Fi Direct connection is used. The SSID specified here is displayed on the Wi-Fi Direct (setting) screen of the terminal compatible with Wi-Fi Direct. If you cannot connect to this machine by specifying the SSID on the Wi-Fi Direct (setting) screen, specify [Virtual SSID] on the Wi-Fi (setting) screen to make a connection. • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40 MHz. [OFF] is specified by default. • [Authentication/Encryption Algorithm]: Select the algorithm used for authentication or encryption. [No Authentication/Encryption] is specified by default. • Specify [Key Input Method] and [WEP Key] when [WEP] is selected in [Authentication/ Encryption Algorithm]. To specify multiple WEP keys, select the required WEP keys in [Use key settings]. When [Wired + Wireless (Wi-Fi Direct)] is selected in Network I/F Configuration, [WEP] is not available. • When an algorithm other than [WEP] or [No Authentication/Encryption] is selected in [Authentication/Encryption Algorithm], specify [Key Input Method] and [Passphrase]. If necessary, specify whether to automatically update the Encryption Key in [Passphrase Auto Update]. To automatically update the Encryption Key, enter its update interval in [Update Interval].
Wireless Channel	Set a wireless channel to be used by the access point. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
ANY connection	Select whether to allow ANY connection. If [Restrict] is selected, the SSID cannot be detected automatically as an access point in the wireless LAN adapter side. [Allow] is specified by default. This option is displayed only when [Wired + Wireless (Primary Mode)] is selected in Network I/F Configuration.

MAC Address Filtering	Restricts wireless LAN adapters that can be connected to the access point using the MAC address. Enter the MAC addresses of wireless LAN adapters that can be connected to the access point. MAC addresses of up to 16 devices can be registered. This option is displayed only when [Wired + Wireless (Primary Mode)] is selected in Network I/F Configuration.
DHCP Server Settings	Configure a setting to use the DHCP server function. • [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default. • [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [5] devices is specified by default.
Signal Strength Setting	Select the radio field intensity of the access point from three levels (Low, Middle, and High). [High] is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Virtual SSID	Displays the automatically generated virtual SSID. This option is available when a terminal incompatible with Wi-Fi Direct is connected to this machine. A virtual SSID is displayed on the Wi-Fi (setting) screen of a terminal incompatible with Wi-Fi Direct. The virtual SSID is displayed with "DIRECT-XXXXXX" ("XXXXXX" indicates a combination of the random alphanumeric characters and the specified value of [SSID]).
	This option is displayed when [Wired + Wireless (Wi-Fi Direct)] is selected in Network I/F Configuration.

(c) [Wired + Wireless (Simple AP Mode)]

- [Wired + Wireless (Simple AP Mode)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]
- When optional upgrade kit UK-215 is mounted.

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default.
Simple AP Mode Setting	Manually configure settings to use this machine as a wireless LAN access point. • [SSID]: Enter the SSID to use this machine as a wireless LAN access point (using up to 32 bytes). • [Authentication/Encryption Algorithm]: The algorithm for authentication or encryption is fixed to [WPA2-PSK(AES)].
Wireless Channel Setting	Specify the frequency band and channel required for wireless LAN connection. • [Frequency Band]: Select the frequency band required for wireless LAN connection. • [2.4GHz]: Select the channel to be used for wireless LAN connection of the 2.4GHz band. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default. • [5GHz]: Select the channel to be used for wireless LAN connection of the 5GHz band. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
DHCP Server Settings	Configure a setting to use the DHCP server function. • [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default. • [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [4] devices is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Passphrase	Specify the passphrase. • [Key Input Method]: Select the method to enter the passphrase. • [Passphrase]: Enter the passphrase.

(d) [Wired + Wireless (Wi-Fi Direct)]

- [Wired + Wireless (Wi-Fi Direct)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]
- When optional upgrade kit UK-212 is mounted.

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default. Set [Awake with ARP + Unicast Communication] for this function.
AP Mode Setting	Manually configure a setting to operate this machine as a Wi-Fi Direct group owner. • [SSID]: Enter the SSID to use this machine as a Wi-Fi Direct group owner (using up to 32 bytes). This option is available when a device compatible with Wi-Fi Direct is connected to this machine. The SSID specified here is displayed on the Wi-Fi Direct (setting) screen of the device compatible with Wi-Fi Direct. If you cannot connect to this machine by specifying the SSID on the Wi-Fi Direct (setting) screen, specify [Virtual SSID] on the Wi-Fi (setting) screen to make a connection. • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default. • [Authentication/Encryption Algorithm]: The algorithm for authentication or encryption is fixed to [WPA2-PSK(AES)]. A passphrase is generated automatically. If necessary, specify whether to automatically update the Encryption Key in [Passphrase Auto Update]. To automatically update the Encryption Key, enter its update interval in [Update Interval].
Wireless Channel	Set a wireless channel to be used by the access point. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
DHCP Server Settings	Configure a setting to use the DHCP server function. • [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default. • [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [5] devices is specified by default.
Signal Strength Setting	Select the radio field intensity of the access point from three levels (Low, Middle, and High). [High] is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Virtual SSID	Displays the automatically generated virtual SSID. This option is available when a device incompatible with Wi-Fi Direct is connected to this machine. A virtual SSID is displayed on the Wi-Fi (setting) screen of a device incompatible with Wi-Fi Direct. The virtual SSID is displayed with "DIRECT-XXXXXX" ("XXXXXX" indicates a combination of the random alphanumeric characters and the specified value of [SSID]).

(e) [Wired + Wireless (Wi-Fi Direct)]

- [Wired + Wireless (Wi-Fi Direct)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]
- When optional upgrade kit UK-215 is mounted.

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default.
Simple AP Mode Setting	Manually configure a setting to operate this machine as a Wi-Fi Direct group owner. • [SSID]: Enter the SSID to use this machine as a Wi-Fi Direct group owner (using up to 32 bytes). This option is available when a terminal compatible with Wi-Fi Direct is connected to this machine. The SSID specified here is displayed on the Wi-Fi Direct (setting) screen of the terminal compatible with Wi-Fi Direct. If you cannot connect to this machine by specifying the SSID on the Wi-Fi Direct (setting) screen, specify [Virtual SSID] on the Wi-Fi (setting) screen to make a connection. • [Authentication/Encryption Algorithm]: The algorithm for authentication or encryption is fixed to [WPA2-PSK(AES)]. A passphrase is generated automatically.
Wireless Channel Setting	Specify the frequency band and channel required for wireless LAN connection. • [Frequency Band]: Select the frequency band required for wireless LAN connection. • [2.4GHz]: Select the channel to be used for wireless LAN connection of the 2.4GHz band. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default. • [5GHz]: Select the channel to be used for wireless LAN connection of the 5GHz band. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
DHCP Server Settings	Configure a setting to use the DHCP server function.

	• [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default. • [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [4] devices is specified by default.
Signal Strength Setting	Select the radio field intensity of the access point from three levels (Low, Middle, and High). [High] is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Virtual SSID	Displays the automatically generated virtual SSID. This option is available when a terminal incompatible with Wi-Fi Direct is connected to this machine. A virtual SSID is displayed on the Wi-Fi (setting) screen of a terminal incompatible with Wi-Fi Direct. The virtual SSID is displayed with "DIRECT-XXXXXX" ("XXXXXX" indicates a combination of the random alphanumeric characters and the specified value of [SSID]).

2.11.5 Network Settings-IWS Settings

NOTE

- **It will be displayed when [Administrator Settings] -> [Security Settings] -> [FIPS Settings] is set to "Disable."**

(1) Use

- To configure the settings of the WebDAV server which is used to transfer data in the IWS (Internal Web Server) function.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Set the port number in [Port Number] (Web Server/Application Installation) using the 10-key pad.
2. Set Allow/Restrict for the connection of application in [Connect IWS Apps to Network].
3. Select whether to allow an external application to operate the IWS application on this machine in [Permit Access for Communication between the applications].
4. Select whether to notify you of the user name and password of the user who is using this machine, when the IWS application on this machine operates that of a different device in [Login Information Notification Settings].
5. The following settings are available when the IWS application has been registered.
   - Print Data Conversion Setting: Select a print data conversion application.
   - Authentication Screen Setting: Select an authentication screen application.
   - Background Application Setting: Select a background application.
   - Application List: Display the list of the registered applications (up to 50 applications)
   - Administrator Password Change Setting: It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Password Change Permission Setting] -> [IWS Application] is set to "Allow." Specify whether to allow a change of the administrator password for each IWS application.

2.11.6 Network Settings - Remote Panel Settings (outline)

- It will not be displayed when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to "OFF."
- Issue and install the self-signed certificate from Device Certificate Setting under Security Setting of PageScope Web Connection.
- Enable CE Password.
- The control panel of this machine can be operated remotely from a computer on the network.
- During remote operations, display on the control panel can be masked to thereby lock the operation on the machine side (the machine control panel is forced into the locked state when the machine is set into the service mode through remote operation).
- The control panel can also be unlocked through remote operation. The machine control panel is enabled when unlocked remotely.
- Operations performed through the machine control panel while it is in the unlocked state can be reflected in the remote panel side.
- The remote operations are disabled under the following conditions:
  - Service mode operations are being performed on the machine.
  - Remote operations are already performed from another PC.

(1) Methods of the Remote panel

- The following two methods are available for operating the control panel.

Using the dedicated software	• This method uses the dedicated software that collects screen information of the control panel of this machine periodically, and operates the control panel from a computer on the network. • You must prepare a dedicated remote control software program and server. Despite the burden, this method enables you to control the machine remotely even from a computer located outside the router network.

Accessing the machine directly	• This method accesses this machine directly from another computer on the network, and operates the control panel of the machine using a Web browser. • A dedicated remote control software program is not required, but the computer used for the remote control must be able to access this machine.

2.11.7 Network Settings - Remote Panel Settings (Server Settings)

(1) Use

- To access this machine directly and control the control panel of the machine remotely, select [ON].

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

(a) <Server Settings - Password Authentication>

- Select whether to request password entry for connecting with this machine. To request for a password entry, select [Yes], and enter the password (using up to 64 characters).

(b) <Server Settings - IP Filtering (Permit Access)>

- Select [Enable] to specify IP addresses allowed to access. Also enter the range of IP addresses allowed to access.

(c) <Port Number>

- To set the port number.

NOTE
Starting the remote operations
Access the machine web server (URL: https://IP_address_of_MFP:Port_Number/panel/top.html) through the web browser.

- **If Password Authentication is set, enter the set password.**
- **If IP Filtering is enabled, connection can be established only through the authorized address.**

2.11.8 Network Settings - Remote Panel Settings (Client Settings)

(1) Use

- To control the control panel of this machine remotely using the dedicated software, select [ON].

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

(a) <Port No.>

- To set the port number.

(b) <Connection Timeout>

- To set the time-out time. (60 Second is specified by default)

(c) <Server Address>

- Enter the address of the server where the dedicated software was installed.

(d) <Certificate Verification Level Settings>

- To verify the server certificate, configure settings to verify the certificate.

Expiration Date	Select whether to check that the server certificate is within the validity period.
Key Usage	Select whether to check that the server certificate is used according to the purpose approved by the issuer.
Chain	Select whether to check that the server certificate chain (certification path) is correct.
Expiration Date Confirmation	Select whether to check that the server certificate is within the validity period. The OCSP service and CRL (Certificate Revocation List) are checked in this order when the expiration date of the certificate is checked.
CN	Select whether to check that the CN of the server certificate matches the server address.

(e) <Synchronize WebDAV Client Setting>

- Select whether to use the proxy server for WebDAV transmission as a proxy server for the server where the dedicated software was installed.
- To use a different proxy server, select [Individual Settings] and enter the proxy server information.

(f) <Launch Remote Panel from vCare>

- To set whether or not to allow the remote panel to be started from the remote diagnosis system.

2.11.9 Machine Update Settings - Internet ISW Settings

- This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

(1) Update Firmware at Specified Time

- This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

(a) Use

- To update the downloaded firmware at the specified time.

(b) Default setting

- No

(c) Setting item

- Yes
- No
- If [Yes] is selected, set the time to update the firmware.

(2) FTP Server Settings

- This is displayed when [FTP data acquisition setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [FTP Setting].

(a) Use

- To set whether to connect via a proxy server to access the FTP server.
- To configure the settings related to the server for connection via a proxy server.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

1. Touch [Host Address] in [Proxy Server Address] to set the host address of the proxy server.
2. Set the port number used to access the proxy server in [Proxy Server Port Number].

(3) Firmware Update Parameters

- This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

(a) Use

- To download and update the firmware.
- When you wish to update the firmware at the specified time, after downloading it in the way described here, you can specify the time in [Update Firmware at Specified Time].

(b) Procedure

1. Touch [Download] in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [Firmware Update Parameters].
2. Select [Yes] in the confirmation screen and touch [OK].
3. The firmware download starts.
4. The message to show the status will be displayed on the screen while connecting and transferring data.
5. Select [Upgrade] or [Delete].
   - Touching [Upgrade] starts updating using the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
   - Touching [Delete] will delete the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
6. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

NOTE

- **To download the firmware, in addition to the necessary proxy settings configured in [FTP Server Settings], you need to configure appropriate settings in [Service Mode] -> [Machine Update Setting] ->[Internet ISW] -> [HTTP Setting], [FTP Setting], and [Forwarding Access Setting].**

2.11.10 Machine Update Settings - Machine Auto Update setting

- Obtain the update file for this machine from the file storage server to update the firmware or settings of the machine.
- This function is same as that of the service mode, but it will not be used together with the function of the service mode.
- Refer to Procedures for rewriting the firmware by using the Auto Update function for how to create an update file.

(1) Auto Update Settings for This Machine

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

If [ON] is selected, configure the following settings.

When configuring the settings for SMB with the download protocol

NOTE

- **If the machine relay server is used as a server on the data providing side, the SMB protocol will not be used.**

- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used in the SMB server communication.
  NOTE
  - **Specify the folder in which C_UpdateList.ini is stored. Refer to Procedures for rewriting the firmware by using the Auto Update function for details.**
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.
- <Number of retries>: Set the number of times to retry when failed to obtain.
- <Update Time>: Touch Clear to set the time to update the machine.
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.

When configuring the settings for HTTP with the download protocol

- <URL>: Set the address of the http server.
  NOTE
  - **Specify the folder in which C_UpdateList.ini is stored. Refer to Procedures for rewriting the firmware by using the Auto Update function for details.**
- <User Name>: Set the user name used to access the http server.
- <Password>: Set the password used to access the http server.
- <Proxy>: Select whether to use the proxy server.
  NOTE
  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**
- <Connection Timeout>: Set the timeout period for connecting to the server.
- <Update Time>: Touch Clear to set the time to update the machine.
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.

(2) Relay Server Function Setting

Obtain an update relay data, and configure settings for the relay server function which enables the file to be shared with the other machine.

(a) Update File Download

- Set a relay server to obtain the update relay data from file storage server.
- When [ON] is selected, configure the following settings.
- [OFF] is default.

Procedure

- <URL>: Set the address of the file storage server.
  NOTE
  - **Specify the folder in which S_UpdateList.csv is stored. Refer to Firmware relay procedures by using “relay server function” for details.**
- <User Name>: Set the user name used to access the file storage server.
- <Password>: Set the password used to access the file storage server.
- <Proxy>: Select whether to use the proxy server.
  NOTE
  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.
- <Connection Timeout> Set the timeout period for connecting to the server.

(b) Authentication Setting

- Configure the authentication settings of access management works as an update relay data sharing server.
- When [ON] is selected, configure the following settings.
- [OFF] is default.

For SMB Setting

- DO NOT use the SMB setting

For HTTP Setting

- <User Name>: Set the user name used to access the relay server by http protocol.
- <Password>: Set the password used to access the relay server.

NOTE

- **Once a password is set, be sure not to forget it. It is required for reset.**
- **Please refer to "Download the firmware opened from the relay server by using the Auto Update function on the other MFP" for the file path of relayed data.**

(3) Log TX setting

(a) Update File Download/Update Log

- Save the update file download log for auto update of the machine, and send it to the specified location.
- When [ON] is selected, configure the settings for transmission protocol.
- [OFF] is default.

For PC (SMB)

- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used for SMB server communication.
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.

For WebDAV

- <URL>: Set the address of the WebDAV server.
- <User Name>: Set the user name used to access the WebDAV server.
- <Password>: Set the password used to access the WebDAV server.
- <Proxy>: Select whether to use the proxy server.

  NOTE

  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(b) Relay Update File Download Log

- Save the log related to update relay data download for the relay server, and send it to the specified location.
- When [ON] is selected, configure the settings for transmission protocol.
- [OFF] is default.

For PC (SMB)

- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used for SMB server communication.
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.

For WebDAV

- <URL>: Set the address of the WebDAV server.
- <User Name>: Set the user name used to access the WebDAV server.
- <Password>: Set the password used to access the WebDAV server.
- <Proxy>: Select whether to use the proxy server.

  NOTE

  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(4) Log Confirmation

- Check the log related to update file download for auto update of the machine or update relay data download for relay server.
- The latest five logs can be checked.

(5) Immediate Update

- This is displayed when [Auto Update Settings for This Machine] is set to [ON] in, [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Machine Auto Update setting] with the following condition.
- This is displayed when the update file for auto update settings has been downloaded in HDD.

(a) Use

- To conduct Machine Auto Update manually.

(b) Procedure

- Touch [Immediate Update] to start update.
- Touch [Yes] on the confirmation screen, and touch [OK].

  NOTE

  Do not set the power to OFF under the following state.

  - **It takes about 45 seconds from touching [Immediate Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
  - **About one minute after the download completed screen being displayed, the MFP will restart.**
  - **When rewriting configuration files followed by the firmware, the MFP will restart again.**

(6) Machine Update Password

(a) Use

To set a password used to decrypt the configuration file(s) of the machine.

(b) Procedure

Enter the decryption password using the on-screen keyboard.

- <Current Password>: Enter the currently used decryption password (only when the decryption password has been set).
- <New Password>: Enter the new decryption password.
- <Password Confirmation>: Enter the new decryption password again.

NOTE

- **Once a password is set, be sure not to forget it. It is required for reset.**
- **Please refer to Procedures for rewriting the firmware by using the Auto Update function for how to make the configuration file(s).**

2.11.11 Machine Update Settings - HTTP Proxy Settings

(1) Use

- To select whether to connect via a proxy server to access the http server.
- To configure the settings of the server related to connection via a proxy server.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

1. Touch [Host Address] in [Proxy Server Address] to set the host address of the proxy server.
2. Set the port number used to access the proxy server in [Proxy Server Port Number].
3. Select whether to perform an authentication to access a proxy server. If [ON] is set, enter the user name and password.

2.11.12 Security Settings - Prohibited Functions When Authentication Error

(1) Use

- To set the function for prohibiting authentication operation in order to prevent the unauthorized access.
- To use when setting the system to prohibit authentication failure when conducting authentication by password, etc.
- Authentications which are subjected to this function: CE authentication, administrator authentication, user+ accounts authentication, SNMP authentication, secure print authentication, user box authentication.

(a) Mode

Mode 1	When failed to authenticate, authentication operation (entering the password) will be prohibited for a certain period of time.
Mode 2	• When failed to authenticate, authentication operation (entering the password) will be prohibited for a certain period of time. The number of times failure occurred will be counted, and when the number reaches to the specified time, authentication will be prohibited and the access will be locked. • When the machine goes into an access lock condition, release the lock in the following procedure.

(b) Authentications

User & Accounts authentication	• Touch keys in the following order. [Administrator Settings] -> [Security Setting] -> [Security Details] -> [Prohibited Functions When Authentication Error]. Then touch [Release].
SNMP authentication	
Secure print authentication	
User Box authentication	
WebDAV Server authentication	
Remote Panel authentication	
Administrator authentication	• After the main power switch is turned OFF and ON, the access lock is released automatically after the lapse of a predetermined period of time.
	• [Service Mode] -> [Enhanced Security] -> [Administrator unlocking]
CE authentication	1. Main power switch is turned OFF and ON. 2. Touch Menu -> [Counter] -> [Print List]. 3. Touch [Display Keypad], displaying 10-key pad. 4. The lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7 5. When the timer reaches the time specified in this setting, the access lock is released.

(2) Default setting

- Mode 1

(3) Setting item

- Mode 1
- Mode 2

NOTE

- **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", selecting "Mode 1" in this setting cancels enhanced security mode.**
  Only the number of times for trials up to the access lock can be changed.
- **When [Mode 2] is selected, set the number of times where checks are made before access is locked.**

(4) Procedure

- Touch [Release Time Settings] and set a period of time that elapses before access lock is released.

2.11.13 Security Settings - Enhanced Security Mode

(1) Use

- To set whether or not to enhance security.
- To use when enhancing the security function at user's option.
- The following settings are necessary for setting the security enhancement "ON".

Administrator Password	Change it with the one which meets password rules.
User Authentication	Set to "ON (MFP)", "External Server Authentication", or "Main + External Server".
HDD encryption word	Set the encryption word with 20 characters.
SSL Certificate	Register self-certificate for SSL communication from the PSWC.
CE Password	Change it with the one which meets password rules.
CE Authentication	Set to [ON].
Image Controller Setting	Set to [Controller 0].
Management Function Choice	Set to "Unset."

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

NOTE

- **Note that setting Enhanced Security Mode to "ON" disables the following functions.**
  - **Print Data Capture (forcibly prohibited when Enhanced Security Mode is set to "ON")**
  - **In CS Remote Care, the following operation is prohibited.**
    ▪ Rewriting instructions of firmware, communication of the account track counter information, the setting renewal of the machine.
    ▪ Firmware upgrading through Internet ISW (When the Enhanced Security Mode is set to ON, the setting of this function cannot be changed from "OFF.")
- **Setting the Enhanced Security Mode "ON" will change the setting values for the following functions.**
- **In addition, the indicator of "not be changed" below indicates that the settings cannot be changed while Enhanced Security Mode is maintained "ON".**

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
Password Rules	**To apply the password rule to enhance security.**	**Disable**	**Enable (not to be changed)**
Prohibited Functions When Authentication Error	**To set the function for prohibiting Authentication operation in order to prevent the unauthorized access.**	**Mode 1**	**Mode 2 (not to be changed): Three times is set. * The number of times can be changed to once, twice, or three times. (It is twice, four or six times for WebDAV server password.)**
Confidential Document Access Method	**To display the status of the Authentication system on the control panel for the Confidential document access.**	**Mode 1**	**Mode 2 (not to be changed) * In association with Prohibited Functions When Authentication Error, the method is changed from authentication using Secure Document ID and password (Mode 1) to that using the password with the Secure Document first narrowed down by Secure Document ID (Mode 2).**
Public User Access	**To permit use by a public user having no user registration if user authentication setting has been made.**	**Restrict**	**Restrict (not to be changed)**
User Name List	**To display the list key for User names on User Authentication screen.**	**OFF**	**OFF (not to be changed)**
Print without Authentication	**To allow or restrict printing which user and account are not specified.**	**Restrict**	**Restrict (not to be changed)**

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
Counter Remote Control	To select whether or not to allow the Center to acquire counter information managed by the machine when CS Remote Care is used.	Restrict	Restrict (not to be changed)
URL Home Settings	To set whether to enable the Scan to URL function.	Enable	Disable (not to be changed)
Simple Auth. (Authentication Setting)	You can print from the printer driver using authentication that requires only your user name (without password).	Restrict	Restrict (not to be changed)
User Box Administrator Setting	To set whether to allow or restrict the Box Administrator to use the system.	Restrict	Restrict (not to be changed)
SSL	To set whether to encrypt access by SSL.	OFF	ON (not to be changed)
SSL Encryption Strength	To set the SSL encryption strength for the SSL encryption communication.	AES-256, 3DES-168, RC4-128	AES/3DES (not to be changed to one containing strength lower than AES/3DES)
Automatically Obtain Certificates of S/MIME	-	No	No (not to be changed)
S/MIME Encryption Method	-	3DES	3DES (not to be changed to DES or RC-2)
FTP Server	To set whether to use FTP server or not.	ON	OFF (not to be changed)
Server Capacity Reduction Send Method	Select the sending method to reduce the load of the E-mail server (SMTP).	OFF	When [Stop URL when max. limit is exceeded] or [Always Send via URL] is selected, this option is set to [OFF].
SNMPv1/v2c	To use when changing Write setting.	Read/Write enable	Only Read is enabled (not to be changed)
SNMP v3 Security Level and auth/priv-password	To set the security level for the Reading/Writing Authority User which is used for SNMP v3.	auth/priv-password	• The security level can be selected from among [auth-password] and [auth/priv-password]. • An 8-digit-or-more auth-password and priv-password can both be set.
Print Data Capture	To set whether to allow or restrict capturing the Print Job Data.	Allow	Restrict (not to be changed)
Network Setting Clear	To clear the network setting through PageScope Web Connection.	Enabled	Restrict
Release Time Settings	To set the period of time to be elapsed before the access lock state is released.	5 min.	The setting value should be 5 min. or more (no value less than 5 can be set)
Destination Registration Change by User (Address Book and Program destination)	-	Allow	Restrict (not to be changed)
Secure Print User Box Preview	-	Thumbnail View, Detail View, and Document Details are enabled	Only Detail View is enabled before password authentication (Mode 2)
Initialize (Network Settings)	To clear the network related settings.	Enabled	Restrict (not to be changed)
Image Log Transfer Settings	Specifies whether to transfer the input or output image data to the server using whenever machine inputs or outputs image data.	OFF	OFF (not to be changed)
Machine Update Settings	To set firmware upgrading by Internet ISW, and enable or disable various settings.	No	No (not to be changed)
operation Ban release time (CE Authentication)	To set the period of time to be elapsed before the access lock state is released in CE password authentication.	5 min.	The setting value should be 5 min. or more (no value less than 5 can be set)
E-mail RX Print	To print an E-mail attachment, send an E-mail to the E-mail address of this machine.	OFF	OFF (not to be changed)

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
IWS Settings	Set the operating environment of IWS (Internal Web Server) function.	OFF	OFF (not to be changed)
Report File Attachment	To set whether to convert a TX result report to a file and attach it to an E-mail.	With Attachment	Without Attachment (not to be changed)
Storage data backup	To set whether to permit our service representative to back up or restore the storage on this machine.	Restrict	Restrict (not to be changed)
CS Remote Care	CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line, network or E-mail in order to control the machine.	Usable	Remote device setting disabled
Maintenance Mode Access	To set whether to permit your service representative to change [Administrator Settings] of a device without authentication.	Restrict	Restrict (not to be changed)
Simple Connection Setting	To set the pairing method to connect to an Android/iOS device.	• QR Code Display Setting: OFF • Enable NFC: OFF • Enable Bluetooth LE: OFF	• OFF (not to be changed) • OFF (not to be changed) • OFF (not to be changed)
Administrator Password Change Permission Setting	Specify whether to allow the administrator password to be changed via the IWS application.	Restrict	Restrict (not to be changed)
USB Connection Permission setting	Specify whether to permit a function that requires the USB Port.	Detail Setting	Restrict (not to be changed)

2.11.14 Security Settings - HDD Encryption Setting

(1) Use

- To set the encrypting passphrase.
- To re-set encrypting passphrase due to exchange of SSD board or etc.

NOTE

- **HDD formatting is required after this setting. Therefore it is necessary to retrieve certain data from HDD in advance.**
  The following data will be lost after HDD formatting.
  1. Address data
  2. Authentication data: Authentication mode, user authentication setting, account track setting
  3. Box setting data: Box and text in the box, setting information of each box, box for fax
  4. Job history, fax transmission history
  And after setting the HDD encryption key, the movie data, voice data, OCR dictionary data, PDF/A font, OCR font, and Unicode font need to be reinstalled as necessary since these data will be deleted by HDD format.
- **If you replace the HDD due to its breakage or other reasons, you can automatically reset the encryption passphrase by installing a new HDD and performing the logical format.**
- **Make sure to configure the following settings after formatting the HDD.**
  - **Installing the firmware.**
  - **Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts with the install data function under the service mode.**
    [Service Mode] -> [System 2] -> [Install Data]
- **Make sure to install the firmware after the format of the hard disk. Otherwise a trouble code " C-D012 mount error due to unformatted HDD " will appear.**

(2) Procedure

1. Press [HDD Encryption Setting].
2. Enter encryption passphrase (20 characters) with the keyboard on the operation panel and press [OK].
   NOTE
   - **Double-byte and identical characters are not acceptable.**
3. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
4. Open [Administrator Settings] and conduct HDD formatting according to the instruction appeared on the panel.
5. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

2.11.15 Security Settings - Debug Log Encryption Settings

(1) Debug Log Encryption Settings

(a) Use

- To set a password used to encrypt debug data when storing it into the HDD.

(b) Default setting

- 01234567890123456789

(c) Procedure

- Enter an encryption passphrase from the on-screen keyboard.
  1. Enter the encryption passphrase currently in use.
  2. Encryption Passphrase: Enter a new encryption passphrase.
  3. Encryption Passphrase Confirmation: Re-enter the new encryption passphrase.

2.11.16 Security Settings - Image Log Transfer Settings (Type1)

NOTE

- **This is displayed only when Switch No. "63" is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting].**

(1) Use

- Specifies whether to transfer the input or output image data to the server using whenever machine inputs or outputs image data. Makes the settings of the WebDAV Server, the FTP Server, or the SMB Server where image data are transferred.
- Use this settings to keep logs of input and output image data for security purpose.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Select Forwarding Destination and configure the sever settings. For details of the server setting, refer to Table 1: Server setting.
2. Specify Audit Item. For details of the audit item, refer to Table 2: Audit item.

Table 1: Server setting

WebDAV Server setting	Host Name, File Path, User Name, Password, Port Number, Proxy, SSL Settings
FTP Server setting	Host Name, File Path, User Name, Password, Port Number, PASV, and Proxy
SMB Server setting	Host Name, File Path, User Name, Password

Table 2: Audit item

All Items	Applied to Fax TX, Fax RX, Scan, and Others.
Individual Item	Can be selected from Fax, Fax RX, and Scan.

2.11.17 Security Settings - Image Log Transfer Settings (Type2)

NOTE

- **This is displayed only when Switch No. "63" is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting].**

(1) Use

- To select whether or not to transfer only input/output images in Fax TX/RX to the server when image data is input or output to or from the machine.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Configure the file type and scan setting.
2. Select Forward or Do Not Forward for Fax TX/RX. To transfer data, select [Forwarding Dest.] and configure the server settings.

FTP Server setting	Host Name, File Path, User Name, Password, Port Number, PASV, and Proxy
SMB Server setting	Host Name, File Path, User Name, Password

WebDAV Server setting	Host Name, File Path, User Name, Password, Port Number, Proxy, SSL Settings

2.11.18 Security Settings - Driver Password Encryption Setting

(1) Use

- To set whether to use the factory default encryption word or user-defined one as a common key that encrypts a password used for a print job.

User-Defined	Sets an encryption word. Enter an encryption word of 20 letters.
Use Factory Default	Uses the factory default encryption word (undisclosed predefined encryption key).

NOTE

- **When selecting [User-Defined], set an encryption key being consisted of the same letters in the printer driver. If the encryption word set in the machine differs from the encryption key set in the printer driver, different encrypted passwords are created and printing cannot be made.**
- **The use of OpenAPI allows an encryption key to be obtained from the machine.**

(2) Default setting

- Use Factory Default

(3) Setting item

- User-Defined
- Use Factory Default

2.11.19 Security Settings - Quick Security Setting - Administrator Password

(1) Use

- To set/change the administrator password.

(2) Procedure

- Enter the administrator password on the on-screen keyboard.

1. Enter the current administrator password
2. Password: Enter the new administrator password to be used
3. Password Confirmation: Re-enter the new administrator password

NOTE

- **When "Enable" is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].**

2.11.20 Security Settings - Quick Security Setting - USB Enable Settings

(1) Use

- To set whether to permit a function that requires the USB Port.

Save Document	Select whether to allow users to save files on a USB memory. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
Print Document	Select whether to allow users to print files from USB memory. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
External Memory Document Scan	Select whether to allow users to save files from a USB memory into a User Box. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
Print PC	Select whether to enable to print files from a USB-connected computer. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [PC Connection].

(2) Default setting

- Save Document: Restrict
- Print Document: Allow
- External Memory Document Scan: Restrict
- Print PC: Allow

2.11.21 Security Settings - Quick Security Setting - Password Rules

(1) Use

- To set whether to apply the password rules.
- To apply the password rule to enhance security.
- Passwords to be covered: CE password, administrator password, user password, account track password, public user box password, user box administrator password, passwords for confidential documents, WebDAV server password, SNMPv3 Write User password, remote panel server password, Encryption Passphrase
- Details of the password rules:
  - Minimum number of characters specified in [Set Minimum Password Length] (Default: 12 characters)
  - Upper- and lower-case letters are distinguished in alphabetical letters.
  - Only one-byte symbols can be used.

- Password with only the same letter is prohibited.
- Password same with the one prior to change is prohibited.

NOTE

- **When the password rule is set to [Enable], the password cannot be changed or registered unless it follows the above conditions.**

- When [Enable] is selected, it is possible to determine the minimum number of characters that a password can contain. (8 to 64 characters, Default: 12 characters)

(2) Default setting

- Disable

(3) Setting item

- Enable
- Disable

NOTE

- **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", selecting "Disable" in this setting cancels enhanced security mode.**
- **[Enable] cannot be selected when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to "OFF." "OFF" setting of [CE Authentication] will not be displayed and cannot be set to "OFF" when [Password Rules] is set to "Enable."**

2.11.22 Security Settings - Quick Security Setting - Quick IP Filtering

(1) Use

- A function that only allows access to the MFP from devices within the same IP group.
- Determine the receiving IP for the decided IP when setting the address to the MFP by DHCP or manually.

(2) Default setting

- Synchronize IP Address (except for North America and Europe)
- No Filtering (North America and Europe)

(3) Procedure

- Quick IP Filtering activates automatically.

(a) Synchronize IP Address

- IPv4 address: Only reception by an IP address with the upper 3 bites same as that of the IP address set in the MFP is allowed.
  NOTICE
  - If the MFP IP address is set to [192.168.0.134], the filtering range is as follows.
    192.168.0.0 to 192.168.0.255
- IPv6 address: Only Global Unicast Address (2000::/3) is available. Only reception by an IP address with the upper 64 bits same as that of the IP address set in the MFP is allowed.
  NOTICE
  - If the MFP IP address is set to "2345:1:2:3:4:5:6:7", the filtering range is as follows.
    2345:1:2:3::0 to 2345:1:2:3:FFFF:FFFF:FFFF:FFFF

(b) Synchronize Subnet Musk

- IPv4 address: Use the IP address set in the MFP and the Subnet Mask to allow receptions by IP addresses within the range belongs to the same network.
  NOTICE
  - If the MFP IP address is set to [150.16.17.134] and the Subnet Mask is set to [255.255.252.0], the filtering range is as follows.
    150.16.16.*** to 150.16.19.****
  - If the Subnet Mask has not been set, or it has been set to [0.0.0.0], only accesses from the IP address with the end differs from that of the IP address set in the MFP are restricted. As a result, filtering runs in the same way as that it has been set in [Synchronize IP Address].
- IPv6 address: Only Global Unicast Address (2000::/3) is available. And use the Global IP address and Prefix to perform filtering.
  NOTICE
  - If the MFP IP address is set to [IP address=2345:1:2:3:4:5:6:7], and the Prefix is set to [/64], the filtering range is as follows.
    2345:1:2:3::0 to 2345:1:2:3:FFFF:FFFF:FFFF:FFFF
  - If the Prefix has not been set, filtering runs in the same way as that the Prefix is set to 64 bit.

(c) No Filtering

- For both IPv4 address and IPv6 address, no filtering is performed.

2.11.23 Security Settings - Quick Security setting - PSWC Setting

(1) Use

- To set whether to use the PageScope Web Connection.

NOTE

- **To use the PageScope Web Connection, enable "JavaScript" and "Cookie" of the Web browser.**
- **If this machine is connected to the internet via a proxy server, register the Proxy Settings of the Web browser as "Exceptions".**
- **When the PageScope Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.**

(2) Default setting

- ON

(3) Setting item
- ON
- OFF

2.11.24 Security Settings - Quick Security setting - Security Warning Display Setting
(1) Use
- To select whether or not to display the security warning screen if an administrator password is still remained as default setting or does not meet the password rules.

(2) Default setting
- ON (except for North America and Europe)
- OFF (North America and Europe)

(3) Setting item
- ON
- OFF

2.11.25 License Settings
(1) Get Request Code
(a) Use
- To display and print a request code and serial number used to activate i-Option.

(b) Procedure
1. Touch [Get Request Code], and [Yes].
2. A serial number and request code are issued.
3. By touching [Print], the serial number and request code are printable.

(2) Install License
- It is displayed when this machine is equipped with an optional upgrade kit UK-211.

(a) Use
- To allow administrator to activate functions provided by i-Option.
- The functions can be activated by entering Function/License Code or Token Code.
- By making settings in [Service Mode] -> [Billing Setting], CE can also activate functions provided by i-Option.

NOTE
- **When activating i-Option, MFP accesses to KM license server via WebDAV connection. Set the proxy server setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access] as occasion demands.**
- **For accessing to KM license server, it is necessary to select "Fixed Address" in [Service Mode] -> [Billing Setting] -> [WebDAV Server Setting].**
- **When the server connection error "MAE001" is displayed, check the network settings.**
- **When the internal error "MAI001" is displayed, repair the license management information in [Service Mode] -> [Billing Setting] .**

(b) Procedure (Function/License Code)
1. Touch [Install License].
2. Touch [Function/License Code].
3. Touch [Function Code].
4. Enter the Function Code.
5. Touch [OK].
6. Touch [License Code].
7. Enter the license code that was issued in the license management server using the key board on the control panel, and touch [OK].
8. Touch [Install].
9. Confirm the message, select [Yes], and touch [OK].
10. Turn OFF and ON the main power switch.

(c) Procedure (Token Code)
1. Touch [Token Code].
2. Touch one of the Token Codes 1 to 10.
3. Enter the Token Code.
4. Touch [OK].
5. Touch [Install].
6. Confirm the message, select [Yes], and touch [OK].
7. Turn OFF and ON the main power switch.

(3) List of Enabled Functions
- It is displayed when this machine is equipped with an optional upgrade kit UK-211.

(a) Use
- To display currently activated functions.

2.11.26 Voice Guidance Settings-Voice Guidance

(1) Use

- To select whether or not to enable the voice guidance function.
- Selecting [ON] allows you to configure the settings on the voice guidance function in the [Accessibility] screen.

NOTE

- **To use voice guidance, optional upgrade kit UK-211 (not required for bizhub C658/C558/C458) and i-Option LK-104 v3 must be activated, and optional local interface kit EK-608 or EK-609 must be mounted.**

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

2.11.27 External Memory Backup - Import/Export

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.72 is set to [00000100] at Bit assignment/[04] at HEX assignment.

(1) Use

- To export various types of setting information to an external memory (USB memory).
- To import various types of setting information from other machine via the USB memory.
- Types of data that can be exported and imported: Address Book, Authentication Data, Network Settings, Remote Access Setting *, User Setting, Administrator Setting, Custom Display Settings, External Certificate

  NOTE

  - ***: Only importing Remote Access Setting is allowed; exporting it is not allowed.**

(2) Procedure (Import)

1. Connect the external memory to the machine.
2. Touch [Import].
3. Touch [Password], enter the password previously set for the import data, and touch [OK].
4. Touch [Start].
5. Import results appear.

NOTE

- **If an error occurs in importing an external certificate, the certificate is returned to the state before it is imported.**
- **Import errors of external certificates are determined in following cases:**
  - **Importing a certificate fails.**
  - **The number of imported certificates exceeds the limit.**

(3) Procedure (Export)

1. Connect the external memory to the machine.
2. Touch [Export].
3. Select the item to be exported.
4. Touch [Password], enter the password of the export data, and touch [OK].
5. Touch [Start].
6. Export results appear.

2.11.28 Remote Access Setting - Import/Export User Data

(1) Use

- To set whether to remotely rewrite (import or export) user data such as address information using the CS Remote Care.

(2) Default setting

- Restrict

(3) Setting item

- Allow
- Restrict

3. ADJUSTMENT ITEM LIST

3.1 Replace feed roller, pick-up roller, separation roller (tray 1, tray 2)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace feed roller, pick-up roller, separation roller (tray 1, tray 2)	[Service Mode] / [Counter] / [Life] / [Counter Clear]	1

3.2 Replace feed roller, separation roller assy (manual bypass tray)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace feed roller, separation roller assy	[Service Mode] / [Counter] / [Life] / [Counter Clear]	1

3.3 Install LCT (Built-in)

Replacement part/Service job	Adjustment/setting items	Procedure
Install LCT (Built-in)	[Service Mode] / [System2] / [LCT (Built-in) Size Settings]	1
	[Service Mode] / [Machine] / [Printer Area] / [Printer Image Centering Side 1]	2
	[Service Mode] / [Machine] / [Printer Area] / [Prt. Image Center. Side 2 (Dup)]	3
	[Service Mode] / [Machine] / [Printer Area] / [Tray Printing Position: Tip]	4

3.4 Replace CCD board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace CCD board	[Service Mode] / [System2] / [CCD Calibration]	1
	[Service Mode] / [System2] / [Line Mag Setting]	2
	[Service Mode] / [Machine] / [Printer Area] / [Paper Feed Direction Adj.]	3
	[Service Mode] / [Machine] / [Scan Area] / [Main Scan Zoom Adj.]	4
	[Service Mode] / [Machine] / [Scan Area] / [Scanner Image Side Edge]	5
	[Service Mode] / [Machine] / [Scan Area] / [Image Position: Leading Edge]	6

3.5 Replace developing unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace developing unit	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	1

3.6 Replace drum unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace drum unit	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	1

3.7 Replace transfer belt unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace transfer belt unit	[Service Mode] / [Counter] / [Life] / [New Release]	1
	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	2

3.8 Replace fusing unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace fusing unit	[Service Mode] / [Counter] / [Life] / [New Release]	1

3.9 Replace PH unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace PH unit	[Service Mode] / [Machine] / [Print Head Skew Adj.] / [Print Head Skew Reset]	1
	[Service Mode] / [Machine] / [Printer Area] / [Leading Edge Adjustment]	2
	[Service Mode] / [Machine] / [Printer Area] / [Printer Image Centering Side 1]	3

3.10 Replace original size detection sensor

Replacement part/Service job	Adjustment/setting items	Procedure
Replace original size detection sensor	Installation of original size sensor	1
	[Service Mode] / [State Confirmation] / [Sensor Check]	2

3.11 Replace scanner motor

Replacement part/Service job	Adjustment/setting items	Procedure
Replace scanner motor	Scanner motor belt adjustment	1

3.12 Replace scanner home sensor

Replacement part/Service job	Adjustment/setting items	Procedure
Replace scanner home sensor	[Service Mode] / [Machine] / [Scan Area] / [Image Position: Leading Edge]	1

3.13 Replace MFP board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace MFP board	• bizhub C368/C308/C258: Entering the machine type information • bizhub C658/C558/C458: Entering the machine type information	1
	Installing the firmware	2
	Restore (backup) data	3
	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	4

3.14 Replace eMMC board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace eMMC board	Installing the firmware	1

NOTE

- **Contact Konica Minolta technical support if the eMMC board needs to be replaced.**

3.15 Replace original glass

Replacement part/Service job	Adjustment/setting items	Procedure
Replace original glass	[Service Mode] / [Machine] / [Scan Area] / [Scanner Image Side Edge]	1
	[Service Mode] / [Machine] / [Scan Area] / [Image Position: Leading Edge]	2

3.16 Replace hard disk

Replacement part/Service job	Adjustment/setting items	Procedure
Replace hard disk	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [Format]	1
	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [Storage R/W Check]	2
	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [HDD Mirroring Rebuild]	3

3.17 Replace control panel unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace control panel unit	Touch panel calibration	1
	[Accessibility] / [Touch Panel Adjustment]	2

3.18 Replace DF control board (when DF is mounted)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace DF control board	Installing the firmware	1
	[Service Mode] / [ADF] / [Original Tray Width]	2
	[Service Mode] / [ADF] / [Mixed Original Size Adjustment]	3

3.19 Replace Multi feed detection board (installed with double feed detection Kit UK-501)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace Multi feed detection board	[Service Mode] / [ADF] / [Multi-Feed DetectionAdj.]	1

3.20 Add key counter

Replacement part/Service job	Adjustment/setting items	Procedure
Add key counter	Re-entry of Enhanced Security settings	1

3.21 Execute initialize

Replacement part/Service job	Adjustment/setting items	Procedure
Execute initialize	[Service Mode] / [System 2] / [HDD Installed]	1

Replacement part/Service job	Adjustment/setting items	Procedure
	Re-entry of Utility settings	2
	[Service Mode] / [System 1] / [Serial Number]	3
	[Service Mode] / [System 1/2] and re-entry of setting values	4
	Re-entry of Enhanced Security settings	5

3.22 Add an optional device

Replacement part/Service job	Adjustment/setting items	Procedure
Add an optional device	[Service Mode] / [Firmware Version]	1

3.23 Execute F/W update

Replacement part/Service job	Adjustment/setting items	Procedure
Execute F/W update	[Service Mode] / [Firmware Version]	1

3.24 Add fax board

Replacement part/Service job	Adjustment/setting items	Procedure
Add fax board	[Service Mode] / [System2] / [Option Board Status]	1
	Installing the firmware	2
	[Service Mode] / [System1] / [Marketing Area] / [Fax Target]	3

3.25 Mount DF-629

Replacement part/Service job	Adjustment/setting items	Procedure
Mount DF-629	ADF adjusting the height	1
	Adjusting front side skew feed on ADF	2
	[Service Mode] / [ADF] / [Read Pos Adj]	3
	[Service Mode] / [ADF] / [FD-Mag. Adj.(F)]	4

3.26 Mount DF-704

Replacement part/Service job	Adjustment/setting items	Procedure
Mount DF-704	ADF adjusting the height	1
	Adjusting front side skew feed on ADF	2
	Adjusting back side skew feed on ADF	3
	[Service Mode] / [ADF] / [Original Tray Width]	4
	[Service Mode] / [ADF] / [Original Stop Position]	5
	[Service Mode] / [ADF] / [FD-Mag. Adj. (F)]	6
	[Service Mode] / [ADF] / [FD-Mag. ADJ. (B)]	7
	[Service Mode] / [ADF] / [Main Scanning Direction Zoom]	8
	[Service Mode] / [ADF] / [Read Pos Adj]	9
	[Service Mode] / [System 2] / [CIS Image Adjustment]	10

3.27 Replace CIS module (when DF-704 is mounted)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace CIS module	Adjusting back side skew feed on ADF	1
	[Service Mode] / [ADF] / [FD-Mag. Adj. (F)]	2
	[Service Mode] / [ADF] / [FD-Mag. ADJ. (B)]	3
	[Service Mode] / [ADF] / [Auto Stop Position Adjustment]	4
	[Service Mode] / [ADF] / [Main Scanning Direction Zoom]	5
	[Service Mode] / [ADF] / [Read Pos Adj]	6
	[Service Mode] / [System 2] / [CIS Image Adjustment]	7

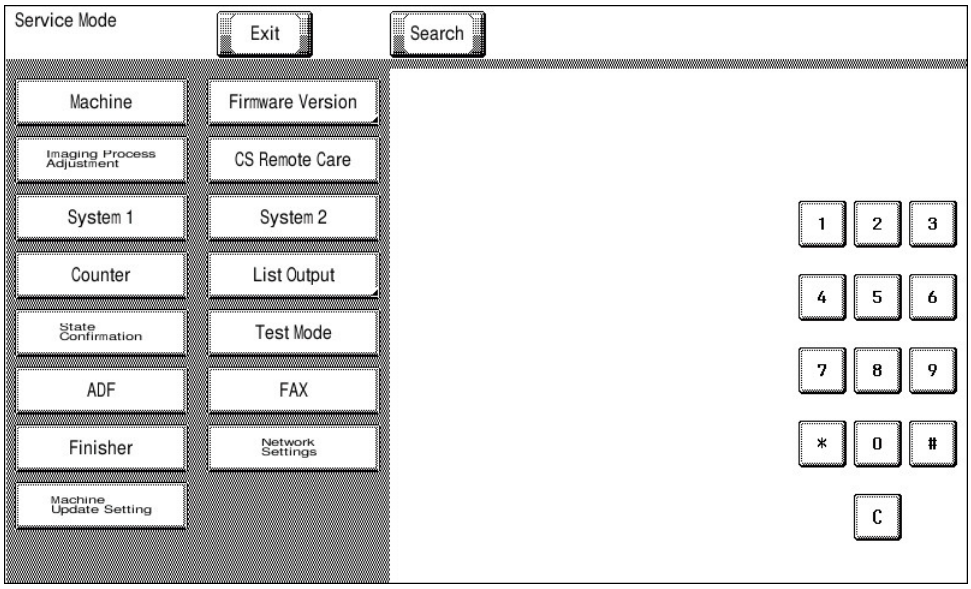
3.28 Replace Dual scan document feeder

Replacement part/Service job	Adjustment/setting items	Procedure
Replace Dual scan document feeder	ADF adjusting the height	1
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Skew Measurement]	2
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Sub Scanning]	3
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Main Scanning]	4
	[Service Mode] / [ADF] / [Read Pos Adj]	5

Replacement part/Service job	Adjustment/setting items	Procedure
	[Service Mode] / [ADF] / [FD-Mag. Adj. (F)]	6

4. LIST OF SERVICE MODE

4.1 List of service mode (outline)



NOTE

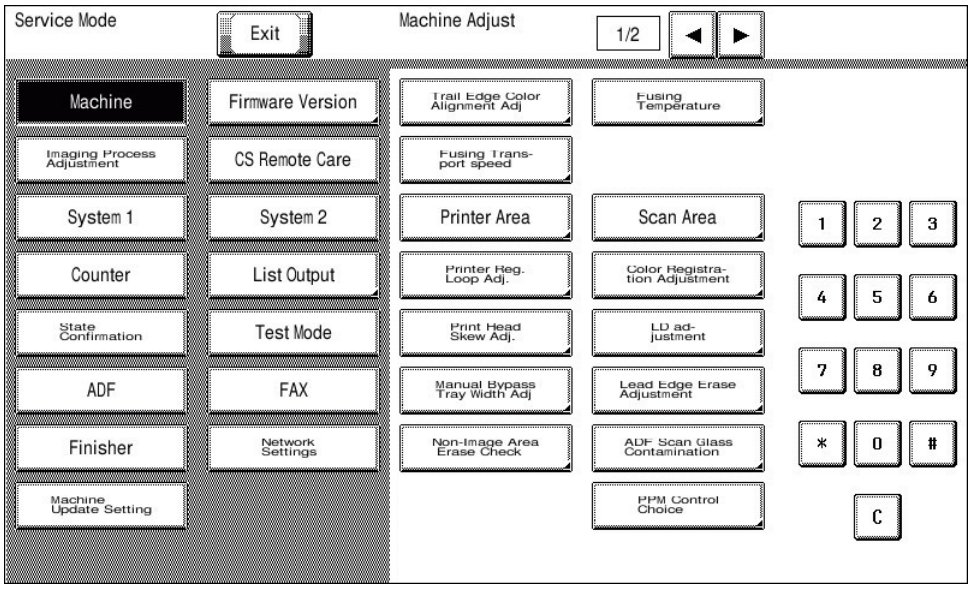
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

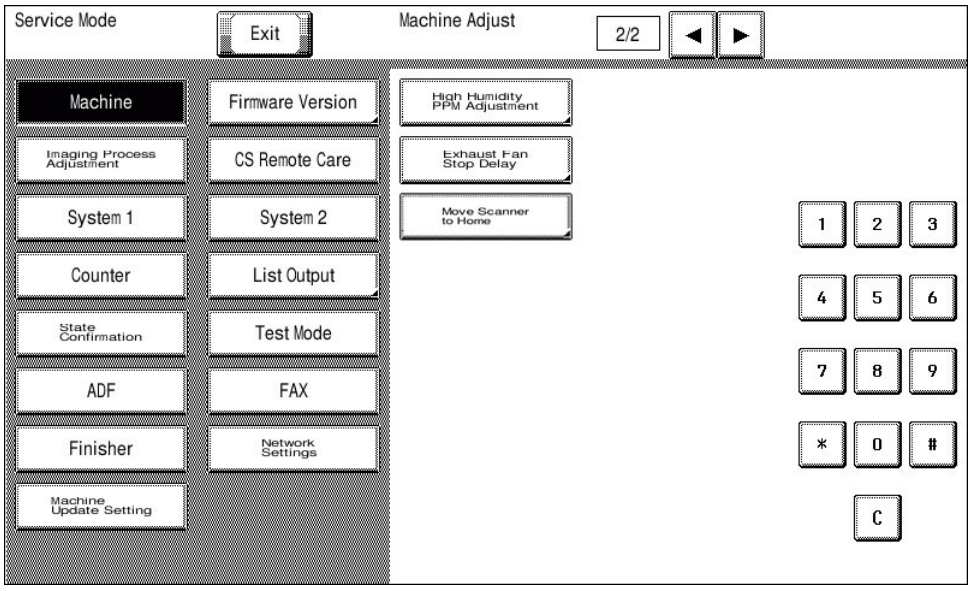
Service Mode	Search	Search
	Machine	I.4.2.1 Machine
	Firmware Version	I.5.5 Firmware Version
	Imaging Process Adjustment	I.4.2.2 Imaging Process Adjustment
	CS Remote Care	I.4.2.3 CS Remote Care
	System 1	I.4.2.4 System 1
	System 2	I.4.2.5 System 2
	Counter	I.4.2.6 Counter
	List Output	I.4.2.7 List Output
	State Confirmation	I.4.2.8 State Confirmation
	Test Mode	I.4.2.9 Test Mode
	ADF *1	I.4.2.10 ADF
	FAX *2	I.4.2.11 FAX
	Finisher *3*4*5	I.4.2.12 Finisher
	Network Settings	I.4.2.13 Network Settings
	Machine Update Setting	I.4.2.14 Machine Update Setting

- The function tree is shown to comply with the format displayed on the screen.
- *1: It will be displayed only when optional dual scan document feeder DF-704 or reverse automatic document feeder DF-629 is mounted. (bizhub C368/C308/C258)
- *2: It will be displayed only when optional fax kit FK-514 is mounted.
- *3: It will be displayed only when optional finisher FS-533, FS-534 or FS-534SD is mounted. (bizhub C368/C308/C258)
- *4: It is displayed only when optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted. (bizhub C658)
- *5: It is displayed only when optional finisher FS-533, JS-506, FS-536, FS-536SD, FS-537 or FS-537SD is mounted. (bizhub C558/C458)

4.2 List of service mode (detail)

4.2.1 Machine





NOTE

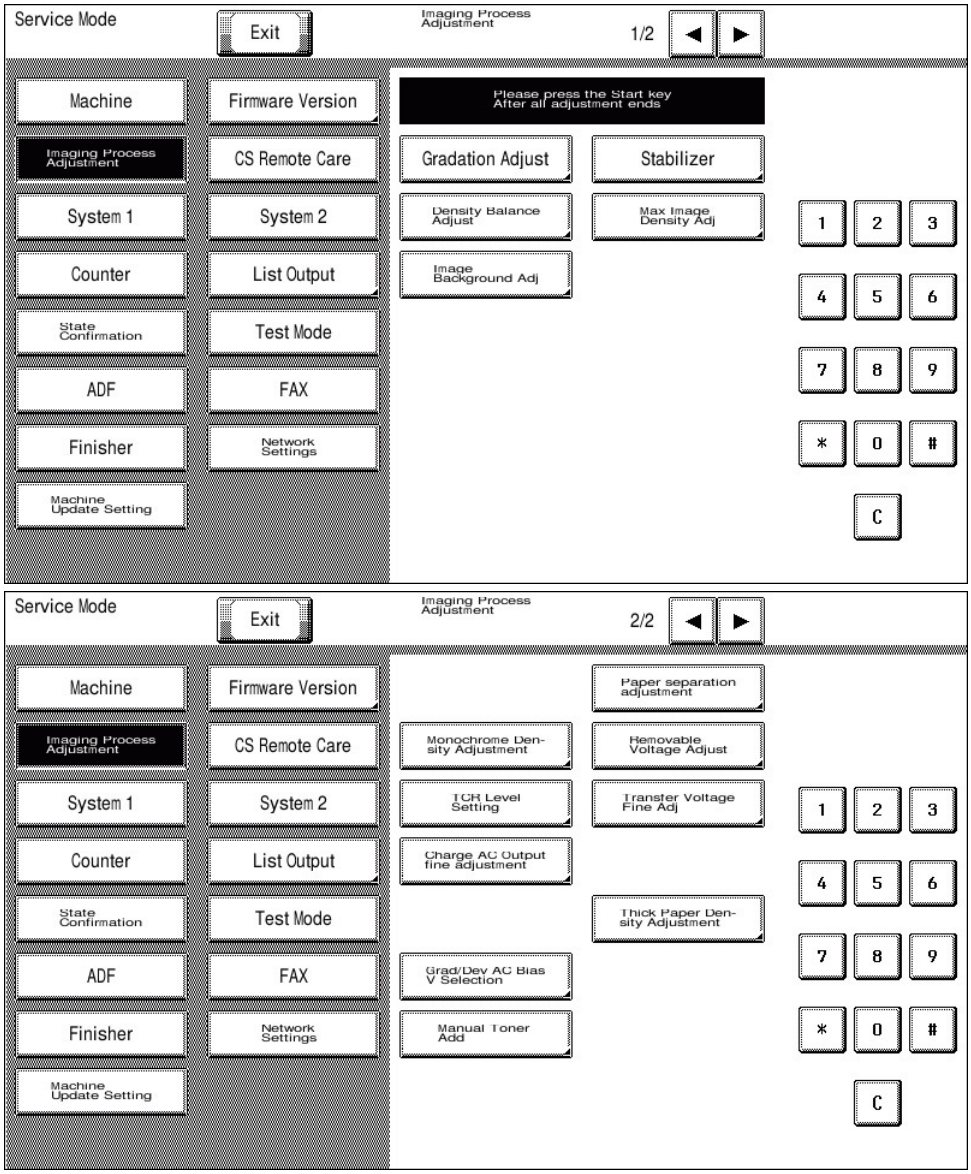
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Machine		Ref. Page
Trail Edge Color Alignment Adj *1		I.5.4.1 Trail Edge Color Alignment Adj (bizhub C658/C558/C458)
Fusing Temperature		I.5.4.2 Fusing Temperature
Fusing Transport Speed		I.5.4.3 Fusing Transport Speed
Heater Control Level *2		I.5.4.4 Heater Control Level (bizhub C458/C368/C308/C258)
Printer Area	Leading Edge Adjustment	I.5.4.5 (1) Leading Edge Adjustment
	Printer Image Centering Side 1	I.5.4.5 (2) Printer Image Centering Side 1
	Leading Edge Adj. Side 2 (Duplex)	I.5.4.5 (3) Leading Edge Adj. Side 2 (Duplex)
	Prt. Image Center. Side 2 (Dup)	I.5.4.5 (4) Prt. Image Center. Side 2 (Dup)
	Paper Feed Direction Adj.	I.5.4.5 (5) Paper Feed Direction Adj.
	Tray Printing Position: Tip	I.5.4.5 (6) Tray Printing Position: Tip
Scan Area	Image Position: Leading Edge	I.5.4.6 (1) Image Position: Leading Edge
	Scanner Image Side Edge	I.5.4.6 (2) Scanner Image Side Edge
	Main Scan Zoom Adj.	I.5.4.6 (3) Main Scan Zoom Adj.
	Sub Scan Zoom Adj.	I.5.4.6 (4) Sub Scan Zoom Adj.
Printer Reg. Loop Adj.		I.5.4.7 Printer Reg. Loop Adj.
Color Registration Adjustment		I.5.4.8 Color Registration Adjustment

Machine		Ref. Page
Print Head Skew Adj.	Print Head Skew Adj.	I.5.4.9 (1) Print Head Skew Adj.
	Print Head Skew Reset	I.5.4.9 (2) Print Head Skew Reset
LD adjustment	LD Timing Adj. *3	I.5.4.10 (1) LD Timing Adj.
	LD 1/2 Balance Adj. *3	I.5.4.10 (2) LD 1/2 Balance Adj.
	LD Light Width Adjustment	I.5.4.10 (3) LD Light Width Adjustment
Manual Bypass Tray Width Adj		I.5.4.11 Manual Bypass Tray Width Adj
Lead Edge Erase Adjustment		I.5.4.12 Lead Edge Erase Adjustment
Non-Image Area Erase Check		I.5.4.13 Non-Image Area Erase Check
ADF Scan Glass Contamination		I.5.4.14 ADF Scan Glass Contamination
PPM Control Choice		I.5.4.15 PPM Control Choice
High Humidity PPM Adjustment *3		I.5.4.16 High Humidity PPM Adjustment
Exhaust Fan Stop Delay		Not used
Move Scanner to Home		I.5.4.17 Move Scanner to Home

*1: It is not used on bizhub C368/C308/C258.
*2: It is not used on bizhub C658/C558.
*3: It is not used on bizhub C458/C368/C308/C258.

4.2.2 Imaging Process Adjustment



NOTE

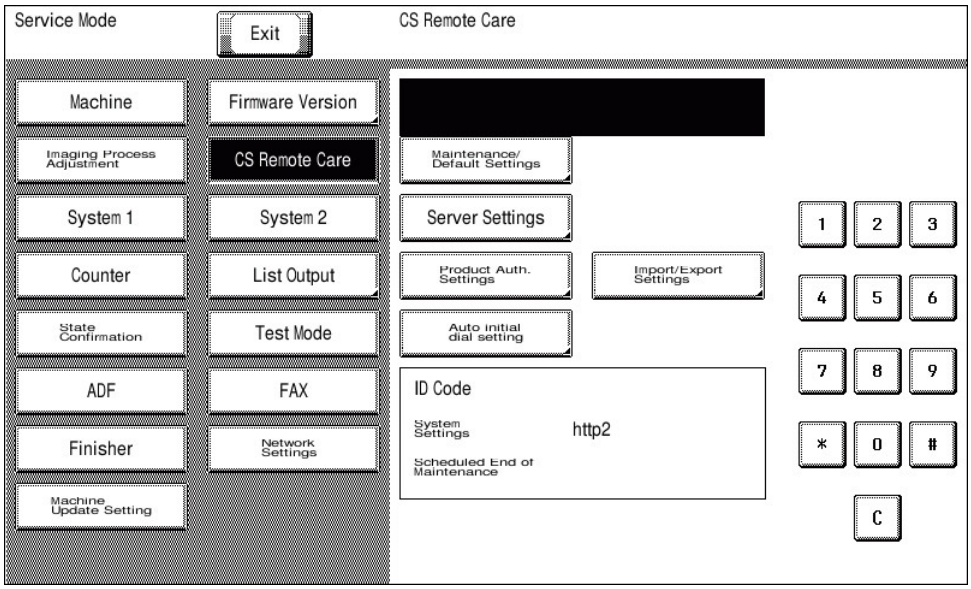
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Imaging Process Adjustment		Ref. Page
Gradation Adjust		I.5.6.1 Gradation Adjust
Stabilizer	Initialize + Image stabilization	I.5.6.2 Stabilizer

Imaging Process Adjustment		Ref. Page
	Stabilization Only	
Density Balance Adjust *1		I.5.6.3 Density Balance Adjust (bizhub C658/C558/C458)
Max Image Density Adj	Copy	I.5.6.4 Max Image Density Adj
	Printer	
Image Background Adj		I.5.6.5 Image Background Adj
Paper Separation Adjustment		I.5.6.6 Paper Separation Adjustment
Monochrome Density Adjustment		I.5.6.7 Monochrome Density Adjustment
Removable Voltage Adjust		I.5.6.8 Removable Voltage Adjust
TCR Level Setting		I.5.6.9 TCR Level Setting
Transfer Voltage Fine Adj	Primary transfer adj.	I.5.6.10 Transfer Voltage Fine Adj
	2nd Transfer Adj.	
Charge AC Output fine adjustment		I.5.6.11 Charge AC Output fine adjustment
Thick Paper Density Adjustment		I.5.6.12 Thick Paper Density Adjustment
Grad/Dev AC Bias V Selection		I.5.6.13 Grad/Dev AC Bias V Selection
Manual Toner Add	Manual Toner Add	I.5.6.14 Manual Toner Add
	Hopper Toner Filling	

*1: It is not used on bizhub C368/C308/C258.

4.2.3 CS Remote Care



NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

CS Remote Care	Ref. Page
Maintenance / Default Settings	I.5.14.1 Maintenance/Default Settings - System Selection
Maintenance Start	-
Maintenance Complete	-
Server Settings	I.5.14.4 Maintenance/Default Settings - Server Setting (E-Mail1 or E-mail2 is selected.) I.5.14.5 Maintenance/Default Settings - Server Setting (http1 or http2 is selected)
Detail Setting	I.5.14.3 Maintenance/Default Settings - Detail Setting
Product Auth. Settings	I.5.14.6 Product Auth. Settings
Import/Export Settings	I.5.14.7 Import/Export Settings
Auto initial dial setting	I.5.14.8 Auto Initial Dial Setting

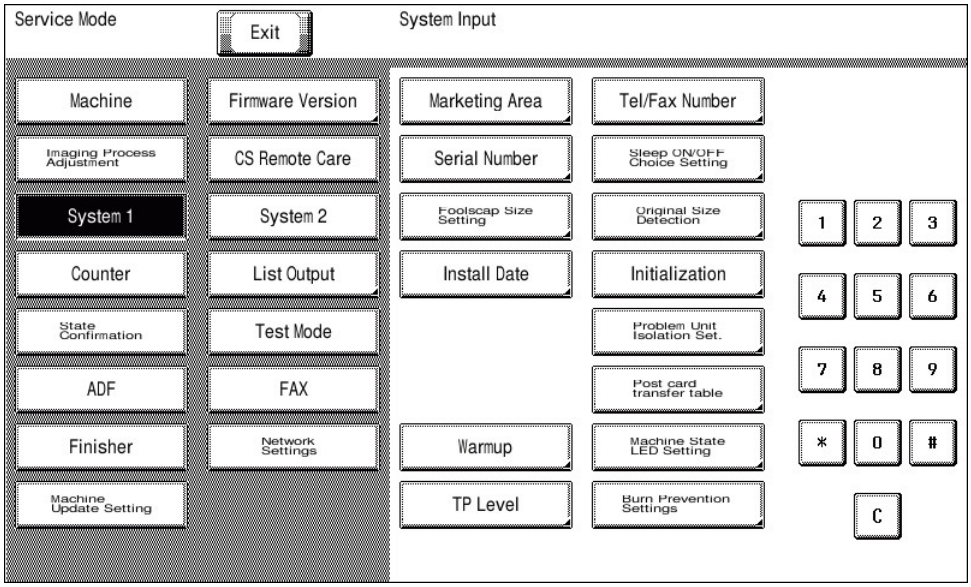
(1) Setting up the CS Remote Care

CS Remote Care		Ref. Page
Using the telephone line modem		I.5.8.1 Using the telephone line modem
Using the fax line modem		I.5.8.2 Using the Fax line modem
Using the E-mail		I.5.8.3 Using the E-mail
When using a WebDAV server in http communication	http (bilateral communication)	I.5.8.4 (1) Bilateral communication
	http (unilateral communication: Device to Center)	I.5.8.4 (2) Unilateral communication: Device to Center

(2) List of software SW for CS Remote Care

SW No.	Functions		Ref. page
01	Communication settings	Dial Mode	I.5.9.3 SW No. 01
		Line for send only	
		Baud rate	
02	Auto call	Emergency transmission	I.5.9.4 SW No. 02
		Date specified transmission	
		Call parts replace date	
		Call drum replace date	
		Call regular service date (PM)	
		Auto call on the IC Life	
		Auto call of the IR shortage	
		Auto call on the zero reset of the fixed parts replacement	
03	Trouble display setting	Trouble display setting	I.5.9.5 SW No. 03
		Auto call on the toner empty	
		Auto call on the waste toner bottle full	
04	CS Remote Care communication mode		I.5.9.6 SW No. 04
05	Modem redial interval		I.5.9.7 SW No. 05
06	Modem redial times		I.5.9.8 SW No. 06
07	Redial for response time out		I.5.9.9 SW No. 07
08	Retransmission interval on E-Mail/http delivery error		I.5.9.10 SW No. 08
09	Retransmission times on E-Mail/http delivery error		I.5.9.11 SW No. 09
10	Time zone settings		I.5.9.12 SW No. 10
11	Timer 1	RING reception -> CONNECT reception	I.5.9.13 SW No. 11
12	Timer 2	Dial request completed -> CONNECT reception	I.5.9.14 SW No. 12
13	Not used		-
14	Timer 4	Line connection -> Start request telegram delivery	I.5.9.15 SW No. 14
15	Timer 5	Wait time for other side's response	I.5.9.16 SW No. 15
16	Not used		-
17	Not used		-
18	Attention display	To set whether to give the alarm display when using the modem but the power for the modem is OFF.	I.5.9.17 SW No. 18
19	Not used		-
20	Not used		-
21	Transmission of misfeed frequent occurrence warning	Transmission of paper-based misfeed frequent occurrence warning	I.5.9.18 SW No. 21
		Transmission of original-based misfeed frequent occurrence warning	
		Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning	
22	Paper-based misfeed frequent occurrence threshold value		I.5.9.19 SW No. 22
23	Original-based misfeed frequent occurrence threshold value		I.5.9.20 SW No. 23
24 to 40	Not used		-

4.2.4 System 1

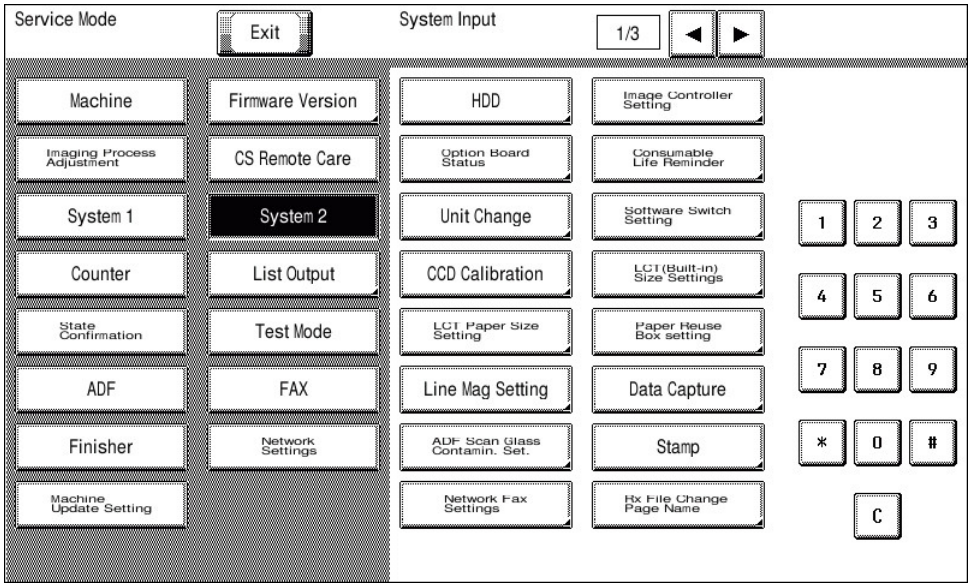


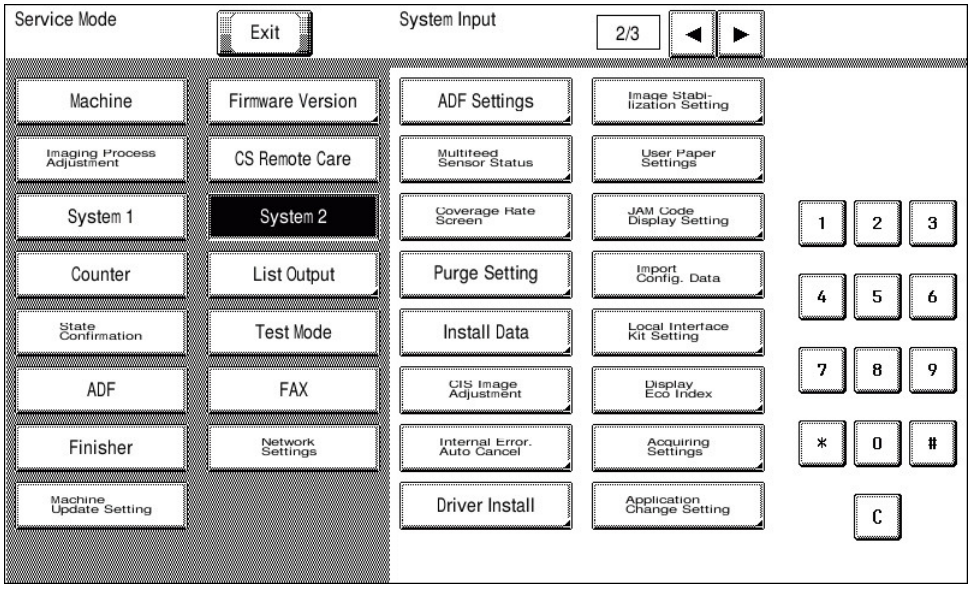
NOTE

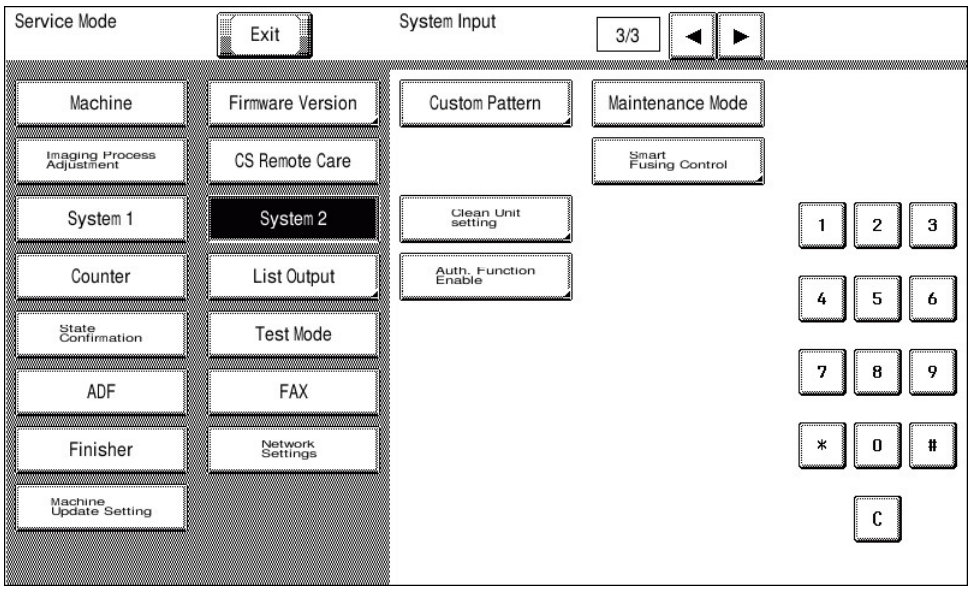
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

System 1			Ref. Page
Marketing Area			I.5.15.1 Marketing Area
Tel/Fax Number			I.5.15.2 Tel/Fax Number
Serial Number			I.5.15.3 Serial Number
Sleep ON/OFF Choice Setting			I.5.15.4 Sleep ON/OFF Choice Setting
Foolscap Size Setting			I.5.15.5 Foolscap Size Setting
Original Size Detection			I.5.15.6 Original Size Detection
Install Date			I.5.15.7 Install Date
Initialization	Clear All Data		I.5.15.8 Initialization-Clear All Data
	Clear Individual Data	Copy Program Data	I.5.15.9 (1) Copy Program Data
		Address Registration Data	I.5.15.9 (2) Address Registration Data
		Fax Setting Data	I.5.15.9 (3) Fax Setting Data
		All History Data	I.5.15.9 (4) All History Data
		Network Setting Data	I.5.15.9 (5) Network Setting Data
		Server Cache Data	I.5.15.9 (6) Server Cache Data
	System Error Clear		I.5.15.10 Initialization-System Error Clear
Problem Unit Isolation Set.			I.5.15.11 Problem Unit Isolation Set.
Post card transfer table			I.5.15.12 Post card transfer table
Warm-up			I.5.15.13 Warm-up
Machine State LED Setting			I.5.15.14 Machine State LED Setting
TP Level			I.5.15.15 TP Level
Burn Prevention Settings			I.5.15.16 Burn Prevention Settings

4.2.5 System 2







NOTE

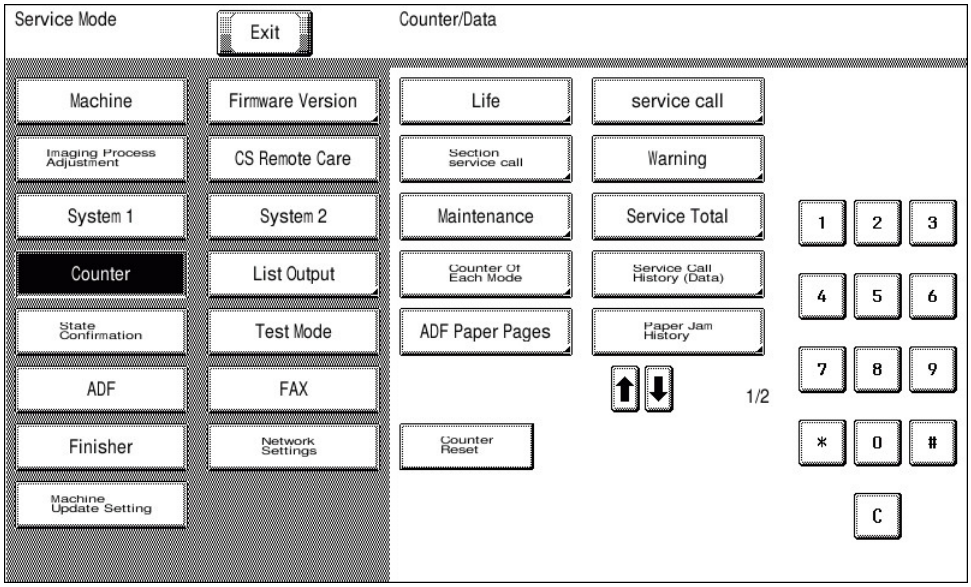
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

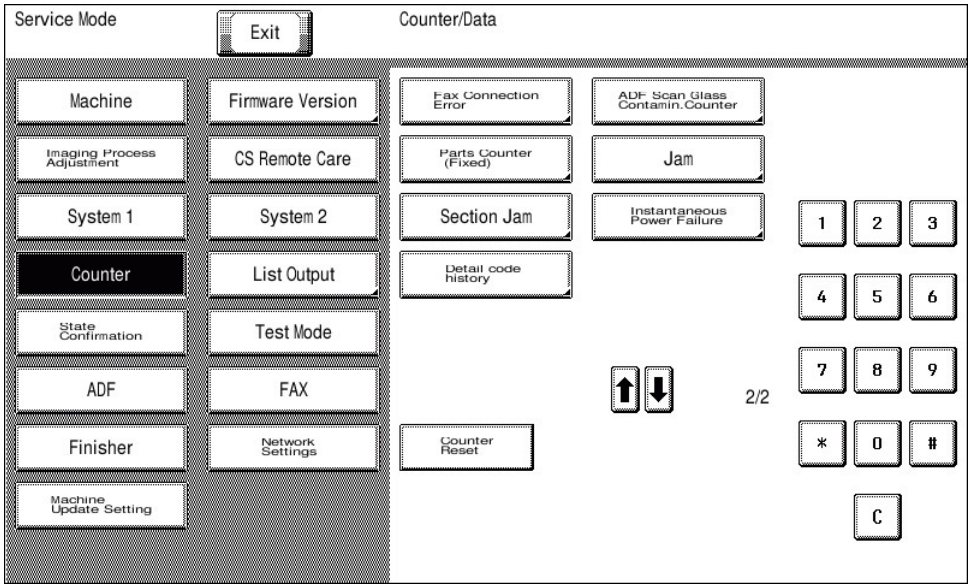
System 2	Ref. Page
HDD	I.5.16.1 HDD
Image Controller Setting	I.5.16.2 Image Controller Setting

System 2		Ref. Page
Option Board Status		I.5.16.3 Option Board Status
Consumable Life Reminder		I.5.16.4 Consumable Life Reminder
Unit Change		I.5.16.5 Unit Change
Software Switch Setting		I.5.16.6 Software Switch Setting
CCD Calibration		I.5.16.7 CCD Calibration
LCT (Built-in) Size Settings		I.5.16.8 LCT (Built-in) Size Settings
LCT Paper Size Setting		I.5.16.9 LCT Paper Size Setting
Paper Reuse Box Setting		I.5.16.10 Paper Reuse Box Setting
Line Mag Setting		I.5.16.11 Line Mag Setting
Data Capture		Data Capture
ADF Scan Glass Contamin. Set.		I.5.16.13 ADF Scan Glass Contamin. Set.
Stamp		I.5.16.14 Stamp
Network Fax Settings		I.5.16.15 Network Fax Settings
RX File Change Page Name		I.5.16.16 RX File Change Page Name
ADF Settings		I.5.16.17 ADF Settings
Image Stabilization Setting		I.5.16.18 Image Stabilization Setting
Multifeed Sensor Status *2		I.5.16.19 Multifeed Sensor Status (bizhub C658/C558/C458)
User Paper Settings		I.5.16.20 User Paper Settings
Coverage Rate Screen		I.5.16.21 Coverage Rate Screen
JAM Code Display Setting		I.5.16.22 JAM Code Display Setting
Purge Setting *3		I.5.16.23 Purge Setting (bizhub C658/C558/C458)
Import Config. Data	BootUp Screen	I.5.16.24 (1) BootUp Screen
	Machine Image	I.5.16.24 (2) Machine Image
	Custom Auth. Setting	I.5.16.24 (3) Custom Auth. Setting
Install Data		I.5.16.25 Install Data
Local Interface Kit Setting		I.5.16.26 Local Interface Kit Setting
CIS Image Adjustment *1		I.5.16.27 CIS Image Adjustment
Display Eco Index		I.5.16.28 Display Eco Index
Internal Error. Auto Cancel		I.5.16.29 Internal Error. Auto Cancel
Acquiring Settings		I.5.16.30 Acquiring Settings
Driver Install		I.5.16.31 Driver Install
Application Change Setting		I.5.16.32 Application Change Setting
Custom Pattern		I.5.16.33 Custom Pattern
Maintenance Mode		I.5.16.34 Maintenance Mode
Smart Fusing Control		I.5.16.35 Smart Fusing Control
Clean Unit Setting		I.5.16.36 Clean Unit Setting
Auth. Function Enable		I.5.16.37 Auth. Function Enable

*1: It will be displayed only when optional dual scan document feeder DF-704 is mounted. (C368/C308/C258)
*2: It is only displayed on bizhub C658/C558/C458.
*3: It is not used on bizhub C368/C308/C258.

4.2.6 Counter





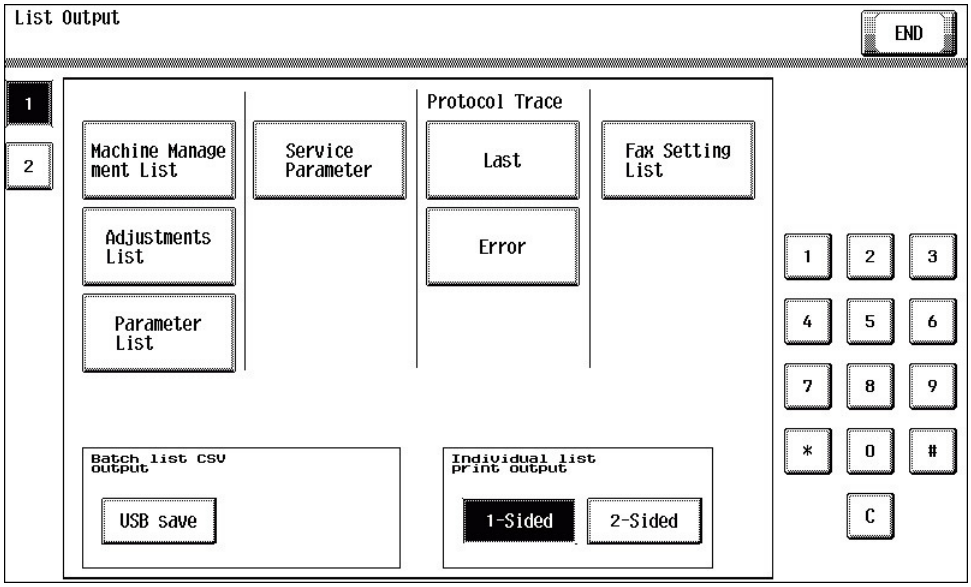
NOTE

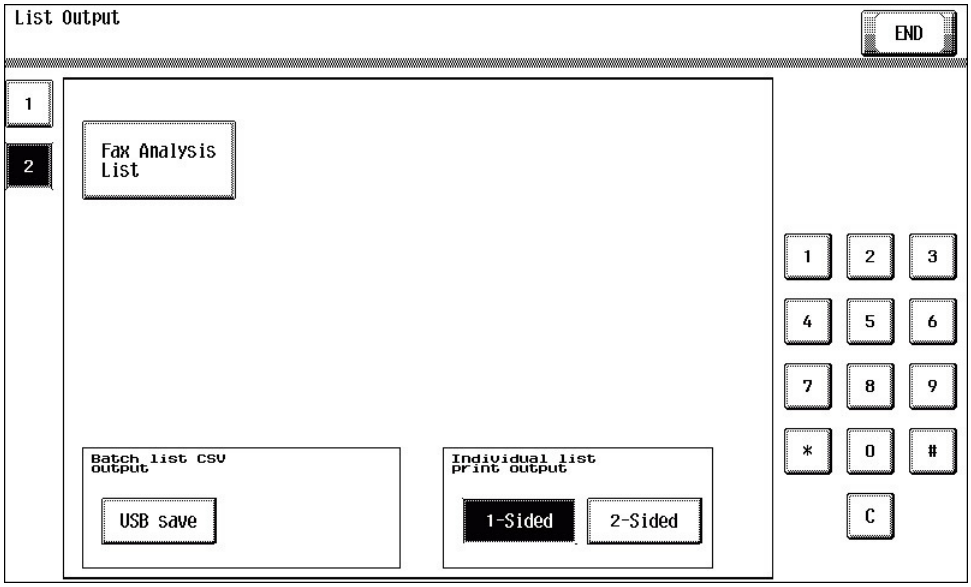
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Counter	Ref. Page
Life	I.5.17.2 Life
Service Call	I.5.17.3 Service Call
Section Service Call	I.5.17.4 Section Service Call
Warning	I.5.17.5 Warning
Maintenance	I.5.17.6 Maintenance
Service Total	I.5.17.7 Service Total
Counter Of Each Mode	I.5.17.8 Counter of Each Mode
Service Call History (Data)	I.5.17.9 Service Call History (Data)
ADF Paper Pages	I.5.17.10 ADF Paper Pages
Paper Jam History	I.5.17.11 Paper Jam History
Fax Connection Error	I.5.17.12 Fax Connection Error
ADF Scan Glass Contamin. Counter	I.5.17.13 ADF Scan Glass Contamin. Counter
Parts Counter (Fixed) *1	I.5.17.14 Parts Counter (Fixed)
Jam	I.5.17.15 Jam
Section JAM	I.5.17.16 Section JAM
Instantaneous Power Failure	I.5.17.17 Instantaneous Power Failure
Detail code history	I.5.17.18 Detail code history
Recoverable error counter	I.5.17.19 Recoverable error counter
Counter Reset	-

*1: It will be displayed only when the optional finisher FS-533 or FS-534 is mounted.

4.2.7 List Output



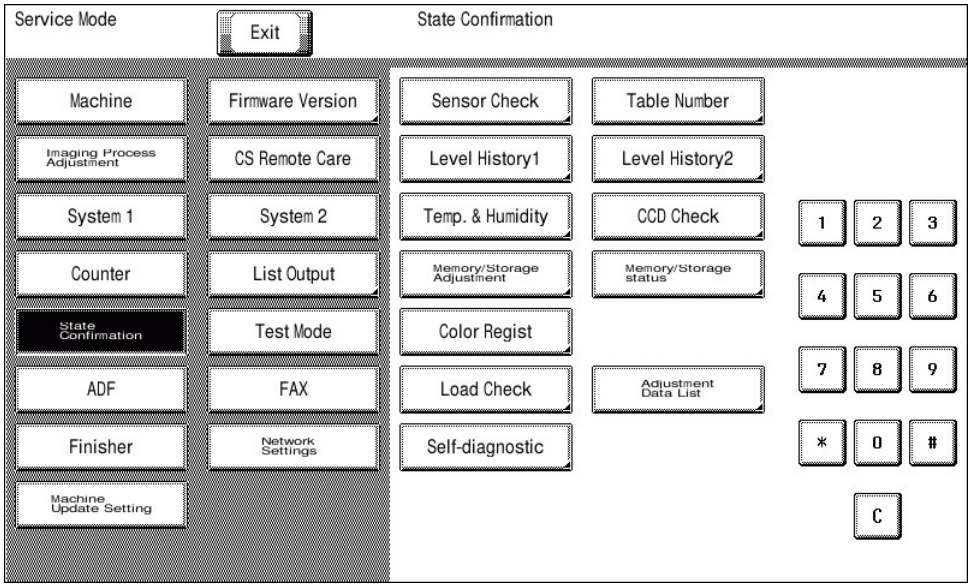


NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

List Output		Ref. Page
Batch list CSV output		Batch list CSV output
Individual list print output		-
Machine Management List		I.5.18.2 Machine Management List
Adjustments List		I.5.18.3 Adjustments List
Parameter List		I.5.18.4 Parameter List
Service Parameter		I.5.18.5 Service Parameter
Protocol Trace	Last	I.5.18.6 Protocol Trace
	Error	
Fax Setting List		I.5.18.7 Fax Setting List
Fax Analysis List		I.5.18.8 Fax Analysis List

4.2.8 State Confirmation



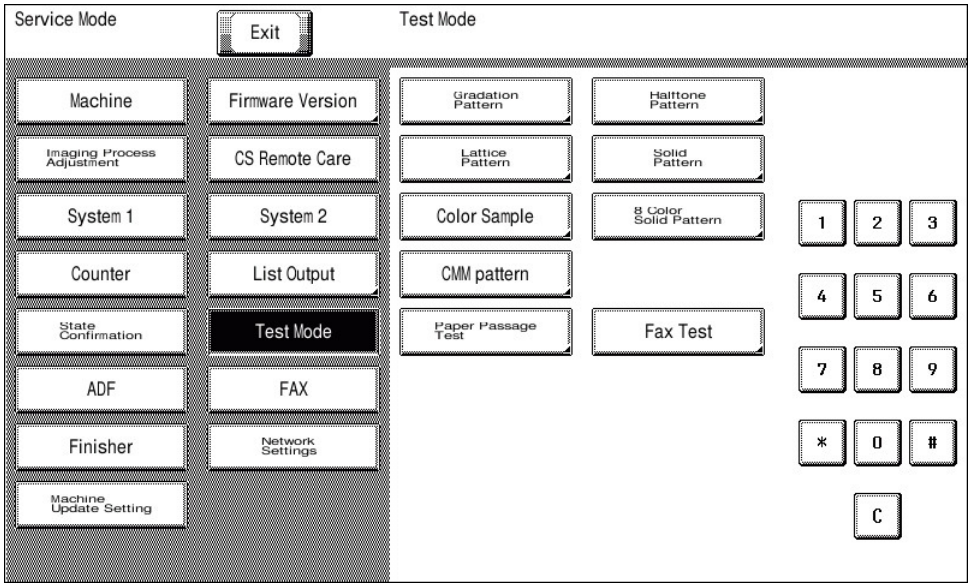
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

State Confirmation		Ref. Page
Sensor Check		I.5.19.1 Sensor Check
Table Number		I.5.19.2 Table Number
Level History1		I.5.19.3 Level History 1
Level History2		I.5.19.4 Level History 2
Temp. & Humidity		I.5.19.5 Temp. & Humidity
CCD Check		I.5.19.6 CCD Check
Memory/Storage Adjustment	Memory Check	I.5.19.7 (1) Memory Check
	Compress / Decompression Check	I.5.19.7 (2) Compress / Decompression Check
	Memory Bus Check	I.5.19.7 (3) Memory Bus Check
	DSC Bus Check	I.5.19.7 (4) DSC Bus Check
	Storage R/W Check	I.5.19.7 (5) Storage R/W Check
	Format	I.5.19.7 (6) Format
	eMMC -> HDD Data Copy	I.5.19.7 (7) eMMC -> HDD Data Copy
	HDD Mirroring Rebuild *	I.5.19.7 (8) HDD Mirroring Rebuild
Memory/Storage Status		I.5.19.8 Memory/Storage Status
Color Regist		I.5.19.9 Color Regist
Load Check		I.5.19.10 Load Check
Adjustment Data List		I.5.19.11 Adjustment Data List
Self-diag.(Full)		I.5.19.12 Self-diag. (Full)
Self-diag. (Individual)		I.5.19.13 Self-diag. (Individual)

- *: It will be displayed only when optional hard disk HD-524 is mounted.

4.2.9 Test Mode



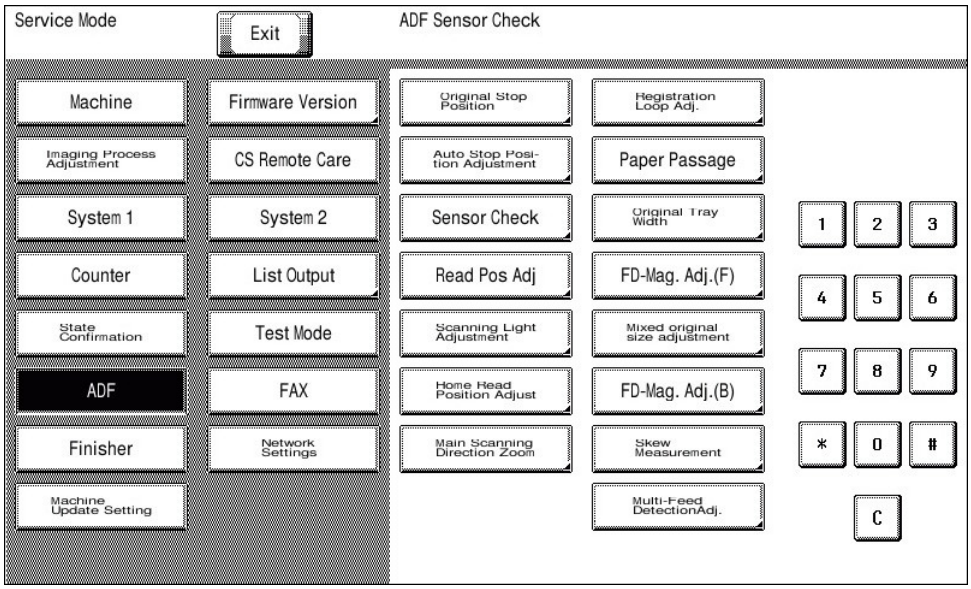
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Test Mode	Ref. Page
Gradation Pattern	I.5.20.2 Gradation Pattern
Halftone Pattern	I.5.20.3 Halftone Pattern
Lattice Pattern	I.5.20.4 Lattice Pattern
Solid Pattern	I.5.20.5 Solid Pattern
Color Sample	I.5.20.6 Color Sample
8 Color Solid Pattern	I.5.20.7 8 Color Solid Pattern
CMM pattern	I.5.20.8 CMM pattern
Paper Passage Test	I.5.20.9 Paper Passage Test
Fax Test *	I.5.20.10 Fax Test-Signal Send Test I.5.20.11 Fax Test-Signal Receive Test I.5.20.12 Fax Test-NCU TEST

*: It will be displayed only when optional fax kit FK-514 is mounted.

4.2.10 ADF



NOTE

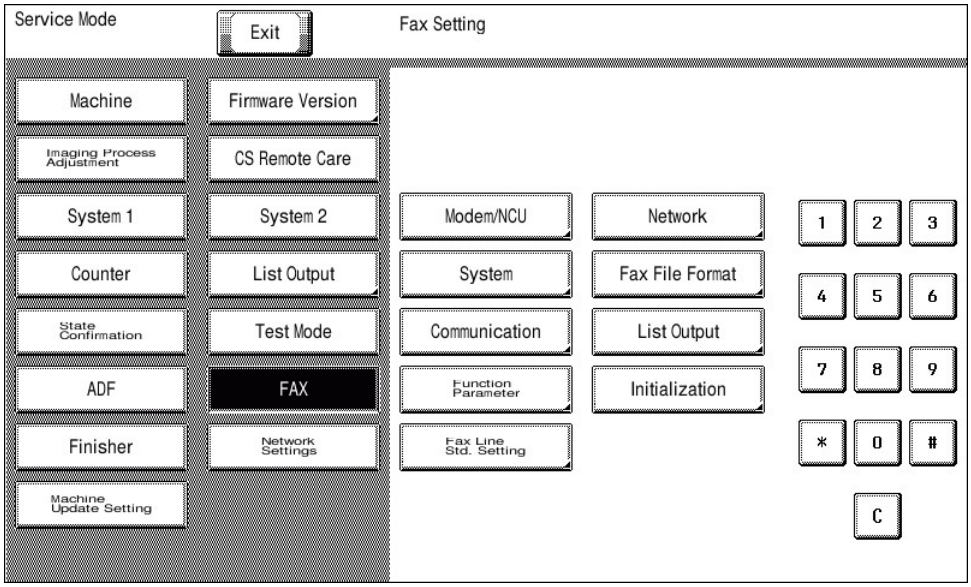
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

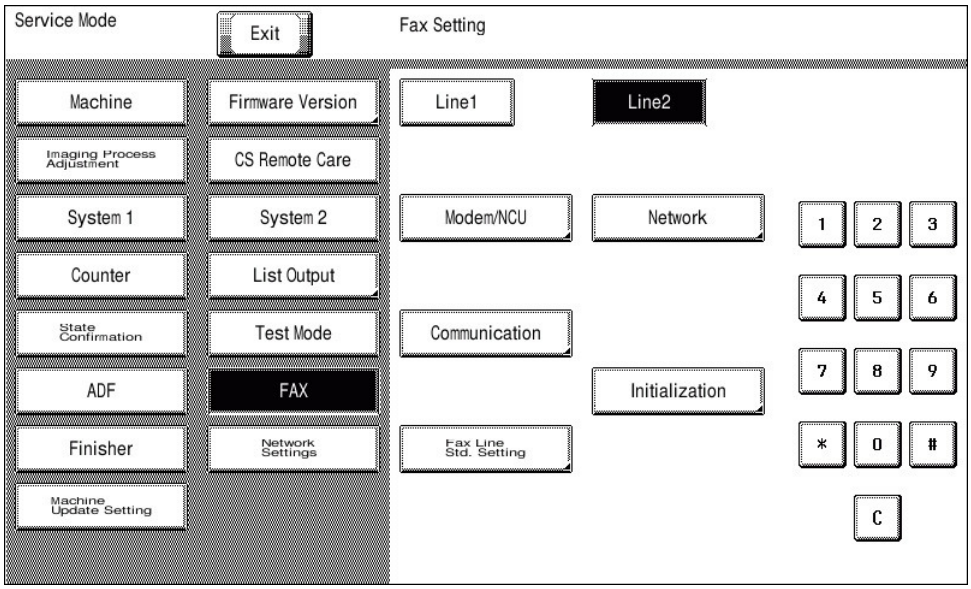
ADF Adjustment	Ref. Page
Original Stop Position	I.5.21.1 Original Stop Position
Registration Loop Adj.	I.5.21.2 Registration Loop Adj.

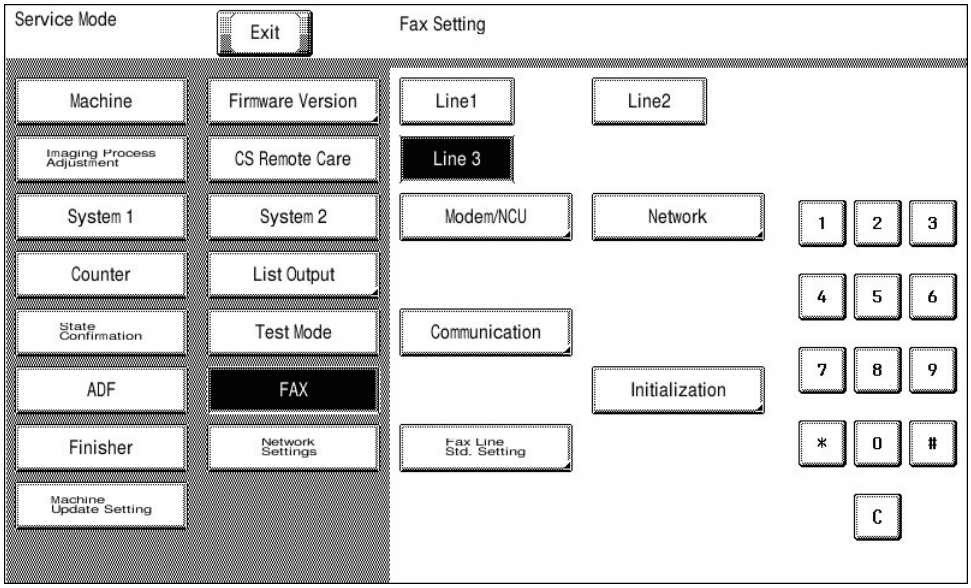
ADF Adjustment		Ref. Page
Auto Stop Position Adjustment		I.5.21.3 Auto Stop Position Adjustment
Paper Passage		I.5.21.4 Paper Passage
Sensor Check		I.5.21.5 Sensor Check
Original Tray Width		I.5.21.6 Original Tray Width
Read Pos Adj	Read Pos Adj	I.5.21.7 Read Pos Adj
	Auto Adjust	
FD-Mag. Adj. (F)	Orig. Feed Zoom Ad	I.5.21.8 Feed Zoom
	Auto Adjust	
Scanning Light Adjustment		I.5.21.9 Scanning Light Adjustment
Mixed original size adjustment		I.5.21.10 Mixed original size adjustment
Home Read Position Adjust *1		I.5.21.11 Home Read Position Adjust
FD-Mag. Adj. (B)	Orig. Feed Zoom Ad	I.5.21.12 FD-Mag. Adj. (B)
	Auto Adjust	
Main Scanning Direction Zoom *1	Main scanning direction zoom adj *1	I.5.21.13 Main Scanning Direction Zoom
	Auto Adjust *1	
Skew Measurement	DFSkew (Front)	I.5.21.14 Skew Measurement
	DFSkew (Back) *1	
ADF automatic Adjustment *2		I.5.21.15 ADF automatic Adjustment
Multi-Feed DetectionAdj. *2		I.5.21.16 Multi-Feed DetectionAdj

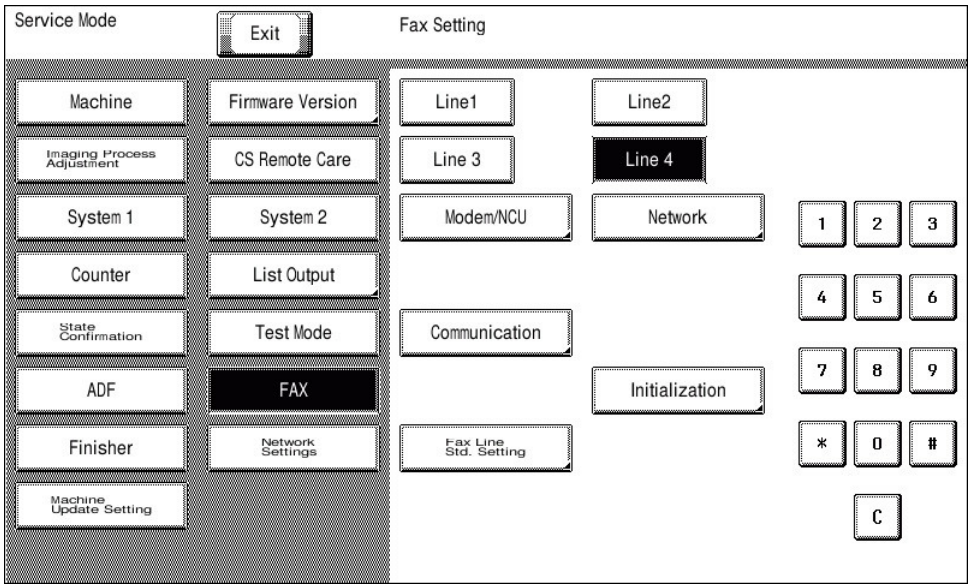
*1: It will be displayed only when optional dual scan document feeder DF-704 is mounted.
*2: It is only displayed on bizhub C658/C558/C458.

4.2.11 FAX









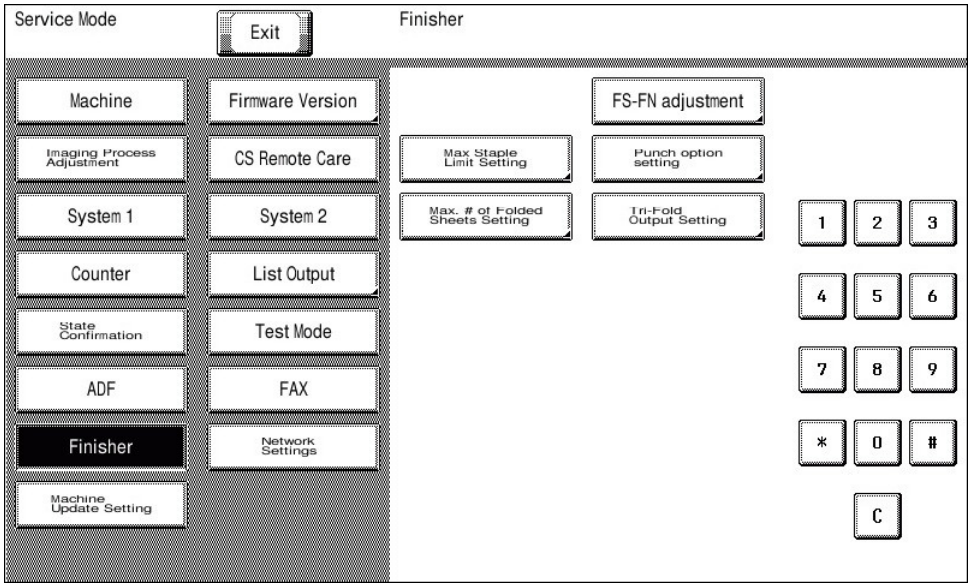
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

FAX		Ref. Page
Line 1 *1	Modem/NCU *1	I.5.22.1 Modem/NCU
	Network *1	I.5.22.2 Network
	System *1	I.5.22.3 System
	Fax File Format *1	I.5.22.4 Fax File Format
	Communication *1	I.5.22.5 Communication
	List Output *1	I.5.22.6 List Output
	Function Parameter *1	I.5.22.7 Function Parameter
	Initialization *1	I.5.22.8 Initialization
	FAX Line Std. Setting	I.5.22.9 FAX Line Std. Setting
Line 2 *2 Line 3 *3 Line 4 *4	Modem/NCU *2 *3 *4	I.5.23.1 Modem/NCU
	Network *2 *3 *4	I.5.23.2 Network
	Communication *2 *3 *4	I.5.23.3 Communication
	Initialization *2 *3 *4	I.5.23.4 Initialize
	FAX Line Std. Setting	I.5.23.5 FAX Line Std. Setting

*1: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 1) is set to “Set”.
*2: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 2) is set to “Set”.
*3: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 3) is set to “Set”.
*4: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 4) is set to “Set”.

4.2.12 Finisher



NOTE

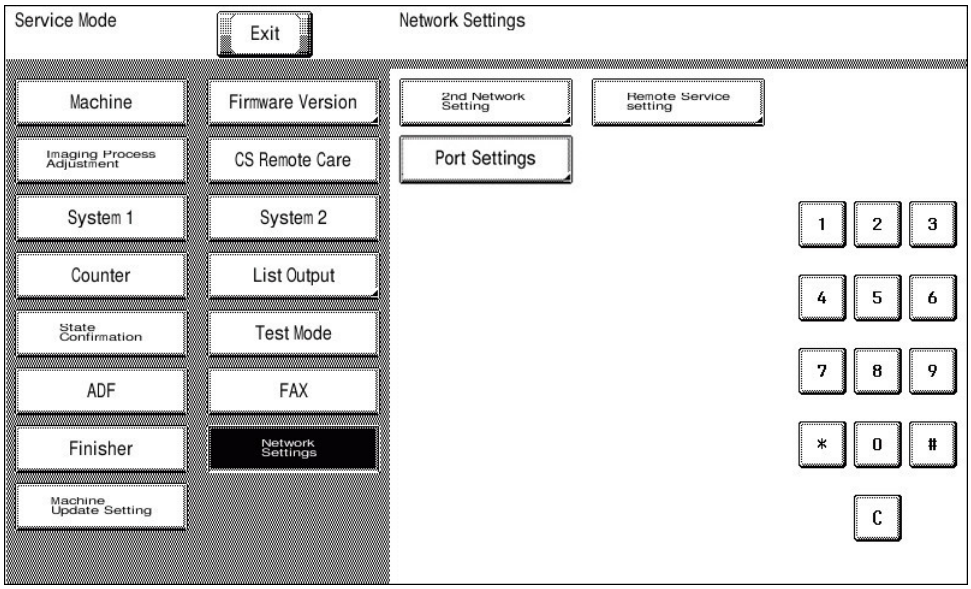
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Finisher *1		Ref. Page
FS-FN adjustment *2	Center Staple Position *3	I.5.29.1 FS-FN adjustment - Center Staple Position (FS-534SD/FS-536SD/FS-537SD)
	Half-Fold Position *3	I.5.29.2 FS-FN adjustment - Half-Fold Position (FA-534SD/FS-536SD/FS-537SD)
	Punch Centering Fine Adj *4	I.5.29.3 FS-FN adjustment - Punch Centering Fine Adj (PK-523)
	Punch F. Sensor Intensity Adj. *4	I.5.29.4 FS-FN adjustment - Punch F. Sensor Intensity Adj. (PK-523)
	Punch vertical position (Z-fold) *7	I.5.29.5 FS-FN adjustment - Punch vertical position (Z-fold) (ZU-609/PK-523)
	Punch horizontal position (Z-fold) *7	I.5.29.6 FS-FN adjustment - Punch horizontal position (Z-fold) (ZU-609/PK-523)
	Resist loop size (Z-fold) *8	I.5.29.7 FS-FN adjustment - Resist loop size (Z-fold) (ZU-609)
	Punch Registration Loop Adj *4	I.5.29.8 FS-FN adjustment - Punch Registration Loop Adj (PK-523)
	Punch Resist Loop Size (PI) *9	I.5.29.9 FS-FN adjustment - Punch Resist Loop Size (PI) (PI-507/PK-523)
	1st Z-Fold position *8	I.5.29.10 FS-FN adjustment - 1st Z-Fold Position/2nd Z-Fold Position (ZU-609)
	2nd Z-Fold position *8	
	1st Tri-Fold Adjustment *3	I.5.29.11 FS-FN adjustment - 1st Tri-Fold Adjustment/2nd Tri-Fold Adjustment (FS-534SD/FS-536SD/FS-537SD)
	2nd Tri-Fold Adjustment *3	
	Punch Edge Adj. *5	I.5.29.12 FS-FN adjustment - Punch Edge Adj (PK-520/PK-523)
	Punch Regist Loop Size *6	I.5.29.13 FS-FN adjustment - Punch Regist Loop Size (PK-519/PK-520)
	PI Size Detection *9	I.5.29.14 FS-FN adjustment - PI Size Detection (PI-507)
	Post Inserter Adjustment *9	I.5.29.15 FS-FN adjustment - Post Inserter Adjustment (PI-507)
	Finisher Components Test Mode	I.5.29.16 FS-FN adjustment - Finisher Components Test Mode (FS-533/FS-534/FS-534SD/FS-536/FS-536SD/FS-537/FS-537SD)
	Alignment Plate Position *10	I.5.29.17 FS-FN adjustment - Alignment plate Position (FS-533)
	Paper Alignment Guides W. Adj. *3	I.5.29.18 FS-FN adjustment - Paper Alignment Guides W. Adj. (FS-534/FS-534SD/FS-536/FS-536SD/FS-537/FS-537SD)
	ZFold1st Fold Loop Size *8	I.5.29.19 FS-FN adjustment - ZFold1st Fold Loop Size (ZU-609)
	ZFold2nd Fold Loop Size *8	I.5.29.20 FS-FN adjustment - ZFold2nd Fold Loop Size (ZU-609)

Finisher *1		Ref. Page
	ZFold2nd Fold Speed *8	I.5.29.21 FS-FN adjustment - ZFold2nd Fold Speed (ZU-609)
	ZFold Adjust Custom *8	I.5.29.22 FS-FN adjustment - ZFold Adjust Custom (ZU-609)
Max Staple Limit Setting *11		I.5.29.23 Max Staple Limit Setting (FS-537/FS-537SD)
Punch option setting *2		I.5.29.24 Punch Option Setting
Max. # of Folded Sheets Setting *12		I.5.29.25 Max. # of Folded Sheets Setting
Tri-Fold Output Setting *13		I.5.29.26 Tri-Fold Output Setting (FS-537SD)
Job Separator *14		I.5.29.27 Job Separator

*1: It will be displayed only when optional finisher FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537 or FS-537SD, or separator JS-506 is mounted.
*2: It will be displayed only when optional finisher FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537 or FS-537SD is mounted.
*3: It will be displayed only when optional finisher FS-534SD, FS-536SD, FS-537 or FS-537SD is mounted.
*4: It will be displayed only when optional punch kit PK-523 is mounted.
*5: It will be displayed only when optional Punch Kit PK-520 or PK-523 is mounted.
*6: It will be displayed only when optional Punch Kit PK-519 or PK-520 is mounted.
*7: It will be displayed only when optional Z Folding Unit ZU-609 and Punch Kit PK-523 are mounted.
*8: It will be displayed only when optional Z Folding Unit ZU-609 is mounted.
*9: It will be displayed only when optional Post Inserter PI-507 is mounted.
*10: It will be displayed only when optional finisher FS-533 is mounted.
*11: It will be displayed only when optional finisher FS-536SD or FS-537SD is mounted.
*12: It will be displayed only when optional finisher FS-534, FS-534SD, FS-536, FS-536SD, FS-537 or FS-537SD is mounted.
*13: It will be displayed only when optional finisher FS-537SD is mounted.
*14: It will be displayed only when optional Job Separator JS-506 is mounted.

4.2.13 Network Settings



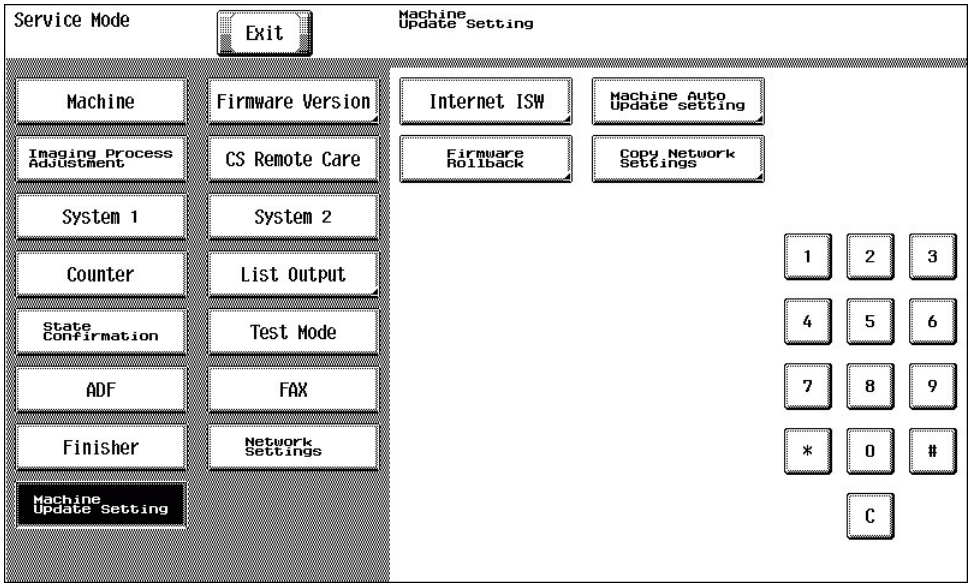
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Network Settings	Ref. Page
2nd Network Setting *1	I.5.30.1 2nd Network Setting - 2nd network card settings
Remote Service Setting	I.5.30.12 Remote Service Setting
Port Setting	I.5.30.13 Port setting

*1: This is displayed only when the optional upgrade kit UK-212 or UK-215is installed.

4.2.14 Machine Update Setting



NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Machine Update Setting			Ref. Page
Internet ISW	Internet ISW Set	Function Setting	I.5.31.1 Internet ISW - Internet ISW Set
		Open Mode Settings	
	HTTP Setting *1		I.5.31.2 Internet ISW - HTTP Setting
	FTP Setting *1		I.5.31.3 Internet ISW - FTP Setting
	Forwarding Access Setting *1		I.5.31.4 Internet ISW - Forwarding Access Setting
	Download *1		I.5.31.5 Internet ISW - Download
	Update Start Time Settings *1		I.5.31.6 Internet ISW - Update Start Time Settings
Machine Auto Update setting	Auto Update setting		I.5.31.7 Machine Auto Update setting - Auto Update setting
	Relay server setting		I.5.31.9 Machine Auto Update setting - Relay server setting
	Transmission log Update		I.5.31.11 Machine Auto Update setting - Transmission log Update
	Transmission Server Log		I.5.31.12 Machine Auto Update setting - Transmission Server Log
	Update Log Display		I.5.31.13 Machine Auto Update setting - Update Log Display
	Relay Server Log Confirmation		I.5.31.14 Machine Auto Update setting - Relay Server Log Confirmation
	Manually Update		I.5.31.15 Machine Auto Update setting - Manual Update
	Machine Import setting		I.5.31.16 Machine Auto Update setting - Machine Import setting
	Machine Export setting		I.5.31.17 Machine Auto Update setting - Machine Export setting
	Machine Update Password		I.5.31.18 Machine Auto Update setting - Machine Update Password
Firmware Rollback	Firmware Rollback		I.5.31.19 (1) Firmware Rollback
	Open Mode Settings		I.5.31.19 (2) Open Mode Settings
Copy Network Settings			I.5.31.20 Copy Network Settings

*1: To be displayed only when the following setting is set to “ON”. [Machine Update Setting] -> [Internet ISW] -> [Internet ISW set] -> [Function Setting]

5. SERVICE MODE

5.1 Starting/Setting/Exiting

5.1.1 Starting procedure

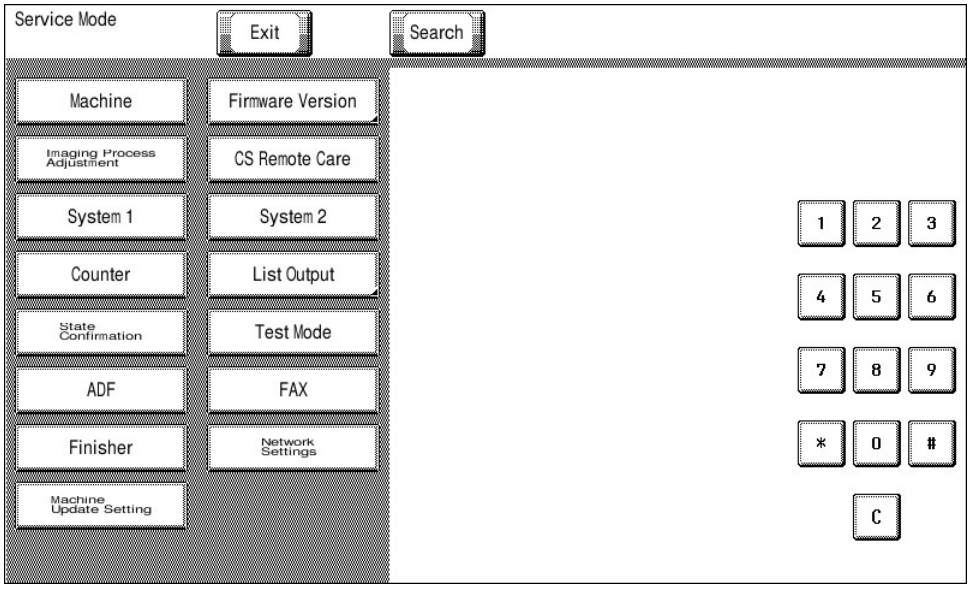
NOTE

- **Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.**

(1) Procedure

1. Touch Menu.
2. Touch [Counter].
3. Touch [Display Keypad].
4. Press the following keys in this order.
   - Stop -> 0 -> 0 -> Stop -> 0 -> 1
5. Enter the CE password and touch [END]. (The CE password is initially set to "9272927292729272.")

   NOTE
   - **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", CE password authentication is necessary.**
   - **If a wrong CE password is entered, re-enter the right password.**
     The machine will not enter Service Mode unless the CE password is entered correctly. To return to the basic screen, turn OFF the main power switch and turn it ON again.
   - **When [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Prohibited Functions When Authentication Error] is set to "Mode 2", operation will be prohibited since it indicates authentication failure by failing to enter the correct CE password within the specified number of times.**
     If the access lock is activated, the lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7 in Menu -> [Counter] -> [Print List] -> [Display Keypad] after the main power switch is turned OFF and On.
     When the timer reaches the time specified in this setting, the access lock is released.
   - **The service code entered is displayed as " * "**
6. The Service Mode menu will appear.

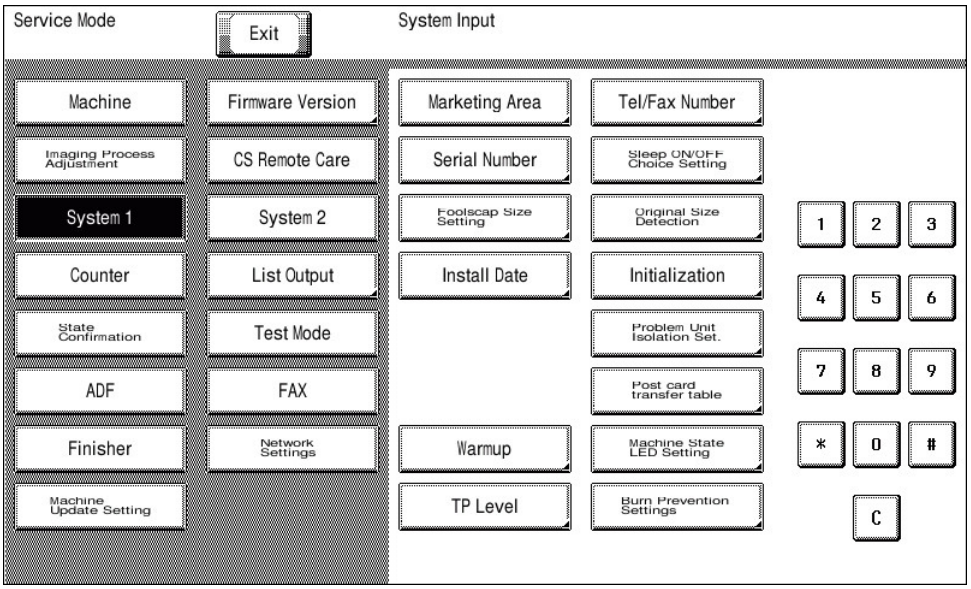


NOTE

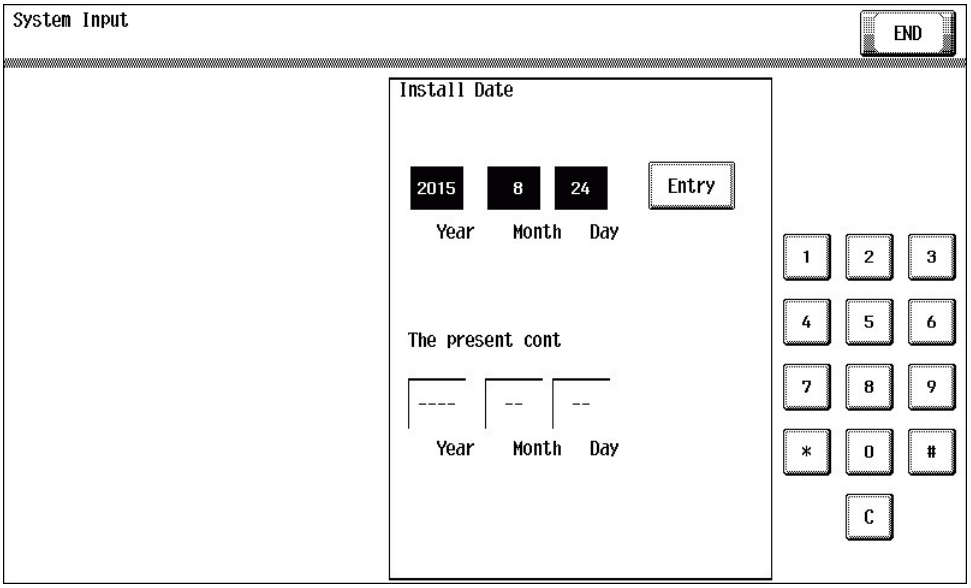
- **Be sure to change the CE password from its default value.**
- **For the procedure to change the CE password, see the [Enhanced Security] -> [CE Password].**
- **NEVER forget the CE password.**

5.1.2 Setting procedure

1. Press the key corresponding to the function you would like to change the setting for. Keys or setting screens will appear for each function.
   Ex.: System 1



2. Press the key for the item that you would like to change the setting for. Setting screens will appear for each item.
Ex.: Install Date



3. Press the key for the setting you would like to change. You can also input the numerical value using the 10-key pad. (the [+]/[-] keys can also be used for settings. Follow the directions on the screen to input numerical values.)
NOTE
   - **For more details, see the description pages for each setting item.**
4. Touch [END]. This closes the setting screen and returns to the Service Mode screen. (If deep within the hierarchy of the setting screen, it may be necessary to touch [END] several times)
5. Touch [Exit]. This will close the Service Mode screen and exit the Service Mode.
6. Turn OFF the main power switch. After waiting 10 seconds, turn ON the main power switch again. Turning the main power switch OFF and then ON again makes the changes to the Service Mode setting take effect.
NOTE
   - **Simply exiting the Service Mode will not make the changed settings take effect. You must turn the main power switch OFF and then ON again.**

5.1.3 Exiting procedure

1. Touch [Exit] on the Service Mode screen.
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

5.2 Time Zone/Date & Time Input mode

5.2.1 Use

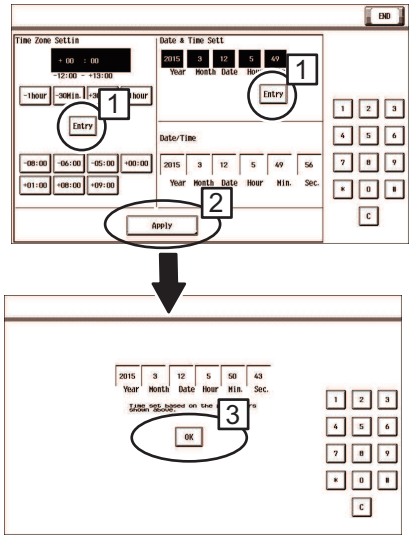
- This mode is used to set time-of-day and date.
- The set time zone/date & time are automatically reflected in the date and time setting of Administrator Settings.

Time Zone Setting	Set the time zone applicable to the area. After the setting, touch [Entry] and then [Apply] to validate the time. The following lists settings of time zones of different areas. -08:00: U.S.: Pacific Standard Time -06:00: U.S.: Central Standard Time -05:00: U.S.: Eastern Standard Time

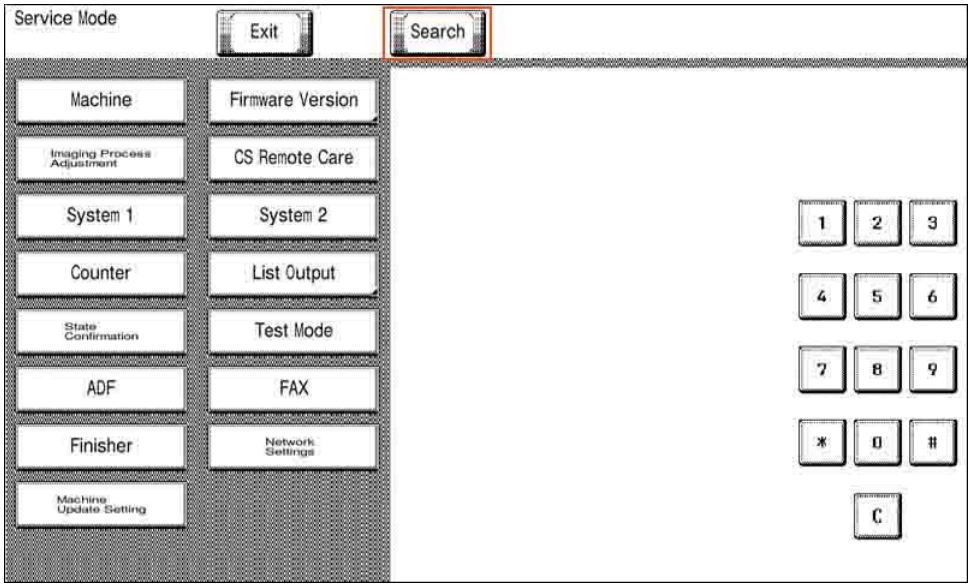
	-00:00: England: Greenwich mean time +01:00: Western European countries +08:00: China, Taiwan, western part of Australia +09:00: Japan, Korea
Date & Time Setting	Enter the time from the 10-key pad to set the time-of-day. Before making any entry, first press Clear. After the time has been set, touch [Entry] and then [Apply].

5.2.2 Procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 1 -> 1 -> 4 -> 4 -> Clear
3. Enter time zone year, month, day, hour, and minute, in that order, from 10-key pad.
   NOTE
   - **Before entering date and time, touch Clear to delete the present time from the place where data and time is entered.**
   - **When setting the month, day, hour, or minute, enter "0" first if the data one digit.**
4. Make sure that the correct value has been entered, then touch [Entry] and then [Apply].
5. After the confirmation screen appears, touch [OK].



5.3 Search



5.3.1 Use

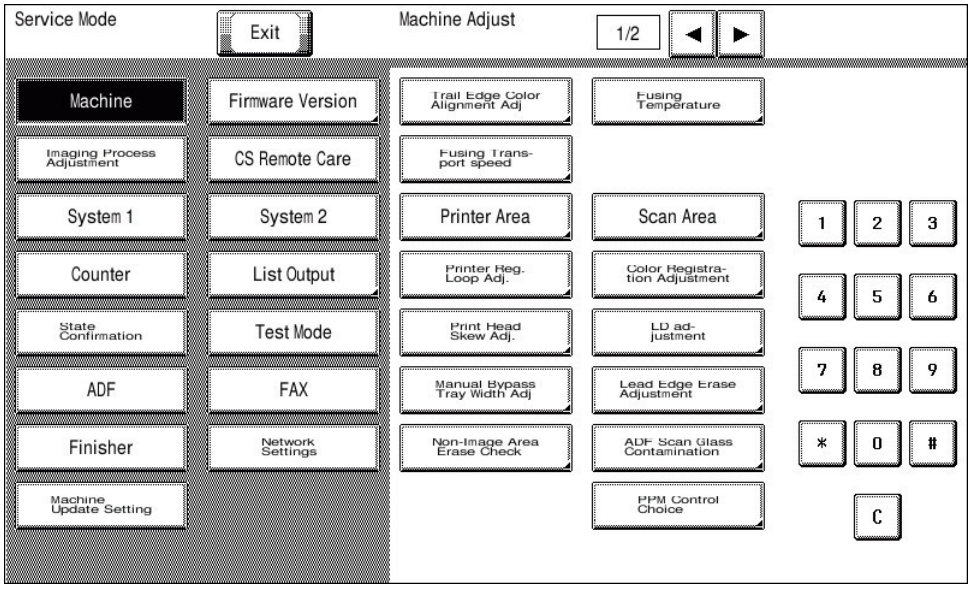
- Searches parameters that include the entered keyword.
- You can display the function screen from the search results.

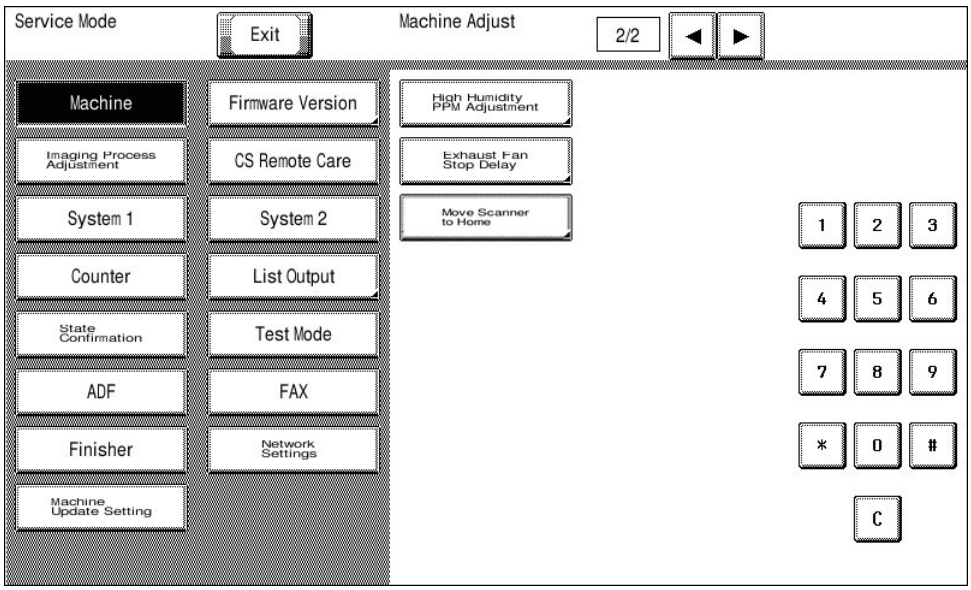
5.3.2 Procedure

1. Touch [Search] at the top of the service mode screen.
2. Enter the desired search keyword.
3. Touch [END].

4. Select the desired function from the displayed search results and touch [Start].
5. The screen for the selected function displays.

5.4 Machine





5.4.1 Trail Edge Color Alignment Adj (bizhub C658/C558/C458)

(1) Use

- To adjust color shift if color shift is found at the trailing edge of either plain paper or thick paper by the comparison of originals and their output.
- Uses this function when color shift occurs at the trailing edge of images.
- Able to make a setting on a process speed basis independently for each paper type of Normal/Thin Paper, Thick 1/1+ and Thick 2/3/4.

NOTE

- **It is not used on bizhub C558/C458.**

(2) Default setting

- 0

(3) Setting range

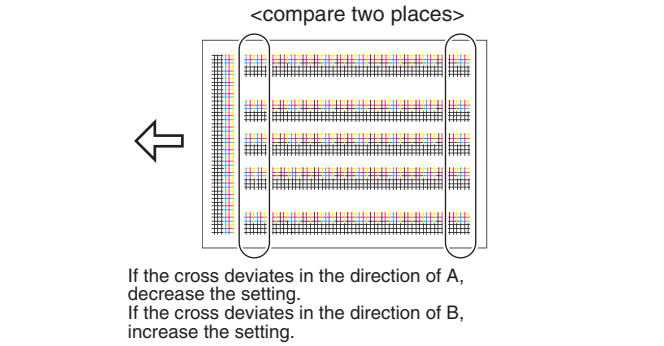
- -5 to 5 (Step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Trail Edge Color Alignment Adj].
3. Load manual bypass tray with A3/11 x 17 or A4/8 1/2 x 11 plain paper.
4. Select the paper type to be adjusted.
5. Press the Start key.
6. Using the printed test pattern, check color shift in the sub scan direction on both leading and trailing edge areas. If color shift is found only around the trailing edge, perform the following adjustment. (If color shift is found on both areas, perform [Color Registration Adjustment].)

7. Using the [+] / [-] key, change the setting value as necessary.
   - If the cross deviates in the direction of A, increase the setting. (Decrease paper transport speed.)
   - If the cross deviates in the direction of B, decrease the setting. (Increase paper transport speed.)
8. Produce another test pattern and make sure that there is no deviation.

Check Procedure



5.4.2 Fusing Temperature

(1) Use

- To adjust individually the temperature of the heating roller for each type of paper, thereby coping with varying fusing performance under changing environmental conditions.
- When fusing performance is poor, or wax streak or offset occurs when the type of paper is changed or environmental conditions change.
- Use when the curling of the paper due to the paper type or environmental change occurred, or when the paper jam, as well as stapling or folding position error occurred due to the curling of the paper.
- By setting the temperature higher (+), gloss of print can be improved.
- By setting the temperature lower (-), exit roller mark can be reduced.

(2) Default setting

- 0

(3) Adjustment range

- bizhub C368/C308/C258

Paper type	Setting range	Step
Plain Paper	-20 °C to +10 °C	5 °C
Thin Paper		
OHP Film		
Thick 1		
Thick 1+		
Thick 2		
Thick 3		
Thick 4		
Post.		
Enve.	-10 °C to +20 °C	
Recycled	-20 °C to +10 °C	

- bizhub C658/C558/C458 (600dpi/1200dpi)

Paper type	Setting range	Step
Plain Paper	-20 °C to +10 °C	5 °C
Thin Paper		
OHP Film		
Thick 1		
Thick 1+		
Thick 2		
Thick 3		
Thick 4		
Post.		
Enve.		

Paper type	Setting range	Step
Recycled		

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Fusing Temperature].
3. Select [600dpi] or [1200dpi].
   NOTE
   - **Only for bizhub C658/C558/C458**
4. Select the paper type.
5. Enter the new setting from the [+] / [-] key.
   - If fusing performance is poor, increase the setting.
   - If wax streaks occur, decrease the setting.
   - If offset is poor, decrease the setting.
   - If curling of the paper occurs, decrease the setting.
6. Touch [END].
7. Return to the basic screen.
8. Output two or three test patterns and check to see whether the image has any problem.
9. Make the adjustment for each type of paper.

5.4.3 Fusing Transport Speed

(1) Use

- To adjust the speed of the fusing motor so as to match the fusing speed with transport speed.
- Brush effect or blurred image is evident as a result of changes in environmental conditions or degraded durability.

(2) Default setting

- 0

(3) Adjustment range

- bizhub C368/C308/C258

Paper type	Setting range	Step
Normal/Thin Paper	-20 to +20	1
Thick 1-4		

- bizhub C458

Paper type	Setting range	Step
Normal/Thin Paper	-20 to +20	1
Thick 1/1+		
Thick 2/3/4		

- bizhub C658/C558

Paper type		Setting range	Step
600dpi	Normal/Thin Paper	-20 to +20	1
	Thick Paper		
1200dpi		-20 to +20	1

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Fusing Transport Speed].
3. Select a processing speed for the mode where a brush effect or a blurred image occurred.
4. Enter the new setting from the 10-key pad.
   - If brush effect is evident, vary the setting value and check for image.
   - If a blurred image occurs, decrease the setting.
5. Touch [END].
6. Return to the basic screen.
7. Check the print image for any image problem.

5.4.4 Heater Control Level (bizhub C458/C368/C308/C258)

(1) Use

- The fluorescent lamp connected to the same power source as the MFP may flicker due to the fusing heater lamp switching On/Off.
- The MFP DC power supply may generate noise due to the fusing heater lamp switching On/Off.
- Control the flicker and noise generation by changing the level of the fusing unit phase control.

NOTE

- **Reducing the control level can cause the DC power supply to generate noise, and increasing the level can cause the fluorescent lamp to flicker.**
- **Whenever changing the control level, specify a level that will reduce the fluorescent lamp flickering and DC power source noise.**

(2) Default setting

- Level 2

- Level 3 (only for EU)

(3) Setting range

- Level 1 to Level 4 (Step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Heater Control Level].
3. Enter the new setting from the [+] / [-] key.
   - When the fluorescent light flickers: Turn down the level. (Example: Level 2 -> Level 1)
   - When there is a noise at power source system such as DC power supply: Turn up the level. (Example: Level 2 -> Level 3 -> Level 4)

5.4.5 Printer Area

(1) Leading Edge Adjustment

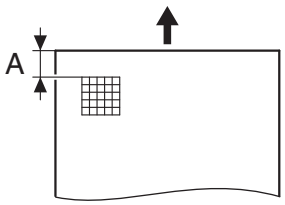
(a) Use

- To vary the print start position in the sub scan direction for each of different paper types. (to adjust the timing where paper is sent out from the registration roller)
- Although the adjustment is made on the manual bypass tray, the adjusted values are reflected to each paper tray.
- The PH unit has been replaced.
- The paper type has been changed.
- The print image deviates in the sub scan direction.
- A faint image occurs on the leading edge of the image.
- This setting can be made independently for plain paper, thin paper, thick 1/1+, thick 2, thick 3, thick 4, OHP film, and envelopes.

(b) Default setting

- 0.0

(c) Setting range



- Width A on the test pattern produced should fall within the following target.

Target	4.2 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(d) Procedure

1. Load manual bypass tray with A3 or 11 x 17 plain paper.
   NOTE
   - **Load tray 1 with thin paper when [Thin Paper] is selected.**
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Leading Edge Adjustment].
4. Select [Leading Edge Adjustment] or [Halftone pattern].
5. Select the [Plain Paper].
6. Press the Start key to let the machine produce a test pattern.
7. Check the dimension of width A on the test pattern.
8. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
9. Press the Start key to let the machine produce a test pattern.
10. Check the dimension of width A on the test pattern.
11. If width A is outside the target, change the setting again and make a check again.
12. If width A falls within the target, touch [END].
13. Following the same procedure, adjust for thin paper, thick 1 to 3, OHP film, and envelope.

(2) Printer Image Centering Side 1

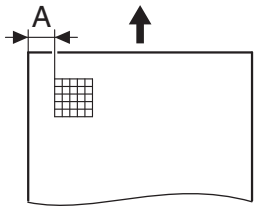
(a) Use

- To vary the print start position in the main scan direction for each paper source.
- The PH unit has been replaced.
- A paper feed unit has been added.
- The print image deviates in the main scan direction.

(b) Default setting

- 0.0

(c) Setting range



- Width A on the test pattern produced should fall within the following target.

Target	3.0 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Area] -> [Printer Image Centering Side 1].
3. Select [Leading Edge Adjustment] or [Halftone pattern].
4. Select the paper source to be adjusted.
5. Press the Start key to let the machine produce a test pattern.
6. Check the dimension of width A on the test pattern.
7. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
8. Press the Start key to let the machine produce a test pattern.
9. Check the dimension of width A on the test pattern.
10. If width A is outside the target, change the setting again and make a check again.
11. If width A falls within the target, touch [END].
12. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 x 11 plain paper for the bypass.)

(3) Leading Edge Adj. Side 2 (Duplex)

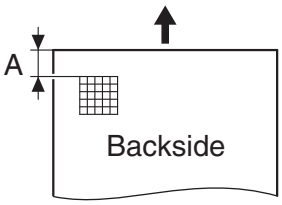
(a) Use

- For individual types of paper, this function allows the adjustment of the image write start position in the sub scan direction on the 2nd side of duplex printing. (to adjust the timing where paper is sent out from the registration roller)
- Although the adjustment is made on the manual bypass tray, the adjusted values are reflected to each paper tray.
- This adjustment is made when the image on the 2nd side of paper deviates from the original position in the sub scan direction.
- This adjustment can be made independently for each of plain paper, thin paper, thick paper 1/1+, thick paper 2, and thick paper 3.

(b) Default setting

- 0.0

(c) Setting range



- Width A on the test pattern produced should fall within the following target.
- For measurement, use the image produced on the backside of the test pattern.

Target	4.2 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(d) Procedure

1. Load manual bypass tray with A3 or 11 x 17 plain paper.
   NOTE
   - **Load tray 1 with thin paper only when [Thin Paper] is selected.**
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Leading Edge Adj. Side 2 (Duplex)].
4. Select [Leading Edge Adjustment] or [Halftone pattern].
5. Select the [Plain Paper].
6. Press the Start key to let the machine produce a test pattern.
7. Check the dimension of width A on the test pattern.
8. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
9. Press the Start key to let the machine produce a test pattern.
10. Check the dimension of width A on the test pattern.
11. If width A is outside the target, change the setting again and make a check again.
12. If width A falls within the target, touch [END].

13. Following the same procedure, adjust for thin paper and thick paper.

(4) Prt. Image Center. Side 2 (Dup)

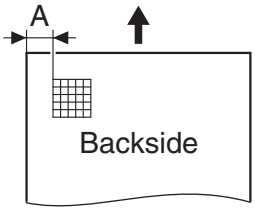
(a) Use

- To vary the print start position in the main scan direction for each paper source in the 2-Sided mode.
- The image on the backside of the 2-sided copy deviates in the main scan direction.

(b) Default setting

- 0.0

(c) Setting range



- Width A on the test pattern produced should fall within the following target.
- For measurement, use the image produced on the backside of the test pattern.

Target	3.0 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Area] -> [Prt. Image Center. Side 2 (Dup)].
3. Select [Leading Edge Adjustment] or [Halftone pattern].
4. Select the paper source to be adjusted.
5. Press the Start key to let the machine produce a test pattern.
6. Check the dimension of width A on the test pattern.
7. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
8. Press the Start key to let the machine produce a test pattern.
9. Check the dimension of width A on the test pattern.
10. If width A is outside the target, change the setting again and make a check again.
11. If width A falls within the target, touch [END].
12. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 x 11 plain paper for the manual bypass tray.)

(5) Paper Feed Direction Adj.

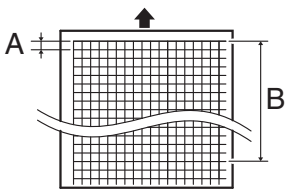
(a) Use

- To synchronize the paper transport speed with the image writing speed.
- [Sub Scan Zoom Adj.] becomes necessary.
- The print image on the copy distorts (stretched, shrunk).
- When the print image on the copy is stretched in the sub scan direction.
- This setting can be made independently for normal/thin paper, thick 1/1+, thick 2, thick 3, and thick 4.

(b) Default setting

- 0

(c) Setting range



- Width A and width B on the test pattern produced should fall within the following target.
  NOTE
  - **Width A: equivalent to one grid**
  - **Width B: equivalent to 48 grids**

Target	A: 8.13 ±0.2 mm
	B: 390.14 mm ±2.0 mm
Setting range	A: -7 to +7
	B: -7 to +7

- Make adjustment in the same way after changing the paper to thick paper.

(d) Procedure

1. Load manual bypass tray with A3 or 11 x 17 plain paper.
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].
4. Select [Lattice pattern] or [Halftone pattern].
5. Select [Normal/Thin Paper].
6. Press the Start key to let the machine produce a test pattern.
7. Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern.
8. Touch [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].
9. If width of A or B falls outside the target, change the setting using the [+] / [-] keys.
    - If width A or B is longer than the target, make the setting value smaller than the current one.
    - If width A or B is shorter than the target, make the setting value greater than the current one.
10. Press the Start key to let the machine produce a test pattern again.
11. Check width A and width B on the test pattern.
12. If width A or B falls outside the target, change the setting value and make a check again.
13. If width A falls within the target, touch [END].
14. Following the same procedure, adjust for thick paper.

(6) Tray Printing Position: Tip

(a) Use

- To change and adjust image printing position at vertical scanning direction by each feed. (to adjust the timing starting from the roller connection up to start of transfer output). It is not applicable in case the job is fed at re-feed.
- To be used when [Printer Area-Leading Edge Adjustment] is not enough for full adjustment (as such case that image printing position gets deviated due to pattern of each feed.)
- Setting is available according to feed of 1st. Short (the length of paper at vertical scanning direction is under 276.4 mm), 1st. Long (the length of paper at vertical scanning direction is over 276.4 mm), 2nd, 3rd, 4th and Manual.
- Adjustment is made for plain paper.

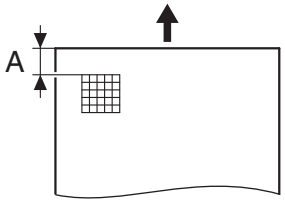
(b) Default setting

- 0.0

(c) Setting range

NOTE

- **[Printer Area-Leading Edge Adjustment] should be made within target.**
- **Image printing position at vertical scanning direction is adjusted based on the combination value of this setting figure and [Printer Area-Leading Edge Adjustment] figure. In case the value is larger than +3.0mm or less than -3.0mm, the figure should be rounded to 3.0mm or -3.0mm.**



- **Width A on the test pattern produced should fall within the following target.**

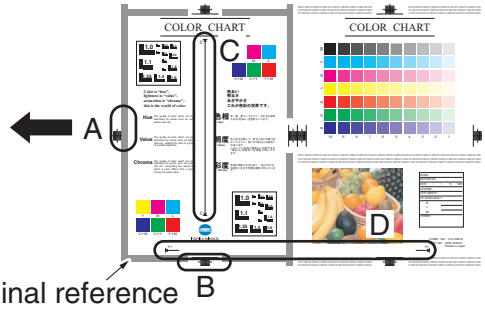
Target	4.2 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Area] -> [Tray Printing Position: Tip].
3. Set plain paper to the targeted tray, and select the feed tray.
4. Press the Start key to let the machine produce a test pattern.
5. Check the dimension of width A on the test pattern.
6. If width A falls outside the target, change the setting using the [+] / [-] key.
    - If width A is longer than the target, make the setting value smaller than the current one.
    - If width A is shorter than the target, make the setting value greater than the current one.
7. Press the Start key to let the machine produce a test pattern.
8. Check the dimension of width A on the test pattern.
9. If width A is outside the target, change the setting again and make a check again.
10. If width A falls within the target, touch [END].

5.4.6 Scan Area

- Use the following color chart for the adjustment of the scanner section.
- If the color chart is not available, a scale may be used instead.



Adjustment item	Reference
A: Image Position: Leading Edge	I.5.4.6 (1) Image Position: Leading Edge
B: Scanner Image Side Edge	I.5.4.6 (2) Scanner Image Side Edge
C: Main Scan Zoom Adj.	I.5.4.6 (3) Main Scan Zoom Adj.
D: Sub Scan Zoom Adj.	I.5.4.6 (4) Sub Scan Zoom Adj.

(1) Image Position: Leading Edge

(a) Use

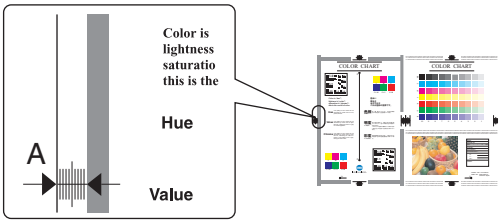
- To adjust variations in mounting accuracy and sensitivity of the scanner home sensor and in mounting accuracy of the original width scale by varying the scan start position in the sub scan direction.
- When the original glass is replaced.
- The CCD board has been replaced.
- The scanner home sensor has been replaced.

(b) Default setting

- 0.0

(c) Setting range

Enlarged view of the color chart



- A width on the color chart and one on the test pattern are measured and adjusted so that the difference of A width satisfies the target shown below.
- An adjustment must have been completed correctly of [Leading Edge Adjustment] of the [Printer Area].

Target	A: ± 1.5 mm
Setting range	-3.0 mm to +3.0 mm (in 0.1 mm increments)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Image Position: Leading Edge].
3. Position the color chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a copy.
5. Check point A on the test pattern.
6. If width A on the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the copy image is less than the target, increase the setting value.
   - If the copy image exceeds the target, decrease the setting value.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

(2) Scanner Image Side Edge

(a) Use

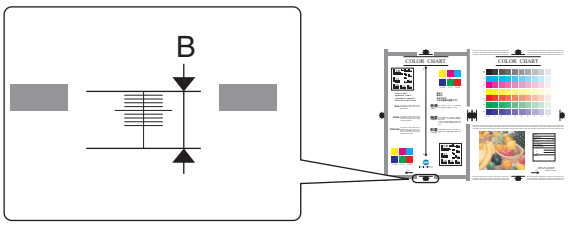
- To adjust part-to-part variations in accuracy of scanner parts and their mounting accuracy by varying the scan start position in the main scan direction.
- The eMMC board has been replaced.
- When the original glass is replaced.
- The CCD board has been replaced.

(b) Default setting

- 0.0

(c) Setting range

Enlarged view of the color chart



- B width on the color chart and one on the test pattern are measured and adjusted so that the difference of B width satisfies the target shown below.
- An adjustment must have been completed correctly of [Printer Image Centering Side 1] of [Printer Area].

Target	Width B: ± 1.5 mm
Setting range	-5.7 mm to +5.7 mm (in 0.1 mm increments)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Scanner Image Side Edge].
3. Position the color chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a copy.
5. Check point B on the image of the test pattern.
6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the copy image is less than the target, increase the setting value.
   - If the copy image exceeds the target, decrease the setting value.
7. Press the Start key to make a test pattern.
8. Check point B of the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

(3) Main Scan Zoom Adj.

(a) Use

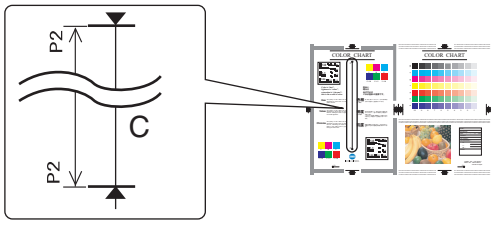
- To adjust the zoom ratio in the main scan direction for the scanner section.
- The eMMC board has been replaced.
- The CCD board has been replaced.

(b) Default setting

- 1.000

(c) Setting range

Enlarged view of the color chart



- Measure C width on the color chart and on the test pattern, and adjust the gap to be within the following target.
- An adjustment must have been completed correctly of [Paper Feed Direction Adj.] of [Printer Area].

Target	Width C: ± 1.0 mm
Setting range	0.990 to 1.010 (steps: 0.001)

* Standard size when using a scale: 200.0 mm

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.].
3. Position the color chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a test pattern.
5. Check the C width on the image of the copy.
6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the C width on the copy sample is less than one on color chart, increase the setting.
   - If the C width on the copy sample exceeds one on color chart, decrease the setting.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

(4) Sub Scan Zoom Adj.

(a) Use

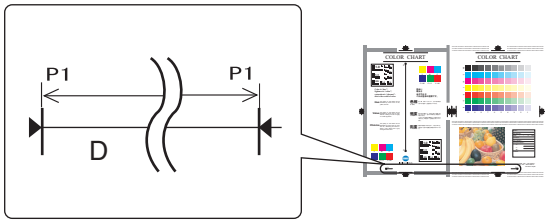
- To adjust the zoom ratio in the sub scan direction for the scanner section.
- The LED exposure unit or the scanner motor has been replaced.

(b) Default setting

- 1.000

(c) Setting range

Enlarged view of the color chart



- Measure D width on the color chart and on the test pattern, and adjust the gap to be within the following target.
- An adjustment must have been completed correctly of [Paper Feed Direction Adj.] of [Printer Area].

Target	Width D: ± 1.5 mm
Setting range	0.990 to 1.010 (steps: 0.001)

* Standard size when using a scale: 300.0 mm

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Sub Scan Zoom Adj.].
3. Position the color chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a test pattern.
5. Check the D width on the image of the test pattern.
6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the D width on the copy sample is less than one on color chart, increase the setting.
   - If the D width on the copy sample exceeds one on color chart, decrease the setting.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

5.4.7 Printer Reg. Loop Adj.

(1) Use

- To set the correction value of the paper loop length for each process speed of tray 1, tray 2-4 and LCT, manual or Duplex.
- To adjust the length of the loop formed in paper before the registration rollers.
- Use “Paper Passage” for paper passage check.
- When a paper skew occurs or paper misfeed occurs.

(2) Setting range

- The adjustable range is different depending on paper source and paper type.

bizhub C658

		Tray 1	2-4th Step/LCT	manual	Duplex
600dpi	Normal/ Thin Paper	-11 to +7	-11 to +7	-10 to +8	-9 to +10
	Thick 1/1+	-11 to +7	-11 to +7	-10 to +8	-9 to +10
	Thick 2/3/4	-11 to +7	-11 to +7	-10 to +8	-9 to +10
1200dpi		-11 to +7	-11 to +7	-10 to +8	-9 to +10

bizhub C558

		Tray 1	2-4th Step/LCT	manual	Duplex
600dpi	Normal/ Thin Paper	-11 to +7	-11 to +7	-11 to +7	-12 to +8
	Thick 1/1+	-11 to +7	-11 to +7	-11 to +7	-12 to +8
	Thick 2/3/4 *	Not used	Not used	Not used	Not used
1200dpi		-11 to +7	-11 to +7	-11 to +7	-12 to +8

- *: The settings made at [Thick 1/1+] are available to adjustment at [Thick 2/3/4].

bizhub C458

		Tray 1	2-4th Step/LCT	manual	Duplex
600dpi	Normal/ Thin Paper	-11 to +7	-11 to +7	-11 to +7	-12 to +8
	Thick 1/1+	-11 to +7	-11 to +7	-11 to +7	-12 to +8
	Thick 2/3/4	-11 to +7	-11 to +7	-11 to +7	-12 to +8
1200dpi *		Not used	Not used	Not used	Not used

- *: The settings made at [Thick 2/3/4] are available to adjustment at [1200dpi].

bizhub C368/C308/C258

	Tray 1	2-4th Step/LCT	manual	Duplex
Normal/Thin Paper	-11 to +7	-11 to +7	-11 to +7	-12 to +8
Thick 1/1+	-11 to +7	-11 to +7	-11 to +7	-12 to +8
Thick 2/3/4 *	Not used	Not used	Not used	Not used

- *: The settings made at [Thick 1/1+] are available to adjustment at [Thick 2/3/4].

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Reg. Loop Adj.].
3. Select a paper source and a processing speed where the settings are made by touching the corresponding keys.
4. Using the [+] / [-] keys, vary the setting value.
   - To decrease the loop amount: Decrease the setting value.
   - To increase the loop amount: Increase the setting value.

5.4.8 Color Registration Adjustment

(1) Cyan, Magenta, Yellow

(a) Use

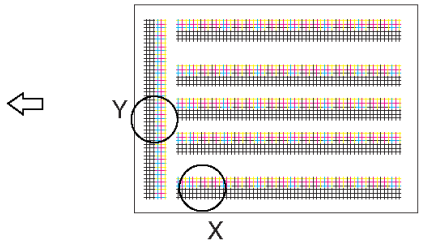
- To adjust color shift if there is any when comparing the original with copy of the plain or thick paper.
- To correct any color shift.
- This setting can be made independently for plain paper, thick 1/1+, thick 2, thick 3, and thick 4.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Color Registration Adjustment].
3. Load manual bypass tray with A3/11 x 17 or A4/8 1/2 x 11 plain paper.
4. Press the Start key.
5. On the test pattern produced, check for deviation between the black line and the line of each color at positions X and Y.
6. Select the color to be adjusted.
7. Using the [+] / [-] key, change the setting value as necessary. (At this time, only the line of the selected color moves.)
   - If the cross deviates in the direction of A, increase the setting.
   - If the cross deviates in the direction of B, decrease the setting.
8. Produce another test pattern and make sure that there is no deviation.

<Check Procedure>

Check point X, Y



Adjustment for X direction:
Check point X

If the cross deviates in the direction of A, increase the setting.
If the cross deviates in the direction of B, decrease the setting.

Direction of A

Direction of B



Adjustment for Y direction:
Check point Y

If the cross deviates in the direction of A, increase the setting.
If the cross deviates in the direction of B, decrease the setting.

Direction of A

Direction of B



5.4.9 Print Head Skew Adj.

(1) Print Head Skew Adj.

(a) Use

- To display the default position of the skew correction motor.
- In this machine, it is not unable to enter the adjusting value.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Print Head Skew Adj.] -> [Print Head Skew Adj.].
3. Check the skew adjustment value for each color.
4. Touch [END].

(2) Print Head Skew Reset

(a) Use

- Returns the skew correction motor to the default position and clear the backup copies of the cumulative skew amount.
- To be used when the backup position information of settings in the machine is lost due to operations such as replacement of the EEPROM.
- After addressing the malfunction code P-14 and completing an action to the problem, perform this function.
- Use this function when the current skew correction motor's position becomes unavailable due to the skew adjustment interrupted by the door being opened or the main power switch being turned OFF.

(b) Procedure

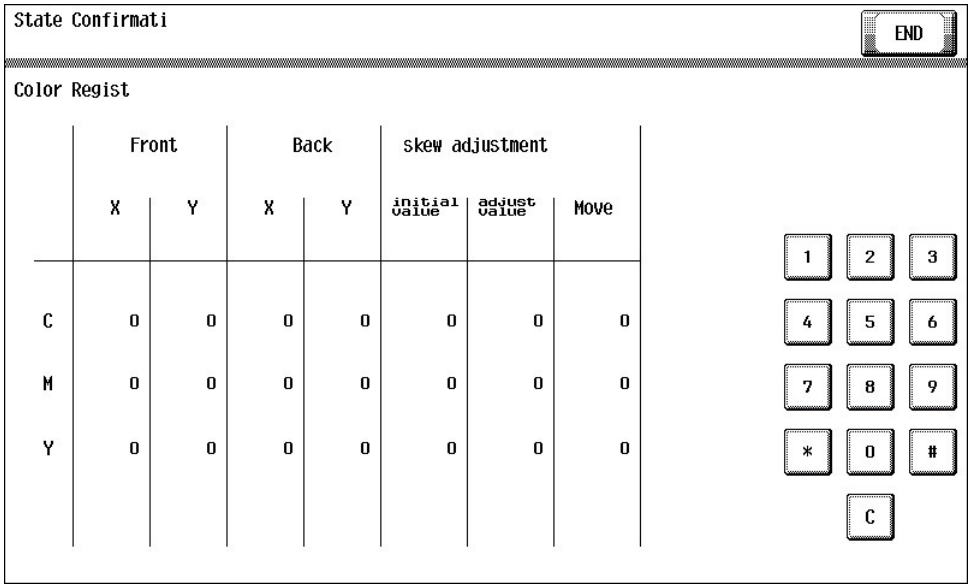
1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Print Head Skew Adj.] -> [Print Head Skew Reset].
3. Touch the start key and execute the print head skew reset.

NOTE

- **After the print head skew reset is complete, be sure to perform [Initialize + Image Stabilization].**

(3) Skew adjustment result on the panel

- Skew adjustment result is provided in [Skew Adjust Value], which is selected as follows: [Service Mode] -> [State Confirmation] -> [Color Regist].



Skew Adjust Value	Contents
Default	Displays the initial position of the skew correction.
adjust value	Displays the final skew correction position that was obtained after finishing the image stabilization control.
Move	Displays how much skew adjust value changed in the previous image stabilization control.

5.4.10 LD adjustment

(1) LD Timing Adj.

NOTE

- **It is not used on bizhub C458/C368/C308/C258.**

(a) Use

- It displays the emission delay value between two laser diode.
- This setting is made after the PH unit is replaced.
- This adjustment is made when the backup of information on position settings is lost.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [LD adjustment] -> [LD Timing Adj.].
3. Check the LD emission delay value for each color.
4. Touch [OK].

(2) LD 1/2 Balance Adj.

NOTE

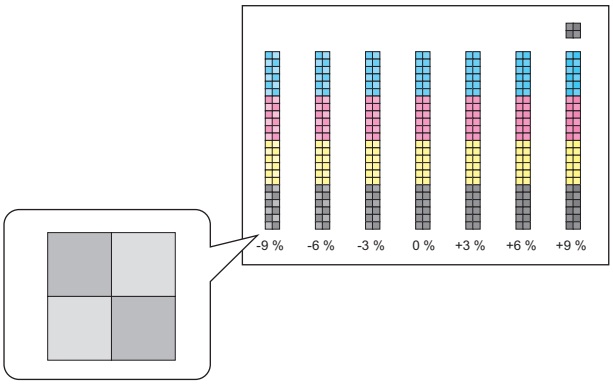
- **It is not used on bizhub C458/C368/C308/C258.**

(a) Use

- This function adjusts the LD lightness balance between the two LDs to correct the difference of LD lightness between the LDs.
- This setting is made after the PH unit or eMMC board is replaced.
- This adjustment is made to prevent uneven density in highlighted halftone area processed with error diffusion being caused by inappropriate laser intensity.
- To eliminate the differences in light intensity between LD1 and LD2, adjust the light intensity of LD2 to that of LD1 (the light intensity of LD1 is fixed).

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.].
3. Select [For adjustment] and press Start key.
4. Patterns are output with LD2 light intensity changed on the basis of LD1.



5. Each pattern has four squares. The two small squares diagonal to each other are printed with the same LD. (The pair of small squares where image density change corresponds to LD2.)
6. From the test pattern, select the pattern where the least density difference appears between LD1 and LD2 for each color.
7. Enter the adjustment value corresponding to the pattern you selected (see the above illustration) or a value close to the adjustment value using the 10-key pad on the panel.
8. Select [For effect confirmat.] and press Start key.
9. Confirm with the test pattern that is output for confirmation.
10. Touch [OK].

(3) LD Light Width Adjustment

(a) Use

- To fine-adjust the light-emitting time of the laser that is scanned by the polygon motor.
- Use when the reproducibility of thin line is reduced.

NOTE

- **Adjustment value of this setting will be reflected by the image stabilization control.**

(b) Default setting

- +3

(c) Setting range

- 0 to +6 (Step: 1)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [LD adjustment] -> [LD Light Width Adjustment].
3. Enter the new setting from the [+] / [-] key.
   - Increase the value: Light-emitting time will be lengthened.
   - Decrease the value: Light-emitting time will be shortened.

5.4.11 Manual Bypass Tray Width Adj

(1) Use

- To set the maximum width and the minimum width for the bypass paper width detection resistor of the manual bypass guide.
- Use when the bypass paper width detection resistor of the manual bypass guide has been changed.
- Use when a false paper size is displayed when the manual bypass is used.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Manual Bypass Tray Width Adj].
3. Touch [Max. Width].
4. Load the bypass tray with paper having a width of 297 mm.
5. Press the Start key and check that the results are [OK].
6. Touch [Min. Width.].

7. Load the bypass tray with paper having a width of 110 mm.
8. Press the Start key and check that the results are [OK].
   * Make the adjustment again if the results are [NG].

5.4.12 Lead Edge Erase Adjustment

(1) Use

- To set the leading edge erase amount of the paper.
- Upon user requests, it is possible to specify the void area where image is not printed along the leading edge.
- This adjustment can be made individually for First Side, Second Side, Thin Paper Front, and Thin Paper Back.

(2) Default setting

(a) First Side/Second Side

- 4 mm

(b) Thin Paper Front/Thin Paper Back

- 5 mm

(3) Setting item

(a) First Side/Second Side

- 4 mm
- 5 mm
- 7 mm

NOTE

- **When "4 mm" is selected, 4.2 mm is the actual amount to be erased in print based on the control system of the machine.**

(b) Thin Paper Front/Thin Paper Back

- 4.0 mm to 10.0 mm (Step: 1.0 mm)

5.4.13 Non-Image Area Erase Check

(1) Use

- The non-image area erase function may not work properly under bright light source. Incoming light quantity is checked to verify that the non-image area erase function can work properly under the environment.
- Verification results are shown as follows:

OK	Works properly.
NG1	Works properly. However, data that may interfere with the non-image area erase function was found. This function may not work well with dark original.
NG2	Data that may interfere with the non-image area erase function was found.

- Use this feature when installing a new machine or reinstalling a machine in a new place.
- Use this feature when the non-image area erase function fails to work properly due to the changes of the surrounding environment at the installation site.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Non-Image Area Erase Check].
3. Press the Start key to start a check.
   NOTE
   - **Before the check, make sure that the DF or original cover is completely opened. In addition, make sure that no scratch or stain exists on the original glass.**
4. Check the result is "OK."
   * If the check result is "NG1" or "NG2," reinstall the machine in another place or adjust the orientation of the machine to reduce light incidence on the machine. Then, perform the check again.

5.4.14 ADF Scan Glass Contamination

(1) Use

- To check the stain on the ADF scan glass and display the result.
  NOTE
  - **If the result is NG, "NG1" or "NG2" is displayed. NG1 corresponds to the detection of stain on the front side and NG2 corresponds to that on the back side.**
- To manually perform the pre-detection of the stain which is normally conducted when the main power switch is turned ON, recovering from the sleep/low power mode, etc.
- [ADF Scan Glass Contamination] will be conducted with the detection level set by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [ADF Scan Glass Contamin. Sensitivity]. When the above setting is set to "Not Set", "NG1" or "NG2" will be displayed even though the pre-detection is conducted.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [ADF Scan Glass Contamination].
3. Press the start key to start the pre-detection.
4. Check to make sure that "OK" is displayed for the result.

- * When the result says "NG1" or "NG2", clean the glass and check again.

5.4.15 PPM Control Choice

(1) Use

- To improve productivity when printing on thin paper.
- To give a higher priority to productivity than to fusing performance, change the setting to “100 %.”

(2) Default setting

- 70 %

(3) Functions

- 100%
- 70%

5.4.16 High Humidity PPM Adjustment

(1) Use

- If a paper curl occurs in a high humidity environment, suppress the curl by making paper passing intervals wider.

(2) Default setting

- 0

(3) Setting range

Paper Type	Setting range	Step
Thin Paper	0 to +2	1
Normal		
Recycled Paper		

(4) Procedure

1. Touch these keys in this order: [Machine] -> [High Humidity PPM Adjustment].
2. Enter the new setting from [+] / [-].
   - 0: Productivity 100% - No change in PPM (equivalent to the standard speed/product speed)
   - 1: Productivity 70% - The paper feeding interval becomes wide and PPM decreases.
   - 2: Productivity 50% - The paper feeding interval becomes much wider and PPM decreases further.
   - For a thin paper, follow the set value in this order: [Service Mode] -> [Machine] -> [PPM Control Choice].
3. Touch [END].
4. Check the print image for any image problem.

5.4.17 Move Scanner to Home

(1) Use

- Move the LED exposure unit to the scanner packing brackets mounting position (home) to prevent any mechanical damages when moving the main body.
  NOTE
  In the following case, do not move it to the home position.
  - Occurrence of troubles related to IR

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Move Scanner to Home].
3. Touch [Start] to shift the standby position of the scanner slider to the home position.
4. Turn OFF the main power switch.
5. Attach the scanner packing brackets to fix the scanner.

5.5 Firmware Version

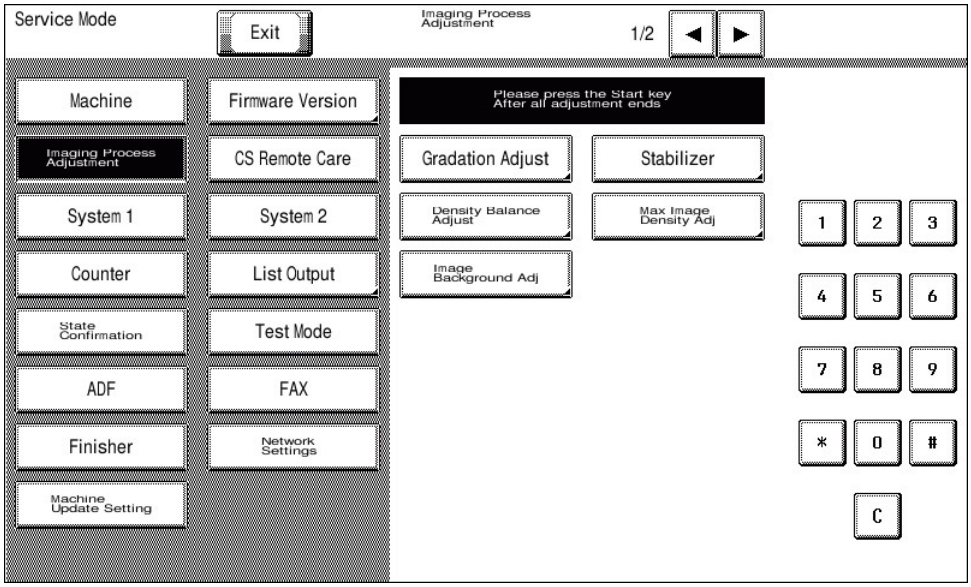
5.5.1 Use

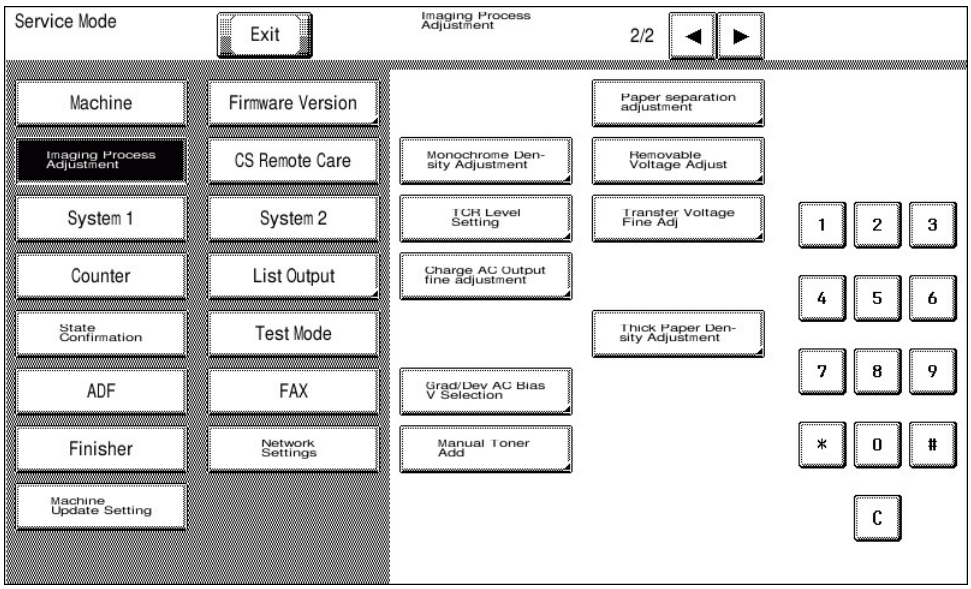
- To check the firmware version.
- Use when the firmware is upgraded.
- When the firmware is upgraded or PWB is replaced.

5.5.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [Firmware Version].
3. Touch the [↑]/[↓] key to check the firmware version.

5.6 Imaging Process Adjustment





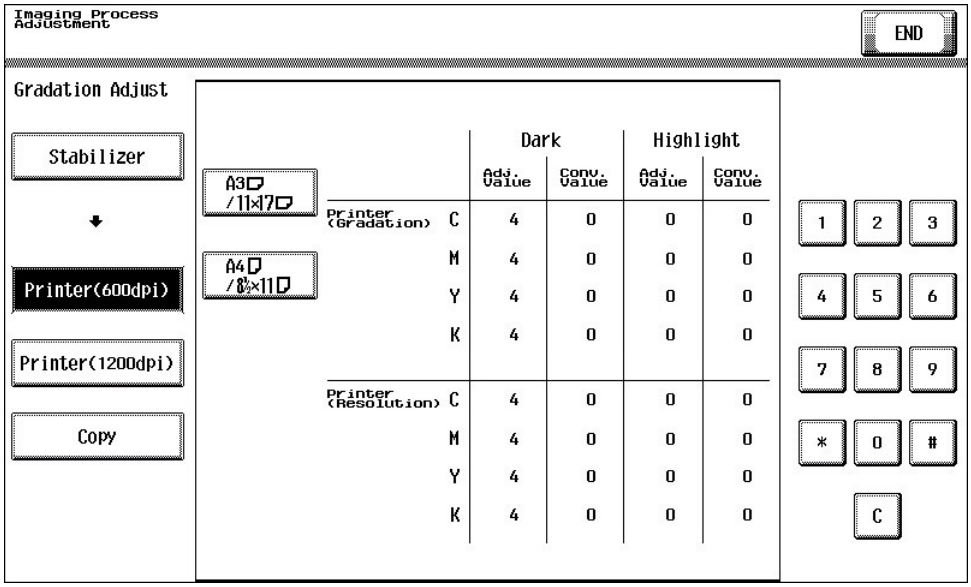
5.6.1 Gradation Adjust

(1) Use

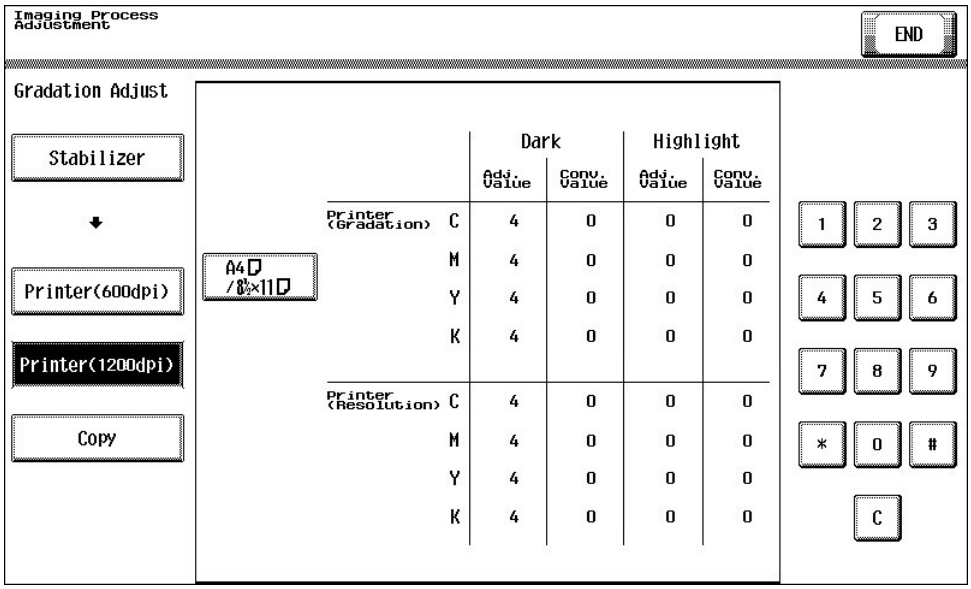
- To make an automatic adjustment of gradation based on the test pattern produced and the readings taken by the scanner.
- Color reproduction performance becomes poor.
- The drum unit, developing unit, or transfer belt unit has been replaced.
- The Adj. Values of “Dark” and “Highlight” shown on the gradation adjust screen represent how much corrections are made to produce an ideal image output. Conv. Value shows the difference from the ideal image density.
- The closer the Conv. Value to 0, the more ideal the image.

Mode key	Description
Stabilizer	• The image stabilization is performed. The controller reflects the image stabilization result in the gradation adjustment table to update the table. • After the image stabilization is performed, [Printer] / [Copy] key will become selectable.
Printer (600dpi)	Detect the gradation reproducibility of the gradation reproduction method (gradation screen, resolution screen) for 600dpi print mode, and correct the gradation adjustment table.
Printer (1200dpi)	Detect the gradation reproducibility of the gradation reproduction method (gradation screen, resolution screen) for 1200dpi print mode, and correct the gradation adjustment table.
Copy	Detect the gradation reproducibility of the following gradation reproduction methods, and correct the gradation adjustment table. • Compression screen (reduce the data volume by 1bit from 8bit of each color while maintaining above a certain quality of characters/images) • FFET (reproduce the character edges smoothly without using the screen)

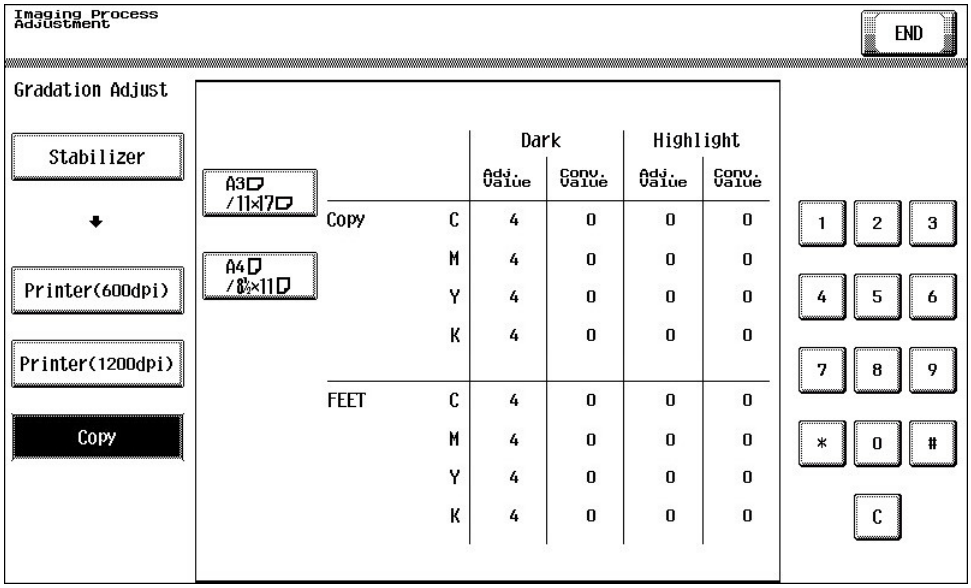
Example of the gradation adjustment screen (Printer-600dpi).



Example of the gradation adjustment screen (Printer-1200dpi).



Example of the gradation adjustment screen (Copy).



(2) Procedure

NOTE

- **When executing the gradation adjustment, make sure to use the white paper for color copy.**

1. Call the Service Mode to the screen.

2. Touch these keys in this order: [Image Process Adjustment] -> [Gradation Adjust].
3. Touch [Stabilizer] and the Start key to perform image stabilization.
   NOTE
   - **Before executing Gradation adjust, be sure to perform Stabilizer.**
4. Select Print or Copy and select the paper size on which test pattern is printed.
   NOTE
   - **When [Printer (1200 dpi) is specified, [A3S/11x17S] not displayed.**
5. Press the Start key to let the machine produce a test pattern.
   NOTE
   - **When the image stabilization performed in step 3 is NG, the Start key stops functioning.**
   - **When one of the alert codes, P-5, P-6, P-7, P-8, P-9, and P-28 is on the screen and [Printer] is selected, the Start key stops functioning.**
   - **When "Printer (1200 dpi)" is specified, two sheets of A4 or 8-1/2x11 paper will be output.**
6. Place the test pattern produced on the original glass.
   NOTE
   - **Depending on the size of the test pattern, it is set in a different position. Set the test pattern according to the instructions displayed on the control panel.**
7. Place ten blank sheets of paper on the test pattern and lower the original cover.
8. Press the Start key. (The machine will then start scanning the test pattern.)
9. Touch [OK] and repeat steps from 4 through 8 twice. (a total of three times)
10. Touch [Gradation Adjust] to display the Adj. Values and Conv. Values of each color (C, M, Y and K) for Dark and Highlight.
11. Use the following procedures to check the Conv. Value.

NOTE
- **Dark: 0 ± 100 and Highlight: 0 ± 60: It completes the adjustment procedure.**
- **If neither Dark nor Highlight falls outside the ranges specified above: Perform steps from 4 to 8.**
- **If the convergence falls within the specified range after the second Gradation Adjustment, further adjustment may not be necessary.**

- If a fault is detected, “0” is displayed for all values. In that case, after turning off the main power switch, turn it on again more than 10 seconds after and then make the gradation adjustment again.
- If either dark or highlight still remains outside the specified ranges perform Max Image Density Adj.
- If a total of four sequences of gradation adjust do not bring the values into the specified range, check the image.
- If the image is faulty, perform the troubleshooting procedures for image problems.

5.6.2 Stabilizer

(1) Stabilization Only

(a) Use

- The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
- Use if an image problem persists even after gradation adjustment has been executed.
- When [Max Image Density Adj] and [Image Background Adj] of Service Mode are changed.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Stabilizer].
3. Touch [Stabilization Only].
4. Press the Start key to start Stabilizer.
   The Start key turns orange and stays lit up orange during the Stabilizer sequence.
5. Stabilizer is completed when the Start key turns blue.

(2) Initialize+Image Stabilization

(a) Use

- To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
- Use if an image problem persists even after [Gradation Adjustment] has been executed.
- Use if tone reproduction and maximum density are faulty even after image stabilization has been executed.
- When color shift correction is needed again after the machine maintenance.
- After executing the print head skew reset.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Stabilizer].
3. Touch [Initialize+Image Stabilization].
4. Press the Start key to start Stabilizer.
   The Start key turns orange and stays lit up orange during the Stabilizer sequence.
5. Stabilizer is completed when the Start key turns blue.

5.6.3 Density Balance Adjust (bizhub C658/C558/C458)

(1) Use

- To adjust the density balance of the main scanning direction by scanning the output test pattern.
- The correction value adjusted by this function is applied to the following:

Function	Menu	Correction value adjusted items
Copy function	[Original Type]	• [Photo-Printed] • [Photo-PhotoPaper]

Function	Menu	Correction value adjusted items
Utility mode	[User Settings] -> [Printer Settings] -> [Basic Settings] -> [Color Setting]	• [Document] • [Photo] • [DTP] • [Web]
Print function (printer driver settings)	[Printer Settings] -> [Quality] -> [Color Setting]	

(2) Procedure

1. Call the Service Mode to the screen.
2. Select [Printer (resolution)] or [Printer (Gradation)].
3. Select the color to be corrected.
4. Load one of Tray 1, Tray 2, Tray 3, and Tray4 with A4 paper. (Load one of them with Letter only if [Marketing Area] is [US].)
5. Press the Start key to let the machine produce a test pattern.
6. Place the test pattern produced on the original glass.
7. Press the Start key and scan the test pattern.
8. If the scanning finishes successfully, start the 2nd scanning following the instruction on the control panel.
9. Set the test pattern rotated by 180 degrees on the original glass.
10. Press the Start key and scan the test pattern.
11. If the scanning finishes successfully, press [Print Test Pattern] to output the adjusted test pattern.
12. Check the adjusted test pattern.
13. To apply the adjusted correction value, press [Reflect Adj Values], then [Reflect] and [OK].

NOTE

- **Select [Do Not Reflect] and press [OK] not to apply the adjusted correct value. In this case, the corrected value is not applied but stored.**
- **Touching [Initialization] clears a stored correction value.**

5.6.4 Max Image Density Adj

(1) Use

- To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to paper through auxiliary manual fine-adjustment of gamma of each color after gradation adjust.
- An image quality problem is not corrected even after gradation adjust has been run.

(2) Default setting

- 0

(3) Setting range

- -10 to +10 (step: 1 *)
  *: 1 step corresponds to 0.03 in density difference.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Max Image Density Adj].
3. Select [Copy] or [Printer].
4. Select the color to be adjusted.
5. Enter the new setting from the 10-key pad and [+/-].
   - To increase the maximum amount of toner sticking, increase the setting value.
   - To decrease the maximum amount of toner sticking, decrease the setting value.
6. Touch [END] to return to the [Imaging Process Adjustment] menu screen.
7. Touch [Stabilizer].
8. Touch [Stabilization Only].
9. Press the Start key to validate the adjustment value.
10. Check the print image for any image problem.

NOTE

- **If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.**

5.6.5 Image Background Adj

(1) Use

- To adjust the highlight portion (fog level) to the target reproduction level by making an auxiliary manual fine-adjustment of γ of each color after gradation adjust.
- Use when a foggy background occurs due to a printer problem.

(2) Default setting

- 0

(3) Setting range

- -5 to +5 (step: 1*)
  *: 1 step corresponds to 10 V.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Image Background Adj].
3. Select the color to be adjusted.
4. Enter the new setting from the 10-key pad and [+/-] key.

- To make the background level foggier, decrease the setting value.
- To make the background level less foggy, increase the setting value.

5. Touch [END] to return to the [Imaging Process Adjustment] menu screen.
6. Touch [Stabilizer].
7. Touch [Stabilization Only].
8. Press the Start key to validate the adjustment value.
9. Check the print image for any image problem.

NOTE

- **If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.**

5.6.6 Paper Separation Adjustment

(1) Use

- By changing the period between the activation of the registration roller and the 2nd image transfer output, the paper separation position can be adjusted for the 1st and 2nd sides of paper.
- To ensure proper balance between paper separating and image transferring performances by varying the paper separation position applied for duplex printing of thin paper (52 to 59 g/m ^{2}) in hot and humid conditions.

(2) Default setting

- 0

(3) Setting range

- -10 mm to +10 mm (step: 0.1 mm)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Paper separation adjustment].
3. Select [First Side], [Second Side], [Thin Paper Front] or [Thin Paper Back].
4. Enter the new setting from the [+] / [-] key.
   - Priority on paper separation performance: Increase the setting value
   - Priority on image transfer performance: Decrease the setting value
5. Touch [END] to validate the setting value.
6. Check the print image for any image problem.

5.6.7 Monochrome Density Adjustment

(1) Use

- To fine-adjust the density of the printed image for a black print.
- To vary the density of the printed image of a black print.

(2) Default setting

- 0

(3) Setting range

- -2 to +2 (step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Monochrome Density Adjustment].
3. Touch [Lighter] or [Darker] as necessary to correct the image density.
   - If the black is light, touch the Darker key.
   - If the black is dark, touch the Lighter key.
4. Touch [END] to validate the setting value.

5.6.8 Removable Voltage Adjust

(1) Use

- To allow the basic charge neutralizing voltage to be adjusted.
- To prevent separation failure (jam, paper conveyance failure) that may occur when paper other than recommended one is used by adjusting the neutralization voltage to the one that suits the type of paper the user uses.

(2) Default setting

- Auto

(3) Setting range

- -3 to +3 (Step: 1*)
  *1: step is equivalent to 500 V.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Removable Voltage Adjust].
3. Select [First Side], [Second Side], [Thin Paper Front] or [Thin Paper Back].
4. Enter the new setting from the [+] / [-] keys.
   - To increase the neutralization voltage, increase the setting value.
   - To decrease the neutralization voltage, decrease the setting value.

5. Touch [END] to validate the setting value.
6. Check the print image for any image problem.

NOTE

- **Select [Auto] at each paper type to automatically control the neutralization voltage without using the neutralization voltage setting value.**

5.6.9 TCR Level Setting

(1) Use

- To adjust the T/C control level when an abnormal image density occurs as a result of a change in the amount of charge of toner and carrier due to an environmental change.
- Use when T/C changes due to changes in environmental conditions of the user site.

(2) Default setting

- 0

(3) Setting range

- -3 to +3 (1 step in positive (+) direction: 0.5 % increase, 1 step in negative (-) direction: 0.5 % decrease, Center value 0 corresponds to 6.5 % T/C ratio.)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [TCR Level Setting].
3. Enter the new setting from the 10-Key pad and [+/-] key.
   - To increase T/C, increase the setting value.
   - To decrease T/C, decrease the setting value.
4. Touch [END] to validate the adjustment value.
5. Check the print image for any image problem.

5.6.10 Transfer Voltage Fine Adj

(1) Primary transfer adj.

(a) Use

- Adjust the output value for the 1st image transfer voltage.
- To use when white spots appeared.

(b) Default setting

- 0

(c) Setting range

- -8 to +7 (step: 1 *)
  - *1: step is equivalent to 1µA.

(d) Procedure

1. Call the Service Mode to the screen.
2. Select [Test Mode] -> [Halftone Pattern] to output the red or green test pattern.
3. When the test pattern image has white spots, adjust with the following procedure.
4. Touch [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj].
5. Select [Primary transfer adj.].
6. Select the color.
7. Enter the new setting from the [+] / [-] key.
   - Increase the output value for the 1st image transfer voltage: Increase the setting value (white spots will decrease)
   - Decrease the output value for the 1st image transfer voltage: Decrease the setting value.
8. Touch [END] to validate the setting value.
   Gradually increase the setting value to the acceptable white spots level while checking the test pattern.

NOTE

- **Photo conductor memory may occur by taking measure to white spots occurred by increasing the 1st image transfer voltage to adjust it.**
- **Check the image on the test pattern or the color chart when adjusting.**

(2) 2nd Transfer Adj.

(a) Use

- Adjust the 2nd image transfer output (ATVC) on the 1st page and the 2nd page for each paper type.
- To use when the transfer failure occurs.
- Pressing the [AUTO] key down activates the 2nd image transfer amperage upper and lower limit control. In this case, the machine uses the voltage determined by the auto transfer voltage control and the 2nd image transfer voltage fine adj value does not take effect.

(b) Default setting

- Auto

(c) Setting item

600dpi - Front	Plain - Color, Normal Paper - Black, Normal Paper - Glossy, Thin Paper - Color, Thin Paper - Black, Thick1 - Color, Thick Paper1 - Black, Thick1+ - Color, Thick Paper1+ - Black, Thick2, Thick3, Thick4, Post., Envelope, OHP Film, Banner Thick1+, Banner Thick2, Banner Thick3
600dpi - Back	Plain - Color, Normal Paper - Black, Thin Paper - Color, Thin Paper - Black, Thick1, Thick1+, Thick2, Thick3, Thick4, Post.
1200dpi - Front	Plain - Color, Normal Paper - Black, Thin Paper - Color, Thin Paper - Black, Thick1 - Color, Thick Paper1 - Black, Thick1+ - Color, Thick Paper1+ - Black, Thick2, Thick3, Thick4, Post., Envelope, OHP Film
1200dpi - Back	Plain - Color, Normal Paper - Black, Thin Paper - Color, Thin Paper – Black, Thick1, Thick1+, Thick2, Thick3, Thick4, Post.,

(d) Setting range

- -8 to +7 (step: 1 *)
  - *: 1 step is equivalent to 100 V.

(e) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj].
3. Select [2nd Transfer Adj].
4. Select the image side (First Side or Second Side) and resolution (600 dpi or 1200 dpi) when a transfer failure occurs.
5. Select the paper type with the transfer failure.
6. Enter the new setting from the [+] / [-] keys.
   - To increase the ATVC value (in the direction of a foggier image), increase the setting value.
   - To decrease the ATVC value (in the direction of a less foggy image), decrease the setting value.
7. Touch [END] to validate the setting value.
8. Check the print image for any image problem.

NOTE

- **To automatically control the 2nd image transfer output without using the 2nd image transfer voltage fine adj value, press [Auto].**

5.6.11 Charge AC Output fine adjustment

(1) Use

- Adjusts the charging AC voltage applied to the charge roller.
- Adjusts the voltage when there are image problems (fogging, white spots, etc).
- Increases the setting when there are image problems (fogging, white spots, etc).

(2) Default setting

- 0

(3) Setting range

- -12 to 8 (step: 1*)
  *: 1 step is equivalent to 25 Vpp.

5.6.12 Thick Paper Density Adjustment

(1) Use

- To fine-adjust density of printed images of each color for thick paper.
- To change the density of the printed image for each color with thick paper.

(2) Default setting

- 0

(3) Setting range

- -5 to +5 (step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Thick Paper Density Adjustment].
3. Touch the Lighter or Darker key for the desired color to correct the image density.
   - Light color: Touch the Darker key.
   - Dark color: Touch the Lighter key.
4. Touch [END] to validate the setting value.

5.6.13 Grad/Dev AC Bias V Selection

(1) Use

- Changes the developing AC voltage, charging AC voltage and 1st. image transfer current settings.
- Turn ON to lower the above-mentioned voltages and prevent white spots caused by leakage.
- Used when white spots occur on the entire image surface in low atmospheric pressure environments, such as in high altitudes, or when void areas occur on a yellow halftone pattern image or a solid pattern image.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

5.6.14 Manual Toner Add

(1) Manual Toner Add

(a) Use

- To adjust the set T/C level by replenishing an auxiliary supply of toner when a low ID occurs due to a lowered T/C after large numbers of prints have been made of originals having a high image density.
- When there is a drop in T/C ratio.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Manual Toner Add].
3. Select the color, for which supply of toner is to be replenished.
4. Pressing the Start key will let the machine detect the current toner density and; if the density is lower than a reference value, a toner replenishing sequence and then a developer agitation sequence are run.
5. Operation above is repeated maximum of ten sets of times with one set consisting of three sequences until it reaches to the reference value. When it is higher than the reference value, only the agitation is conducted.

(2) Hopper Toner Filling

(a) Use

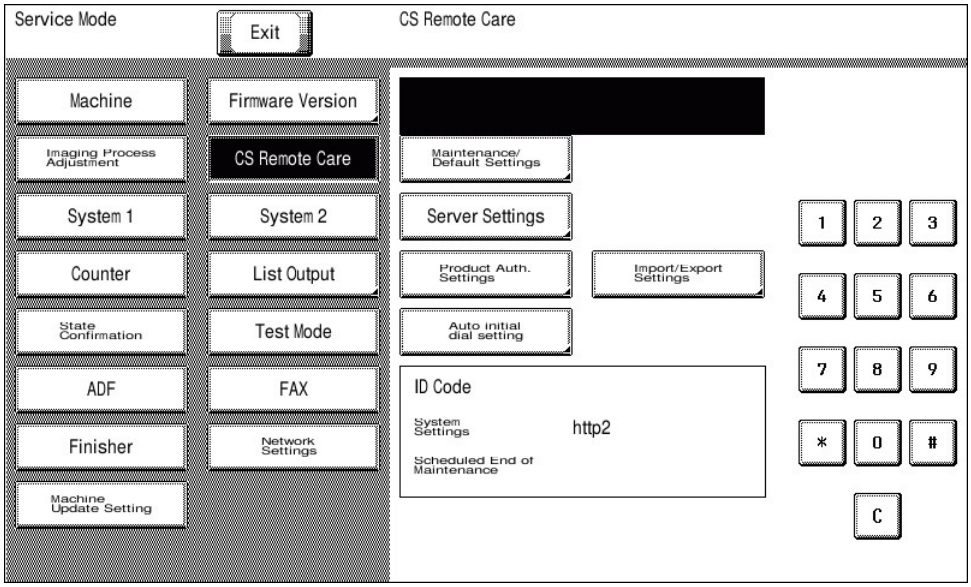
- To fill the sub hopper with toner and perform agitate in the developing unit.
- Used when toner is manually supplied to the toner hopper and agitate in the developing unit is performed.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Manual Toner Add] -> [Hopper Toner Filling].
3. Press the Start key to start filling and agitating operations.

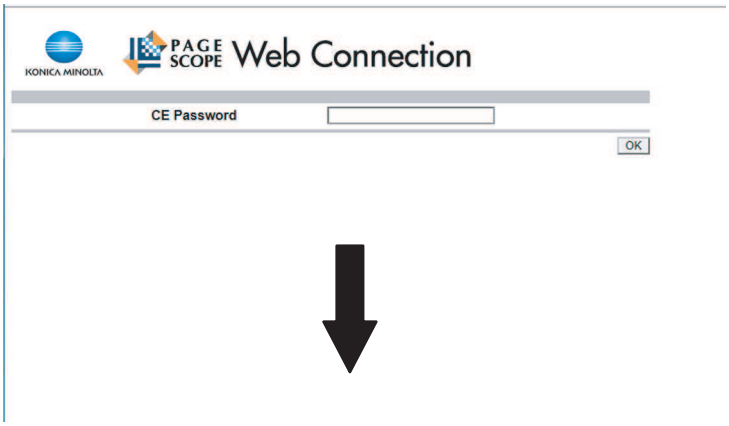
5.7 CS Remote Care (Outlines)

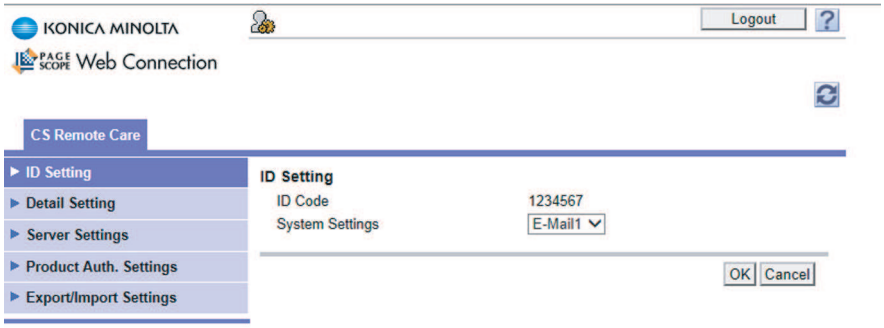
<Service Mode screen>



- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line, network or E-mail in order to control the machine.
- CS Remote Care enables the machine to call the computer at the center when trouble occurs. It also enables the computer at the center to contact the machine for the necessary data.
- Data which CS Remote Care handles can be divided into the following groups.
  - Data which show the status of use of the machine such as total count, PM count.
  - Data which show the abnormal situation on the machine such as where and how often errors occur.
  - Data on adjustment
  - Data on setting

<PageScope Web Connection display>





- CS Remote Care can be set also from PageScope Web Connection. Enter the following address, then enter the CE password and touch [OK].
  - http://(IP address)/csrc_index.html
- For the setting procedure, see I.5.8 Setting up the CS Remote Care.

5.8 Setting up the CS Remote Care

NOTE

- **For resetting up the machine which CS Remote Care has already been set up, clear the RAM for CS Remote Care before resetting.**
- **When using a telephone line modem for connection, use the data modem which is based on the ITU-T recommendations V.34/ V.32 bis/V.32 and AT command.**

5.8.1 Using the telephone line modem

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.
     NOTE
     • The initial connection is not available unless the device ID is registered.
2. Connecting the modem
   - Turn the power for the modem OFF. Connect the machine and the modem with a modem cable. Connect the modem and the modular jack with a modular cable.
     NOTE
     • For connecting the modular cable, see the manual for the modem.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [Modem].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID

1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Basic Setting] -> [Device ID], and input Device ID (13 digits).

NOTE

- **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**

10. Setting the telephone number of the Center
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Center Telephone Number].
    3. Input the telephone number of the center using the 10-key pad and [P], [T], [W], [-].
11. Inputting the device telephone number
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Device Telephone Number].
    3. Input the Device telephone number using the10-key pad and [P], [T], [W], [-].
12. Inputting the AT command for initializing the modem
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [AT Command].
    3. Input AT Command.

    NOTE

    - **Change this command only when it is necessary. (They do not need to be changed in normal condition.)**
    - **For details on AT command, see the manual for the modem.**
13. Setting the Software SW for CS Remote Care

    NOTE

    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**
14. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Initial Transmission].
    3. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
    4. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.

    NOTE

    - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, the device ID, Telephone number of the center and the device telephone number have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

5.8.2 Using the Fax line modem

NOTE

- **Setting will be available only when the optional fax board is installed.**

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.

     NOTE

     • The initial connection is not available unless the device ID is registered.
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the fax line is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [Fax].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Device ID], and input Device ID (13 digits).

   NOTE

   - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Setting the telephone number of the Center
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Center Telephone Number].
    3. Input the telephone number of the center using the 10-key pad and [P], [T], [W], [-].
11. Inputting the device telephone number
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Device Telephone Number].
    3. Input the Device telephone number using the10-key pad and [P], [T], [W], [-].
12. Setting the Software SW for CS Remote Care

    NOTE

    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**
13. Executing the initial transmission

1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Basic Setting] -> [Initial Transmission].
3. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
4. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.

NOTE

- **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, the device ID, Telephone number of the center and the device telephone number have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

5.8.3 Using the E-mail

1. Register the device ID
- Register the device ID to the application at CS Remote Care center.

NOTE

• The initial connection is not available unless the device ID is registered.

2. Remove the telephone line modem
- Be sure to remove the telephone line modem when e-mail is used.

3. Inputting the ID code
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
2. Input the seven digits ID of the service person, and touch [ID Code] again.

4. Clearing the RAM
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [RAM Clear].
3. Select [Set], and touch [OK].

5. Selecting the CS Remote Care function
- Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [E-Mail 1] or [E-Mail 2].

6. Inputting the ID code
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
2. Input the seven digits ID of the service person, and touch [ID Code] again.

7. Setting the date and time for CS Remote Care
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Date & Time Setting].
3. Input the date, time and the time zone using the 10-key pad, and touch [Set].

8. Setting the Center ID
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Basic Setting] -> [Center ID], and input the Center ID (five digits).

9. Confirm the Device ID
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Basic Setting] -> [Device ID], and input Device ID (13 digits).

NOTE

- **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**

10. Encryption setting
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Basic Setting] and select either Encryption or No Encryption.

11. Retransmission interval on e-mail delivery error
- When selecting [E-mail 2], set the retransmission interval on e-mail delivery error in software switch setting.

12. Setting the Respond Timeout
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Respond Timeout] and enter the response timeout using the 10-key pad.

NOTE

- **Under normal conditions, there is no need to change the default setting.**

13. Setting the E-mail address
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Server Set].
2. Touch [Server for RX], and set POP3 server address, POP3 login name, POP3 password and POP3 port number.
3. Touch [Receive], and set the E-Mail address, Mail Check, Connection Time Out and APOP Authentication.
4. Touch [Send], and set the SMTP server address, SMTP port number, Connection Time Out, and APOP Authentication.
5. Touch [TX/RX Test], and press Start key to carry out a transmission/reception test. If it fails to exchange messages, see the error message to take necessary measure, and try again.

14. When selecting [E-Mail2]:
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Schedule] and set the schedule of periodic transmission.
3. Touch [Center Notifi. Item] and set items that will be reported to the Center.

15. Executing the initial transmission
1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.

NOTE

- **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, device ID and the E-Mail address have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

3. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
- If communication error between the machine and Center occurs, check the error code that appears.

16. Receiving the initial connection E-mail message
- Sending the initial connection E-mail message from the center to the address of the copier.

NOTE

• When receiving the initial connection E-mail message from the center while CS Remote Care-related screen is being displayed, the current setting information will be deleted, and CS Remote Care setting will be displayed.
• For sending the initial connection E-mail, see the manual for CS Remote Care center.
• Messages can be exchanged only between the center with initial connection and the copier.

• The initial connection from the center will be carried out, and the E-mail address of the center will be stored in the copier.
• When the initial registration is complete, the E-mail address of the center will be displayed by selecting [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting] -> [Basic Setting] -> [E-Mail address].

5.8.4 When using a WebDAV server in http communication

NOTE

- **When MFP is connected to the Internet via a proxy, the proxy server related settings are necessary in advance. The proxy settings used in the http communication for CS Remote Care is configured in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].**

(1) Bilateral communication

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.
     NOTE
     • The initial connection is not available unless the device ID is registered.
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the http communication is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [http1].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Device ID], and input Device ID (13 digits).
   NOTE
   - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Encryption setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Client Setting] and select either Encryption or No Encryption.
11. Heart Beat
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings]] -> [Detail Setting] -> [Basic Setting], and touch [Heart Beat].
    2. In [Communication], set whether or not to enable Heart Beat communication. (Default: No)
    3. Touch [Comm. Interval] and enter a Heart Beat transmission interval (1 to 256 minutes, Default: 30 minutes).
    4. In [Specified Transmission], set whether or not to enable Heart Beat transmission at a specified interval. (Default: Yes)
    5. Touch [Hour] and [Minute] and enter a time for specified transmission.
    NOTE
    - **Heart Beat is a feature that uploads a Heart Beat file to the registered web server at a specified interval to report that the device is operating. Heart Beat files include total counter and status information.**
12. Polling interval
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting].
    2. Touch [Basic Setting] -> [Polling Interval] and enter the polling interval (1 to 256 min., default: 5 min.).
13. Setting the http server
    1. Select [Service Mode] -> [CS Remote Care], and touch [Server Settings].
    2. Touch [HTTP Server Settings] and set a URL address, account, password, and port number.
    3. Touch [SSL Settings] and make SSL settings.
14. Setting the Software SW for CS Remote Care
    NOTE
    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**
15. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
    NOTE
    - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, device ID and the URL address have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**
    3. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
    - If communication error between the machine and Center occurs, check the error code that appears.

(2) Unilateral communication: Device to Center

1. Register the device ID

- Register the device ID to the application at CS Remote Care center.
  NOTE
  • The initial connection is not available unless the device ID is registered.

2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the http communication is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [http2].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Basic Setting] -> [Device ID], and input Device ID (13 digits).

   NOTE
   ▪ [Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].
10. Encryption setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Client Setting] and select either Encryption or No Encryption.
11. Notification Setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting], and touch [Notification Setting].
    2. Touch [Schedule] and set the schedule of periodic transmission.
    3. Touch [Center Notifi. Item] and set items that will be reported to the Center.
12. Setting the http server
    1. Select [Service Mode] -> [CS Remote Care], and touch [Server Set].
    2. Touch [HTTP Server Settings] and set a URL address, account, password, and port number.
    3. Touch [SSL Settings] and make SSL settings.
13. Setting the Software SW for CS Remote Care

    NOTE
    ▪ This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.
14. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.

    NOTE
    ▪ The initial transmission key at the right bottom of the screen will be displayed only when the center ID, device ID and the URL address have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.

    3. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
       - If communication error between the machine and Center occurs, check the error code that appears.

5.9 Software SW setting for CS Remote Care

NOTE
- **Software SW bits data are written into the memory region on the MFP board every time a change is made. In case you changed bit data by accident, be sure to restore the previous state.**
- **Do not change any bit not described on this table.**

5.9.1 Input procedure

1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting], and touch [Software Switch Setting].
2. Touch [Switch No.], and input the switch number (two digits) using the 10-key pad.
3. Touch [Bit Assignment], and select switch bit number using the arrow keys, and input 0 or 1 using the 10-key pad.
   (For setting by hexadecimal numbers, touch [HEX Assignment] key, and input using the 10-key pad or A to F keys.)
4. Touch [Fix].

NOTE
- **About functions of each switch, see to " I.5.9.2 List of software SW for CS Remote Care."**

5.9.2 List of software SW for CS Remote Care

SW No.	Functions	Ref. page
01	• Dial Mode, Line for send only, Baud rate	" I.5.9.3 SW No. 01"
02	• Emergency transmission, Date specified transmission, Call parts replace date, Call drum replace date, Call regular service date (PM), Auto call on the IC Life, Auto call of the IR shortage, Auto call on the zero reset of the fixed parts replacement	" I.5.9.4 SW No. 02"

SW No.	Functions	Ref. page
03	• Trouble display setting, Auto call on the toner empty, Auto call on the waste toner bottle full	" I.5.9.5 SW No. 03"
04	• CS Remote Care communication mode	" I.5.9.6 SW No. 04"
05	• Modem redial interval	" I.5.9.7 SW No. 05"
06	• Modem redial times	" I.5.9.8 SW No. 06"
07	• Redial for response time out	" I.5.9.9 SW No. 07"
08	• Retransmission interval on E-Mail/http delivery error	" I.5.9.10 SW No. 08"
09	• Retransmission times on E-Mail/http delivery error	" I.5.9.11 SW No. 09"
10	• Time zone settings	" I.5.9.12 SW No. 10"
11	• Timer 1 RING reception -> CONNECT reception	" I.5.9.13 SW No. 11"
12	• Timer 2 Dial request completed -> CONNECT reception	" I.5.9.14 SW No. 12"
13	• Reservation	-
14	• Timer 4 Line connection -> Start request telegram delivery	" I.5.9.15 SW No. 14"
15	• Timer 5 Wait time for other side's response	" I.5.9.16 SW No. 15"
16	• Reservation	-
17	• Reservation	-
18	• Attention display To set whether to give the alarm display when using the modem but the power for the modem is OFF.	" I.5.9.17 SW No. 18"
19	• Reservation	-
20	• Reservation	-
21	• Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning, transmission of paper-based misfeed frequent occurrence warning, transmission of original-based misfeed frequent occurrence warning	" I.5.9.18 SW No. 21"
22	• Paper-based misfeed frequent occurrence threshold value	" I.5.9.19 SW No. 22"
23	• Original-based misfeed frequent occurrence threshold value	" I.5.9.20 SW No. 23"
24 : 40	• Reservation	-

5.9.3 SW No. 01

(1) Default

Bit	7	6	5	4	3	2	1	0
	1	0	0	0	0	0	0	1
HEX	81							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Baud rate	0110		9600 bps
6		0111		19.2 Kbps
5		1000		38.4 Kbps
4		Other		Not available
3	Reservation			
2				
1	Line for send only	Disable	Enable	
0	Dial Mode	Pulse	Tone	

5.9.4 SW No. 02

(1) Default

Bit	7	6	5	4	3	2	1	0
	1	1	1	1	1	1	1	1
HEX	FF							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Auto call on the zero reset of the fixed parts replacement	Disable	Enable	
6	Auto call of the IR shortage	Disable	Enable	
5	Auto call on the IC Life	Disable	Enable	
4	Call regular service date (PM)	Disable	Enable	
3	Call drum replace date	Disable	Enable	
2	Call parts replace date	Disable	Enable	
1	Date specified transmission	Disable	Enable	
0	Emergency transmission	Disable	Enable	

5.9.5 SW No. 03

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3	Auto call on the waste toner bottle full	Disable	Enable	
2	Reservation			
1	Auto call on the toner empty	Disable	Enable	
0	Trouble Display setting	When the CSRC is not connected	When the CSRC is connected	Select the type of message to be displayed at the time of automatic trouble notification made when the CSRC is connected, either the message when the CSRC is connected or that when the CSRC is not connected. If "When the CSRC is not connected" is selected when the CSRC is connected, an automatic notification is made to the center when a trouble occurred. Only the display on the control panel shifts to the massage when the CSRC is not connected.

5.9.6 SW No. 04

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	1	0
HEX	02							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3				

Bit	Functions	Logic		Description
		0	1	
2				
1	CS Remote Care communication mode	00		DATA
0		01		FAX
		10		E-mail
		11		Not available

5.9.7 SW No. 05

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	1	1
HEX	03							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4	Modem redial interval	00001		1 minute
3		00010		2 minutes
2		00011		3 minutes
1		00100		4 minutes
0		00101		5 minutes
		00110		6 minutes
		00111		7 minutes
		01000		8 minutes
		01001		9 minutes
		01010		10 minutes
		Others		Not available

5.9.8 SW No. 06

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Modem redial times	0000 0000		0 times
6		0000 0001		1 time
5		:		:
4		0000 1010		10 times
3		:		:
2		0110 0010		98 times
1		0110 0011		99 times
0		Others		Not available

5.9.9 SW No. 07

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	1
HEX	01							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Redial for response time out	0000 0000		0 times
6		0000 0001		1 time
5		Others		Not available
4				
3				
2				
1				
0				

5.9.10 SW No. 08

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	1	0
HEX	06							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Retransmission interval on E-mail/http delivery error	0000 0000		0 minutes
6		0000 0001		10 minutes
5		:		:
4		0000 0110		60 minutes
3		:		:
2		0000 1011		110 minutes
1		0000 1100		120 minutes
0		Others		Not available

5.9.11 SW No. 09

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Retransmission times on E-mail/http delivery error	0000 0000		0 times
6		0000 0001		1 time
5		:		:
4		0000 1010		10 times
3		:		:
2		0110 0010		98 times
1		0110 0011		99 times
0		Others		Not available

5.9.12 SW No. 10

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	0
HEX	00							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Time zone settings	0000 0000		0

Bit	Functions	Logic		Description
		0	1	
6		0000 0001		+1
5		:		:
4		0000 1100		+12
3		1111 0100		-12
2		:		:
1		1111 1111		-1
0		Others		Not available

5.9.13 SW No. 11

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	1	0	0	0	0	0
HEX	20							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 1 RING reception -> CONNECT reception	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0010 0000		32 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.14 SW No. 12

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	1	0	0	0	0	0	0
HEX	40							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 2 Dial request completed -> CONNECT reception	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0100 0000		64 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.15 SW No. 14

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	1	0	0	0	0	0
HEX	20							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 4 Line connection -> Start request telegram delivery	0000 0000		0 msec
6		0000 0001		100 msec
5		:		:

Bit	Functions	Logic		Description
		0	1	
4		0010 0000		3,200 msec
3		:		:
2		1111 1110		25,400 msec
1		1111 1111		25,500 msec
0				

5.9.16 SW No. 15

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	1	1	1	1	0
HEX	1E							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 5 Wait time for other side's response	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0001 1110		30 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.17 SW No. 18

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	1
HEX	01							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3				
2				
1				
0	Attention display To set whether to give the alarm display when using the modem but the power for the modem is OFF.	OFF	ON	

5.9.18 SW No. 21

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	1	1
HEX	07							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				

Bit	Functions	Logic		Description
		0	1	
4				
3				
2	Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning	OFF	ON	
1	Original-based misfeed frequent occurrence threshold value	OFF	ON	If the number of jams exceeds the threshold specified per day (0:00 to 23:59), Jam Frequent Occurrence Warning is sent. At 12 a.m. of the next day, the counter is reset.
0	Paper-based misfeed frequent occurrence threshold value	OFF	ON	

5.9.19 SW No. 22

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	0	1
HEX	05							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Paper-based misfeed frequent occurrence threshold value	0000 0001		1
6		0000 0010		2
5		:		:
4		0000 0101		5
3		:		:
2		0000 1110		14
1		0000 1111		15
0		Others		Not available

5.9.20 SW No. 23

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	0	1
HEX	05							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Original-based misfeed frequent occurrence threshold value	0000 0001		1
6		0000 0010		2
5		:		:
4		0000 0101		5
3		:		:
2		0000 1110		14
1		0000 1111		15
0		Others		Not available

5.10 Setup confirmation for CS Remote Care

5.10.1 Use

- Follow the steps below to make sure that CS Remote Care has been properly set up.

5.10.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Check to make sure that only selected item is displayed.

5.11 Calling the maintenance for CS Remote Care

- When CE starts maintenance, inputting the ID code of CE (seven digits: numbers which CE can identify. They are controlled by the distributor.) will transmit the information to the Center side and tells that the maintenance has started. When the maintenance is finished, touching [Maintenance Complete] key will transmit the information to the center and tells that it is finished.

NOTE

- **The MFP sends the maintenance start information to the Center. While the MFP is in maintenance mode, the communication between the MFP and the Center is unavailable. Therefore, CE must touch [Maintenance Complete] immediately after the completion of maintenance to end maintenance mode.**

5.11.1 When starting the maintenance

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Touch [Maintenance Start].
4. Input the ID code using the 10-key pad.
5. Select estimated hours that elapse before the completion of the maintenance from the options of [2 hours], [4 hours], [6 hours], [8 hours], [10 hours], or [12 hours].
6. Touch [OK].

NOTE

- **The Start key blinks while maintenance mode is being carried out.**
- **You cannot extend the estimated hours while the maintenance is in progress.**
- **If you forget to touch [Maintenance Complete] after the completion of the maintenance, the maintenance completion information is automatically sent after the lapse of the selected estimated hours and the normal communication becomes available.**

5.11.2 When finishing the maintenance

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Touch [Maintenance Complete].

5.12 Calling the center from the administrator for CS Remote Care

5.12.1 Use

- When the CS Remote Care setup is complete, the administrator can call the CS Remote Care center.

NOTE

- **When the setup is not complete or another transmission is being carried out, the Admin. transmission key will not be displayed, and the transmission is not available.**

5.12.2 Procedure

1. Touch [Settings] -> [System Connection]
2. Touch [Admin. transmission].
3. Press the Start key.

NOTE

- **For transmitting data of the machine by calling the center on the specified date and time, refer to the manual for CS Remote Care center.**

5.13 Checking the transmission log for CS Remote Care

5.13.1 Use

- The transmission log list will be output to be checked.

5.13.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remove Care] -> [Maintenance/Default Settings] -> [Detail Setting].
3. Touch [Communication Log Print].
4. Load tray 1 or bypass tray with A4S paper.
5. Press the Start key to output transmission log.

5.14 Detail on settings for CS Remote Care

5.14.1 Maintenance/Default Settings - System Selection

(1) Use

- To select the system type for remote diagnosis.
- Use to newly build or change the system.

(2) Setting range

- E-Mail1
- E-Mail2
- Modem
- Fax
- http1
- http2

(3) Procedure

- Select [E-Mail 1], [E-Mail 2], [http 1], [http 2], [Modem], or [Fax].

- Fax is available only when the optional fax kit is being installed.

5.14.2 Maintenance/Default Settings - ID Code

(1) Use

- To register the service ID.

(2) Procedure

1. Touch [ID code] and enter the service ID.
   - Enter a 7-digit code from the 10-key pad. (0000001 to 9999999)
2. Touch [ID code] to register the ID.
3. The [Detail Setting] will appear when the ID has been registered.

5.14.3 Maintenance/Default Settings - Detail Setting

(1) Basic Setting (E-Mail1, E-Mail2, Modem or Fax)

(a) Use

- Execute the primary setting.
- Use to register the machine to the CS Remote Care center.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touching the [Detail Setting] will display the primary setting.

<Center Setting>

- Set the center ID, Device ID, and the phone No.
- When e-mail is selected for system and all setup procedures are completed, e-mail address of the center is displayed.

NOTE

- **When entering the phone number, 10-key and keys on the screen have following meanings.**

[-] Pose	**Waits to start transmitting after dialing**
[W] Wait	**Detects the dial tone of the other end**
[T] Tone dial	**Carry out tone dialing**
[P] Pulse dial	**Carry out pulse dialing**
[*], [#]	**To be used as necessary**

<Schedule (Only when the [E-Mail2] is selected)>

- Set the schedule of notification to the center.
- Up to three different notification schedules can be registered.
- Select the notification cycle from [Day], [Week], or [Month].
  When selecting [Day] for the notification cycle, set the Day Frequency.
  When selecting [Week] for the notification cycle, set the Week Frequency and day of the week.
  When selecting [Month], set the Month Frequency and the date of the month.

<Center Notification (Only when the [E-Mail2] is selected)>

- Select the items of data that will be sent to the center in one-way transmission through E-Mail2.
- The following table shows each of the notification item keys and corresponding data.

[1]	Sales count data	[7]	EKC data
[2]	Error count data	[8]	Adjustment data
[3]	Service count data	[9]	Coverage data
[4]	Life count data Life cycle data	[10]	Not used
[5]	CSRC-System data Device config data	[11]	Not used
[6]	History data	[12]	Not used

NOTE

- **Multiple items of data can be selected and sent at one time. However, be sure that only EKC data cannot be sent together with other items of data.**

<Initial Transmission>

- Touching the Initial Transmission key will sent the information to the CS Remote Care center to register the machine. (Only when the modem or fax is selected on the system Input.)

(2) Basic Setting (http1 or http2)

(a) Use

- Execute the primary setting.
- Use to register the machine to the CS Remote Care center.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touching the [Detail Setting] will display the primary setting.

<Center Setting>

- Set the center ID.
- Display the device ID.

<Client Setting>
- To set whether or not to encrypt communication.

<Heart Beat>

NOTE
- **The heat beat function is only available to http1.**

- To make Heart Beat related settings.
- Heart Beat is a feature that uploads a Heart Beat file to the registered web server at a specified interval to report that the device is operating. Heart Beat files include total counter and status information.

<Polling Interval>

NOTE
- **The polling interval function is only available to http1.**

- To set the polling time in http communication.

<Initial Transmission>
- Touching the Initial Transmission key will sent the information to the CS Remote Care center to register the machine.

(3) Date & Time Setting

(a) Use
- To set the data and time-of-day.

(b) Procedure
1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touch [Detail Setting] to access Date & Time Setting.
4. Enter the date (month, day and year), time-of-day, and the time zone from the 10-key pad.
5. Touch [SET] to start the clock.

(4) RAM Clear

(a) Use
- To clear the following data at the center.
  Service ID, Basic setting, Date & time setting (time zone), Software SW setting, AT command
- To be used for setting CS Remote Care.
- To be used for reset the every data of the center to default.

NOTE
- **If RAM clear is selected during transmission, RAM clear processing will be implemented at the time the transmission is completed regardless of whether it is done properly or not.**

(b) Default setting
- Unset

(c) Setting item
- Set
- Unset

(5) Communication Log Print

(a) Use
- To print out the communication log.

(b) Procedure
1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touch [Detail Setting] to access communication log print.
4. Load a paper tray with A4S/A4 or 81/2 x 11S/81/2 x 11 paper.
5. Select [1-Sided] or [2-Sided].
6. Press Start key to print out the communication log.

(6) Software Switch Setting

(a) Use
- To change the CS Remote Care settings.

(b) Procedure
- Refer to “ I.5.9 Software SW setting for CS Remote Care” for the setting.

(7) Response Time Out

(a) Use
- It sets the intervals for resending e-mails when transmission error occurred.
- It can be set only when [E-Mail] is selected in [System Setting].

(b) Default setting
- 60 minutes

(c) Setting range
- 10 to 1440

(8) AT Command
(a) Use
- To set the command to be issued at the time of modem initialization.
- This setting is available only when [Modem] is selected in [System Setting].

(b) Procedure
- Enter the command and touch [SET] to register.

(9) Notification Setting
(a) Use
- To make the settings of notification to the center that is performed under unilateral communication via http.
- This setting is available only when [http2] is selected in [System Setting].

(b) Procedure
<Schedule>
- Set the schedule of notification to the center.
- Up to three different notification schedules can be registered.
- Select the key of the registration number, and then touch [Enable].
- Select the notification cycle from [Day], [Week], or [Month].
  When selecting [Day] for the notification cycle, set the Day Frequency.
  When selecting [Week] for the notification cycle, set the Week Frequency and day of the week.
  When selecting [Month], set the Month Frequency and the date of the month.
- Touch [SET] to register the schedule.

<Center Notifi. Item>
- Select the notification item to the center.
- The following table shows each of the notification item keys and corresponding data.

[1]	Sales count data	[7]	EKC data
[2]	Error count data	[8]	Adjustment data
[3]	Service count data	[9]	Coverage data
[4]	Life count data Life cycle data	[10]	Not used
[5]	CSRC-System data Device config data	[11]	Not used
[6]	History data	[12]	Not used

NOTE
- **Multiple items of data can be selected and sent at one time. However, be sure that only EKC data cannot be sent together with other items of data.**

5.14.4 Maintenance/Default Settings - Server Setting (E-Mail1 or E-mail2 is selected.)
(1) Server for RX-POP3 server
(a) Use
- To set the POP3 server address used for the CS Remote Care.
- POP3 server address can be set with IP address or the domain name.

(b) Procedure
<Input IP Address>
- IP address version 4 format [0 to 255].[0 to 255].[0 to 255].[0 to 255]

<FQDN Input>
- Enter the domain name.

(2) Server for RX-POP3 login name
(a) Use
- To set the login name for the POP3 server used for the CS Remote Care.

(b) Procedure
- Up to 64 characters can be used. (alphanumeric characters and symbols)

(c) Default setting
- No

(3) Server for RX-POP3 password
(a) Use
- To set the logon password for the POP3 server used for the CS Remote Care.

(b) Procedure
- Up to 15 characters can be used. (alphanumeric characters and symbols)

(c) Default setting
- No

(4) Server for RX-POP3 port number

(a) Use
- To set the POP3 port number used for the CS Remote Care.

(b) Default setting
- 110

(c) Setting range
- 1 to 65535

(5) Receive-E-mail Address

(a) Use
- To set the e-mail address used for the CS Remote Care.

(b) Procedure
- Up to 129 characters can be used. (alphanumeric characters and symbols)

(c) Default setting
- No

(6) Receive-Mail Check

(a) Use
- To set whether or not to use mail check and the time interval for the POP server used for the CS Remote Care.

(b) Default setting
- No

(c) Setting item
- No
- 1 to 120 min.

(7) Receive-Connection Time-out

(a) Use
- To set the timeout period for connection during reception.

(b) Default setting
- 60 Sec

(c) Setting range
- 30 to 300 Sec

(8) Receive-APOP Authentication

(a) Use
- To set whether or not to authenticate the APOP during reception.

(b) Default setting
- No

(c) Setting item
- Yes
- No

(9) Send-SMTP server

(a) Use
- To set the SMTP sever address for transmission used for the CS Remote Care.
- SMTP server address can be set by the IP address or the domain name.

(b) Procedure

<Input IP Address>
- IP address version 4 format [0 to 255].[0 to 255].[0 to 255].[0 to 255]

<FQDN Input>
- Enter the domain name.

(10) Send-SMTP port number

(a) Use

- To set the SMTP port number for transmission used for the CS Remote Care.

(b) Default setting

- 25

(c) Setting range

- 1 to 65535

(11) Send-SMTP Connection Time-out

(a) Use

- To set the timeout period for transmission.

(b) Default setting

- 60 Sec

(c) Setting range

- 30 to 300 Sec

(12) Send-Authentication Setting

(a) Use

- To set whether or not to authenticate during transmission via SMTP server.
- To use when authenticating during transmission.
  Available authentication mode: POP Before SMTP, SMTP authentication

(b) Default setting

- OFF

(c) Setting item

- OFF
- POP Before SMTP
- SMTP Authentication

NOTE

- **Setting to "POP Before SMTP" will set the time for POP Before SMTP.**
  - **Default setting: 60 Sec**
  - **Setting range: 0 to "60 Sec"**

- When setting to SMTP authentication, touch the "Setting Check" key for authentication.

User ID	Enter the user ID for SMTP authentication.
Password	Enter the password for SMTP authentication.
Domain name	Enter the domain name for SMTP authentication.

(13) TX/RX Test

(a) Use

- To determine the correct transmission and reception using CS Remote Care.

(b) Procedure

1. Press the Start key to let the machine start the transmission and reception test.
2. The test procedure and result will be displayed on the screen.

(14) Data Initialization

(a) Use

- To initialize the contents for the sever setting.

(b) Default setting

- No

(c) Setting item

- Yes
- No

5.14.5 Maintenance/Default Settings - Server Setting (http1 or http2 is selected)

(1) HTTP Server Settings

(a) Use

- To set a http server at the other end that is used in CS Remote Care.

(b) Procedure

<URL>
- To set the address of the http server.

<Account>
- To set an account that is used to access the http server.

<Password>
- To set a password that is used to access the http server.

<Port Number>
- To set a port number that is used to access the http server.

(2) SSL Settings

(a) Use

- To make SSL settings of the http server at the other end that is used in CS Remote Care.

(b) Procedure

- To set whether or not to use SSL communication.

(3) Data Initialization

(a) Use

- To initialize values in the server settings.

5.14.6 Product Auth. Settings

(1) Product Authentication

(a) Use

- To set whether or not to enable product authentication.

NOTE

- **When changing this setting under the condition where http is used for CS Remote Care communication, you need to perform RAM Clear and then initial transmission again.**

(b) Default setting

- No

(c) Setting item

- Yes
- No

(2) WebDAV

(a) Use

- To set a WebDAV server for the product authentication.

(b) Procedure

<URL>
- URL: To set the address of the WebDAV server.
- Account : To set an account that is used to access the WebDAV server.
- Password : To set a password that is used to access the WebDAV server.
- Port Number : To set a port number that is used to access the WebDAV server.

(3) Register Manually

(a) Use

- To install the certificate to be used in product authentication.

(b) Procedure(LMS)

<LMS>
1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Product Auth. Settings].
3. Touch [Register Manually] -> [LMS].
4. Touch [Start] to communicate with LMS (License Management System) and install the certificate.
5. Check that the "Install OK" message appears.

(c) Procedure (USB)

NOTE

In the following conditions, installation of the certificate from a USB memory is prohibited.
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

1. Connect the USB flash drive where the certificate obtained from LMS (License Management System) is stored to the USB port of MFP.
2. Call the Service Mode to the screen.
3. Touch [CS Remote Care] -> [Product Auth. Settings].
4. Touch [Register Manually] -> [USB].
5. Touch [Start] to install the certificate.

6. Check that the "Install OK" message appears.

5.14.7 Import/Export Settings

(1) WebDAV Setting

(a) Use

- To configure WebDAV server settings used to remotely export or import MFP data (address book data, authentication setting data).

(b) Procedure

<URL>
- To set the address of the WebDAV server.

<Folder Name>
- To set a folder name of the WebDAV server that is used to transfer data.

<Account>
- To set an account that is used to access the WebDAV server.

<Password>
- To set a password that is used to access the WebDAV server.

(2) Port Number

(a) Use

- To set a port number that is used to access the WebDAV server.

(b) Procedure

- Set the port number of the WebDAV server using the 10-key pad.

(3) SSL Settings

(a) Use

- To configure the WebDAV server's SSL settings.

(b) Default setting

- No

(c) Setting item

- Yes
- No

(4) Data Initialization

(a) Use

- To initialize the settings on the server.

(b) Default setting

- No

(c) Setting item

- Yes
- No

5.14.8 Auto Initial Dial Setting

(1) Use

- To set whether to configure the Auto Initial Dial Setting for each CSRC communication method.
- Execute the CSRC Auto Initial Dial automatically at the first time of startup after importing [Remote Access Settings] from [Machine Import Setting].

  NOTE
  - **This function is enabled only when “Set” is selected and the following conditions are satisfied.**
    • No registrations to the CSRC server have been made.
    • At the first time that the main power is turned ON (reboot) after importing the CSRC server information under [Service Mode] -> [Machine Update Settings] -> [Machine Auto Update Setting] -> [Machine Import Setting].

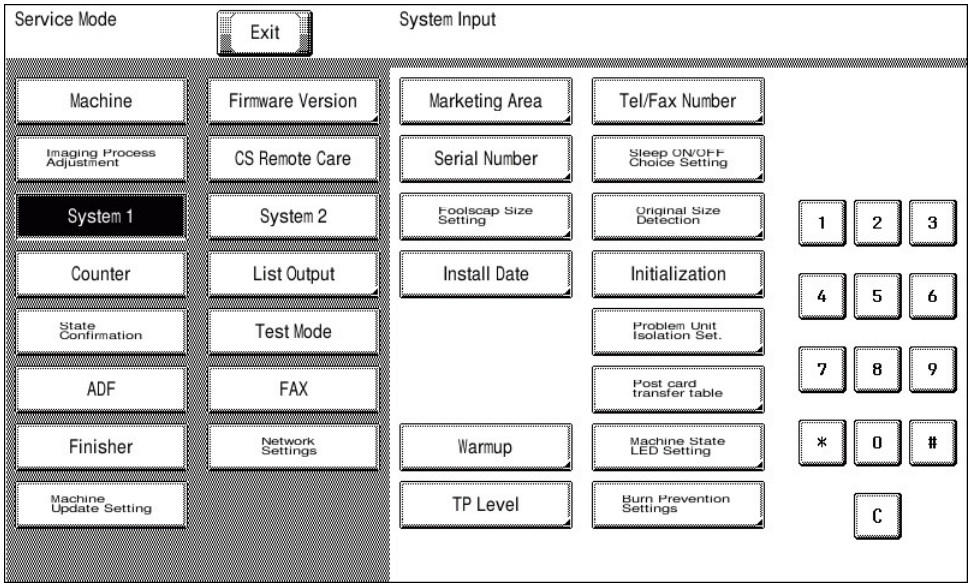
(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

5.15 System 1



5.15.1 Marketing Area

(1) Use

- To make the various settings (language, paper size, fixed zoom ratios, etc.) according to the applicable marketing area.
- Upon setup.

(2) Procedure

Marketing Area

- Select the applicable marketing area and touch [END] to set the marketing area.

Wireless LAN Destination (This is displayed only when optional upgrade kit UK-212 or UK-215 is installed)

1. Touch the [Wireless LAN Destination].
2. Select the applicable marketing area using [+] and [-] keys, and touch [decision].
3. Turn OFF and ON the main power switch.

Fax Target

1. Touch the [Fax Target].
2. Select the applicable marketing area using [+] and [-] keys, and touch [END].

(3) Setting item

Marketing Area

- Japan
- US
- Europe
- Others1 to 5

Wireless LAN Destination

- OT, US, CA, JP, AU, NZ, DE, GB, FR, CH, NL, BE, AT, NO, SE, FI, IE, DK, IT, ES, PT, PL, ZA, TW, SA, CN, MY, SG, KR, HK, AR, BR, VN, PH, RU, MX, IN, TH, ID, AE, KW, GR, TR, HU, SK, CZ, UA, CL

Fax Target

- JP, AU, NZ, EU, DE, GB, FR, CH, NL, BE, AT, NO, SE, FI, IE, DK, IT, ES, PT, PL, ZA, TW, SA, CN, MY, SG, KR, HK, AR, BR, VN, PH, RU, OT, US, CA

(a) List of functions affected by marketing area setting

- The listed are the functions of which setting is automatically changed depending on the selected marketing area.

Marketing area / Setting item	Japan	US	Europe	Others1	Others2	Others3	Others4	Others5
Language (Default value)	Japanese	English	English	English	English	Simplified Chinese	Traditional Chinese	English
Language Selection (Selectable language)	Japanese English French Italian German Spanish Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	Simplified Chinese English French Italian German Spanish Japanese Traditional Chinese Hangul	Traditional Chinese English French Italian German Spanish Japanese Simplified Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul
Foolscap size	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13
LCT(Built-in) size	A4 LEF	Letter LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF

Setting item \ Marketing area		Japan	US	Europe	Others1	Others2	Others3	Others4	Others5
Unit		Metric	Inch	Metric	Metric	Metric	Metric	Metric	Metric
Registered Key Settings (default)	Registered Key 1	Enlarge Display	Enlarge Display	Enlarge Display	Enlarge Display	Enlarge Display	Enlarge Display	Enlarge Display	Enlarge Display
	Registered Key 2	Guidance	Guidance	Guidance	Guidance	Guidance	Guidance	Guidance	Guidance
	Registered Key 3	10 Keypad	10 Keypad	10 Keypad	10 Keypad	10 Keypad	10 Keypad	10 Keypad	10 Keypad
	Registered Key 4	Preview	Preview	Preview	Preview	Preview	Preview	Preview	Preview
Total counter mode		Mode1	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2
Size counter		No count	A3, 11x17	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14
Unit Change		Japan	US	Europe	Europe	Europe	Europe	Europe	Europe

NOTE

- **The language used in the service mode depends on the Language Selection setting, and changes to the language as following table.**

Language Selection	Service Mode
Japanese	**Japanese**
Simplified Chinese	**Simplified Chinese**
Traditional Chinese	**Traditional Chinese**
Hangul	**Hangul**
Language other than listed above	**English**

5.15.2 Tel/Fax Number

(1) Use

- To enter the tel/fax number of the service contact that will appear on the control panel when a malfunction occurs in the machine.
- Upon setup.

(2) Procedure

- Enter the tel/fax number from the 10-key pad. (19 digits)
- Use Interrupt key to enter "-."

5.15.3 Serial Number

(1) Use

- To register the serial numbers of the machine and options.
- To display the serial number of the PH unit.
- The numbers will be printed on the list output.
- To use the serial number as device ID during CS Remote Care communication.
- Upon setup.

NOTE

- **When main power switch was turned ON while the serial No. was not entered, the message to require entering the serial No. will be displayed.**
- **Do not change the serial number registered in the machine. If memory data is lost and entering the serial number is required, enter the original correct serial number.**
  Be careful to enter the correct serial number since characters other than alphanumeric can be also entered. CSRC communication is not available if a wrong serial number is entered.
- **The serial number of "Printer" can be checked through the following: Menu -> [Counter].**

(2) Procedure

- Type the serial numbers.
  - Printer, Scanner, ADF, LCT, Output Option, Duplex, Vendor, RU, ZU, PK, PI, Fax1, Fax2, Fax3, Fax4,

NOTE

- **The serial number of a PH unit can only be displayed but not be changed.**

5.15.4 Sleep ON/OFF Choice Setting

(1) Use

- To display the option of "No" for the sleep mode setting screen available from [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings].
- The sleep mode will begin in 48 hours even if it sets it to "OFF."

(2) Default setting

- Prohibit

(3) Setting item

- Permit

- Prohibit

5.15.5 Foolscap Size Setting

(1) Use

- To set the size for foolscap paper.
- Upon setup.

(2) Procedure

- Select the size from among the following six.

(3) Default setting

- 8 x 13

(4) Functions

- $8^1/_2$ x $13^1/_2$
- 220 x 330 mm
- $8^1/_2$ x 13
- $8^1/_4$ x 13
- $8^1/_8$ x $13^1/_4$
- 8 x 13

NOTE

- **"$8^1/_8$ x $13^1/_4$ " and "220 x 330 mm" setting are corresponding to paper fed from the manual bypass tray only.**

5.15.6 Original Size Detection

(1) Copy Glass

(a) Use

- To change the size detection table for the document glass.

(b) Default setting

- Table1

(c) Setting item

- Table1
- Table2

NOTE

- **Table 2 can be set only when original size sensor 2 is being mounted. (For destinations other than Japan)**
- **On models for Japan, original size sensor 2 is not required, but Table 2 can be set.**

(2) 8-1/2 x 14/Foolscap Size Detection

(a) Use

- To set whether paper of $8^1/_2$ x $13^1/_2$ size is detected as $8^1/_2$ x 14 or foolscap in original glass or DF size detection.
  When Table 1 is selected in Copy Glass, paper of 81/2 x 131/2 size is detected as Foolscap despite of the setting of $8^1/_2$ x 14/Foolscap Size Detection.
- Not available for Japan models.

(b) Default setting

- $8\ ^1/_2$x14

(c) Functions

- $8\ ^1/_2$x14
- Foolscap

(3) ADF Size Detection

(a) Use

- To set whether or not to give a priority to the detection of 8K/16K size when DF is used.
- Not available for Japan models.

(b) Default setting

- K Size

(c) Functions

- K Size
- B series

5.15.7 Install Date

(1) Use

- To register the date the main body was installed.
- Upon setup.

NOTE
- **When using without setting the install date, the date/month/year at which the total counter reaches more than 100 sheets of paper will be set as an install date automatically.**

(2) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Install Date].
3. Touch Clear.
4. Enter the date from the 10-key pad. (Year 4 digit -> Month 2 digit -> date 2 digit)
5. Touch [Entry] to set the date of installation.

5.15.8 Initialization-Clear All Data

(1) Use
- To initialize the setting data.
- For details on items to be cleared, see " I.10 CONTENTS TO BE CLEARED BY RESET FUNCTION."

NOTE
- **When removing or installing the hard disk after registering the data below, be sure to clear the data.**
  Referring data: One-touch registration, user authentication/account track.

(2) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Clear All Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.
   NOTE
   - **The trouble code "CD272: i-Option activated and additional memory and HDD not installed" is displayed after turned on the main power switch.**
5. Call the Service Mode to the screen.
6. Touch [System 2] -> [HDD] -> [Installed].
7. Exit the Service Mode and then turn off the main power switch and turn it on again more than 10 seconds after.

5.15.9 Initialization-Clear Individual Data
- Clear Individual Data enables you to select and clear multiple items at a time.

(1) Copy Program Data
(a) Use
- To clear data registered as copy program.
- Use this feature to clear all copy program data at a time.

(b) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Copy Program Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(2) Address Registration Data
(a) Use
- To clear address registration data.
- Use this feature to initialize address registration data.
- The following are address registration data:
  Group address data, Program key data, One-touch destination data, Mail body data, Subject data, Prefix/suffix data

(b) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Address Registration Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(3) Fax Setting Data
(a) Use
- To clear fax-related settings and parameters.
  However, address-related data is not cleared.
- Use this feature to clear fax-related settings and parameters at a time.

(b) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Fax Setting Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(4) All History Data

(a) Use

- To clear history data.
- The following are history data:
  Job history, Journal history, Receive reject history, Destination history, Job secure counter (Internal data for history management)

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [All History Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(5) Network Setting Data

(a) Use

- To clear the network-related settings.
- Use this feature to initialize and set network-related settings again when the machine does not work properly upon change of network-related settings.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Network Setting Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(6) Server Cache Data

(a) Use

- To clear user information cached from the external authentication server.
- When [Administrator Settings] -> [User Authentication/Account Track] -> [External Server Settings] -> [Temporarily Save Authentication Info.] is set to "Enable," the corresponding user information is cached each time when authentication by the external server is successful. The information is used when MFP cannot be connected to the external server.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Server Cache Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

5.15.10 Initialization-System Error Clear

(1) Use

- To reset the trouble data.
- Use to clear the [Jam], [Trouble], [Error] displays, and other improper displays.
- For details on items to be cleared, see " I.10 CONTENTS TO BE CLEARED BY RESET FUNCTION."

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [System Error Clear].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

5.15.11 Problem Unit Isolation Set.

(1) Use

- Individual units and options have a set or unset setting for the problem unit isolation set. function.
- When a problem occurs, this function enables the continuous use of the units that are not affected by separately controlling them and isolating other units that have a problem.
- The machine isolates only units that have a "set" setting.
  NOTE
  - **The malfunction detection mechanism is not applied to units and options that are being isolated.**
- This function can be selected for the following units and options.
  - Tray 1, Tray 2, Tray 3, Tray 4, manual, Half-Fold/Tri-Fold Center Stapling, Scanner, ADF, Expansion Function (HDD)
- Though Problem Unit Isolation Set. is not selected, if the specified malfunctions occur on the above listed units or options, an alert screen appears and asks users whether to isolate the units or options where malfunction occurs.
  See the "List of the trouble code" section for the corresponding trouble codes.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

NOTE

- **After changing the setting, touch [Apply] and turn the main power switch OFF and ON to make the new setting effective.**

5.15.12 Post card transfer table

(1) Use

- For the use of thick 3 postcards, you can select the transfer table suitable for postcards.
- This setting is used to improve transfer performance to postcards.

Post.	The postcard image transfer table is used when printing on thick3 postcards.
Thick 3	The normal thick3 image transfer table is used when printing on thick 3 postcards.

(2) Default setting

- Post.

(3) Setting item

- Post.
- Thick 3

5.15.13 Warm-up

(1) Change Warm Up Time

(a) Use

- To change warm up completion time.
- Mode is changed to Mode 2 in case the paper gets curled significantly when black printing is conducted immediately after warm up at Mode 1.
- Mode is changed to Mode 3 or 4 in case the paper gets curled immediately after normal warm up or the curled paper causes paper jam, paper exit failure, punch/staple/fold position failure or etc.

(b) Default setting

- Mode 1

(c) Setting item

- Mode 1
- Mode 2
- Mode 3
- Mode 4

Mode 1	It makes the warm-up time for black print shortest.
Mode 2	The warm-up time for both black and color will be as specified value.
Mode 3	To prevent curling of the paper immediately after the warm-up, printing productivity is decreased by PPM control. The warm-up time will be as specified for both black and color.
Mode 4	By having a longer warm-up time and warming up the fusing unit, curling of the paper immediately after the warm-up can be prevented. The warm-up period of time will be 65 seconds or under.

(d) Fusing operation mode

- Warm-up related control can be changed by using [Warm Up] setting and [Choice of high humidity circumstance] setting.
  When the main power switch is turned on, the mode is defined according to each choice setting.
- The following table shows the features of each operation mode.

Operation mode	Service Mode		Target user	Target user	Disadvantages
	Warm-up	Choice of high humidity circumstance			
1 (Initial setting)	Mode 1	OFF	• Black usage rate is high • Want to print quickly	Makes warm-up time for black shortest	Curling may occur in high humidity
2		ON	• Black usage rate is high • Want to prevent curling	• Warm-up time for black is made shortest except when in high humidity • Decreases possibility curling occurs in high humidity	Warm-up time is long in high humidity (65 seconds or later)
3	Mode 2	OFF	• Want to print quickly • Color usage rate is high	• Warm-up time is as specified value or later • High productivity even in high humidity	Curling may occur in high humidity
4		ON	• Color usage rate is high • Want to prevent curling	• Warm-up time is as specified value or later except in high humidity • Decreases possibility curling occurs in high humidity	Warm-up time is long in high humidity (65 seconds or later)
5	Mode 3	OFF	• Want to print quickly	• Warm-up time is as specified value or later	• Productivity immediately after warm-up decreases

Operation mode	Service Mode		Target user	Target user	Disadvantages
	Warm-up	Choice of high humidity circumstance			
			• Want to prevent curling immediately after warm-up	• Decreases the curling in normal circumstance	• Curling may occur in high humidity
6		ON	• Want to prevent curling immediately after warm-up • Want to print quickly • Want to prevent curling when humidity is high	• Warm-up time is as specified value or later • Decreases possibility curling occurs	• Productivity immediately after warm-up decreases • Warm-up time is long in high humidity (65 seconds or later)
7	Mode 4	OFF	Want to prevent curling immediately after warm-up	Decreases possibility curling occurs	Long warm-up time (65 sec. or less)
		ON			

(2) Low Power Consumption Mode

(a) Use

- To set whether to give priority to either the warm-up time or productivity when some optional devices are installed and the machine cannot secure enough electric power supply.

NOTE

- **This setting is available only for Japan.**
- Only for bizhub C558.

(b) Default setting

- Warm Up Priority

(c) Setting item

- Warm Up Priority
- Productivity Priority

5.15.14 Machine State LED Setting

(1) Use

- To set how to display main body statuses on the machine state LED (state display lamp, paper empty lamp).

NOTE

- **Each of Type1 and Type2 has the following LED display forms.**

Machine State LED Setting		Type1	Type2
Warning Status	Attention • Toner supply door open • Toner cartridge install failure • Toner Empty	Blinking	Blinking
	• Near life • Toner Near Empty	Lit	Lit
	Malfunction code	Blinking	Blinking
	Problem Unit Isolation	Blinking	Blinking
	Fatal error • Trouble code • Jam • Door opened • Life stop • Toner Empty Stop	Lit	Lit
Paper Remainder (Tray 1/2 paper empty lamp)	100 % to near empty	Unlit	Unlit
	Near empty	Blinking	Unlit
	Empty	Lit	Lit
	Being lifted up Cassette Open	Unlit	Unlit
Paper Remainder (Tray 3/4 paper empty lamp)	100 % to near empty	Unlit	Unlit
	Near empty	Blinking	Unlit
	Empty	Lit	Lit
	Being lifted up Cassette Open	Unlit	Unlit

(2) Default setting

- Type 2

(3) Setting item
- Type 1
- Type2

5.15.15 TP Level

(1) Use
- To adjust the selectivity of the touch panel.

(2) Default setting
- 0

(3) Setting range
- -2 to +2 (step: 1*)
- To increase sensitivity of the touch panel, increase the setting value.
- To decrease sensitivity of the touch panel, decrease the setting value.

NOTE
- **When the setting has been changed, turn off the main power switch and turn it on again more than 10 seconds after.**

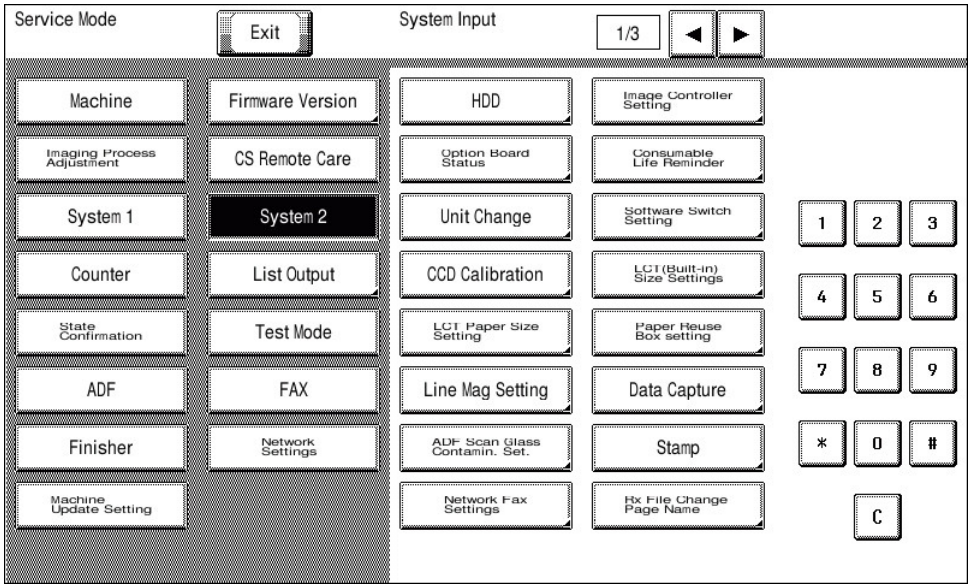
5.15.16 Burn Prevention Settings

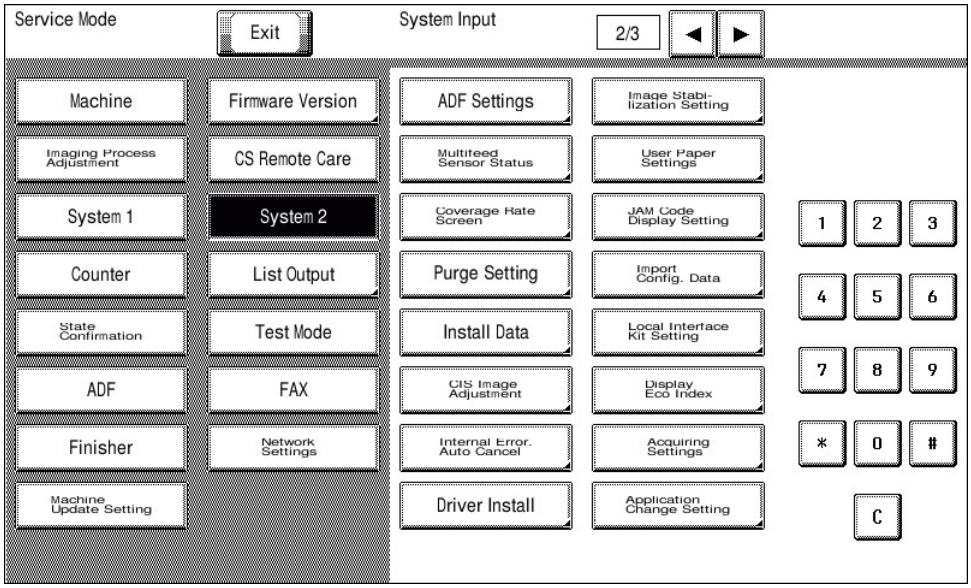
(1) Use
- To prompt to prevent a burn injury by displaying a message indicating that the fusing unit is at a high temperature when the right door has to be opened in order to get rid of a paper jam.

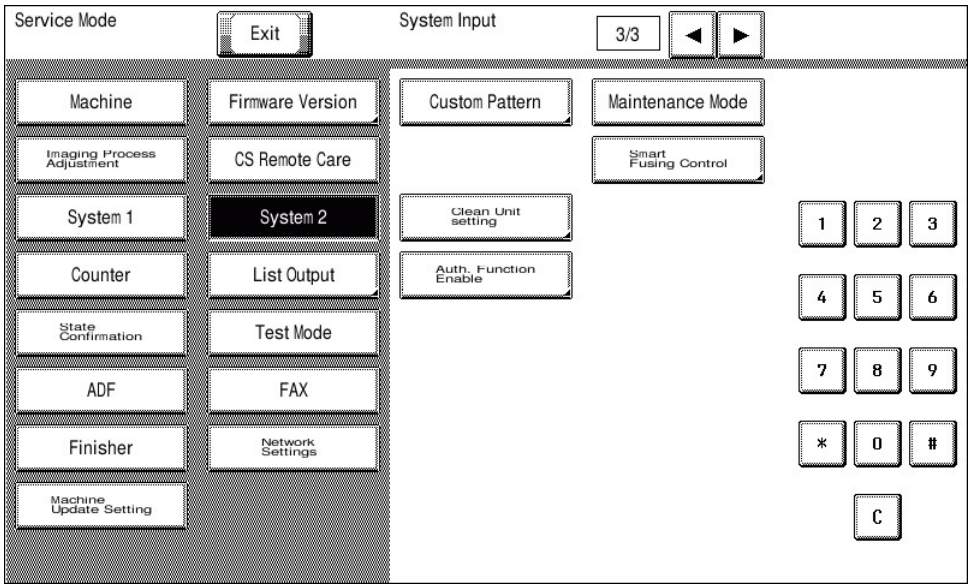
(2) Default setting
- Enable

(3) Setting item
- Enable
- Disable

5.16 System 2







5.16.1 HDD

- Setting change is unnecessary. (Select [Installed] at any time.)

NOTE

- **For putting the following order [System 1] -> [initialization] into practice, the set becomes [Not Installed], causing an error. Required to set [Installed] again.**

5.16.2 Image Controller Setting

(1) Image Controller Setting

(a) Use

- To set the type of the controller.
- When setting up the controller.

(b) Procedure

- Select the controller to be used.

(c) Default setting

- Controller 0

(d) Functions

- Controller 0: The standard controller is used.
- Controller 1: Optional image controller IC-416 is used.
- Others: undefined.

NOTE

- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is “ON”, this setting should be set to “Controller 0”. When [Enhanced Security Mode] is set to "ON", this setting cannot be changed.**
- **After changing setting, make sure to turn off the main power switch and turn it on again more than 10 seconds after.**

(e) Note on returning the setting from “Controller 1” to “Controller 0”.

- Selecting “Controller 0” will initialize the following settings made while “Controller 1” was selected. Reset the following items as necessary when using the internal standard controller.

<Control panel on the machine>

- Setting items included in [Network Setting] available from [Administrator Setting]. (Except [Status Notification Setting] and [Prefix/Suffix Setting] available from the following setting. [Administrator Settings] -> [Network Settings] -> [Detail Settings].)
- [Administrator Settings] -> [User Authentication /Account Track] -> [General Settings] -> [User Authentication] -> [External Server Authentication]
- [Administrator Settings] -> [System Connection] -> [OpenAPI Settings]
- Mailbox Destination (scan)
- Information on the original specified by the program destination

<Page Scope Web Connection>

- SSL/TLS

(2) Peripheral Mode

(a) Procedure

- Select the operating mode of the Scanner.

NOTE

- **After changing setting, make sure to turn off the main power switch and turn it on again more than 10 seconds after.**

(b) Functions

- Mode 1: undefined.
- Mode 2: undefined.
- Mode 3: undefined.

5.16.3 Option Board Status

(1) Use

- To be used for setup of the optional fax kit (FK-514*1, FK-515*2) or the security kit (SC-508).

NOTE

- ***1: FK-514 is used for FAX line 1/line 2.**
- ***2: FK-515 is used for FAX line 3/line 4. The Fax Mount kit (MK-742) is required when line 3/4 is installed.**

(2) Default setting

- Unset

(3) Setting item

FAX (circuit 1)

- Set
- Unset

FAX (circuit 2)

- Set
- Unset

FAX (circuit 3)

- Set
- Unset

FAX (circuit 4)

- Set
- Unset

DSC1

- Set
- Unset

DSC2

- Set
- Unset

NOTE

- **When the setting has been changed, turn off the main power switch and turn it on again more than 10 seconds after.**

5.16.4 Consumable Life Reminder

(1) Use

- To select whether or not to give the display of PM parts lifetime

PM parts lifetime display	An entire screen warning is given when the service life of a specific unit has been reached, prompting the user to replace the part.

- Applicable units:
  Transfer belt unit, fusing unit, developing unit, drum unit, transfer roller unit
- Use to select not to give the display of PM parts lifetime.

Yes	When the service life has been reached, a malfunction code and an entire screen warning appear on the control panel.
No	When the service life has been reached, a malfunction code and a message appear in one line on the upper side of the screen.

(2) Default setting

- No

(3) Setting item
- Yes
- No

5.16.5 Unit Change

(1) Unit Change

(a) Use
- To select who is to replace a unit.
- When the unit life arrives, the warning display is intended for the specific person who is going to replace the unit.
  - When "User" is selected: Printing is inhibited.
  - When "Service" is selected: Life warning.
- Upon setup.

(b) Default setting

Units	Japan	US	Europe
Toner cartridge	User	User	User
Drum unit	Service	Service	Service
Waste toner box	Service	User	User
Hole-Punch Scrape Box	User	User	User

(c) Setting item
- User
- Service

(2) Warning display - Toner Near Empty

(a) Use
- To set whether to display a toner near empty warning.
- To be used for setup.

(b) Default setting
- Yes

(c) Setting item
- Yes
- No

(3) Warning display - Near Empty Display Time

NOTE
- **The Near Empty Display time will be displayed when "Bit Assignment 00000010 / HEX Assignment 02" is set for the Switch No. "151" through the following settings. [SERVICE MODE] -> [System 2] -> [Software Switch Setting].**
- **A mechanism for detecting the residual toner inside the toner cartridge is not provided to the toner cartridge. So note that when the toner cartridge is replaced in the midway, the display timing that was set as a reference and the amount of the residual toner inside the toner cartridge may get mismatched.**

(a) Use
- To change the timing of toner cartridge near empty detection in order to optimize the timing of the toner cartridge replacement depending on individual use (PV).
- To configure the setting for both toner cartridge/K and toner cartridge/C,M,Y.
- To specify the timing for displaying toner near empty warning at a percentage against 100% of a full toner cartridge state.

(b) Default setting

	C658	C558	C458	C368/C308/C258
CMY	8	4	2	0
K	18	11	8	7

(c) Setting range
- 0 to +25 (steps: 1)

(4) Warning display - DU PreNear Life Display Time

(a) Use
- Specifies when to display the near life for the drum unit.
- Specifies whether to display the archive at a set number of months before the estimated the consumables check list life cycle is reached.
- When [0] is specified, the near life is not displayed.

(b) Default setting
- 0

(c) Setting range
- 0 to +6 (steps: 1)

(5) Warning display – Near Life Display Settings

(a) Use
- To set whether or not to display the life warning of individual consumables.
- When [Do Not Display] is selected, a warning is not displayed at the time of life detection. However, in CS Remote Care, life warning is always sent to the Center regardless of this setting.
- Applicable consumables are as follows:
  Drum Unit, Developing Unit, Fusing Unit, Transfer Roller Unit, Image Transfer Belt Unit, Toner Filter

NOTE
- **The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.**

(b) Default setting
- Display

(c) Setting item
- Display
- Do Not Display

(6) Warning display – Pre-Near Life Display Setting

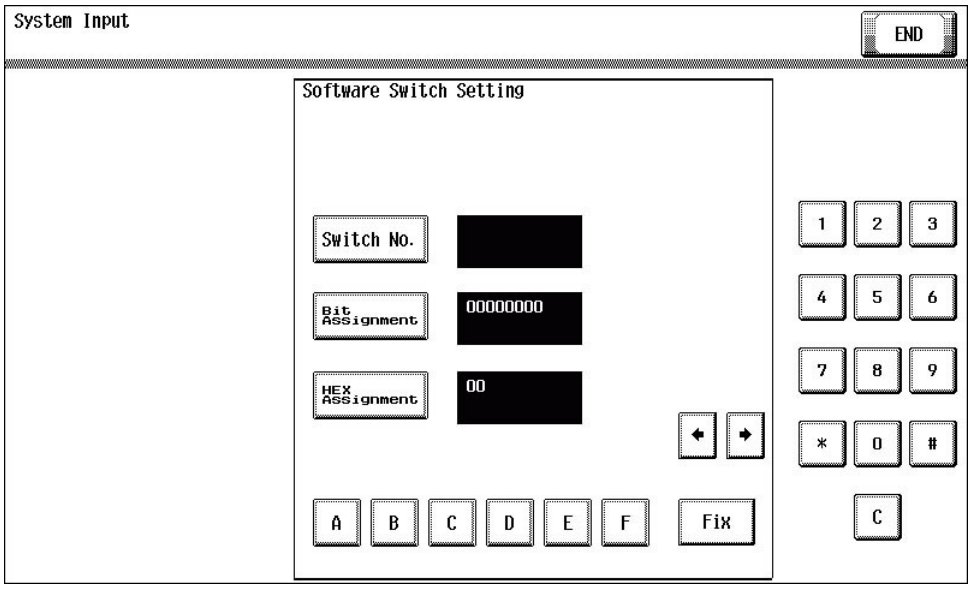
(a) Use
- To set whether or not to display the near life warning of drum unit.
- When [Do Not Display] is selected, a warning is not displayed at the time of near life detection.
  However, in CS Remote Care, near life warning is always sent to the Center regardless of this setting.

NOTE
- **When the PreNear Life Display setting is specified to [Off], the near life warning display is disabled.**

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

5.16.6 Software Switch Setting



(1) Use
- To set the operating characteristic of each function from software switch depending on what types of printing are normally made.

(2) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 2] > [Software Switch Setting].
3. Touch [Switch No.] and enter the intended switch number with the 10-key pad.
4. Touch [Bit Assignment].
5. Use [<-] or [->] to select a bit. To set the bit, enter 0 or 1 with the 10-key pad.
6. To set the bit in hex, touch [HEX Assignment] and use the 16key pad and [A] to [F] keys to enter numbers and characters.
7. Touch [Fix].

(3) Details of the software switch settings

NOTE

- **For switches not mentioned in the list below, use them in the default value (Bit Assignment: 00000000 / HEX Assignment: 00) unless indicated otherwise.**

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
012	Addition of the authentication device	00000000	00	Standard	00000000 / 00	• Authentication Device 2
		00000010	02	PKI correspondence (NIPRNet) [Card3] choice is added in Service Mode.		
				PKI correspondence (SIPRNet) [Card3] choice is added in Service Mode.		
025	FW function version setting	00000000	00	FW compatible with version 1.0	00000000 / 00	• Device Information List
		00010000	10	FW compatible with version 2.0		
		00100000	20	FW compatible with version 2.1		
		00110000	30	FW compatible with version 2.2		
		01000000	40	FW compatible with version 3.0		
		01100000	60	FW compatible with version 3.2		
		01110000	70	FW compatible with version 3.3		
		10000000	80	FW compatible with version 3.4		
		10010000	90	FW compatible with version 4.0		
		10100000	A0	FW compatible with version 4.1		
		10110000	B0	FW compatible with version 4.2		
033	Renders some functions, which were available when both administrator authentication and key counter were provided with when using the vendor, available only with administer authentication.	00000000	00	Available with the combination of administer authentication and key counter.	00000000 / 00	-
		00000001	01	Available only with administrator authentication.		
049	The upper limit of copies that can be input through the control panel of this machine is set.	00000000	00	Unlimited	00000000 / 00	-
		00000001	01	1 copy		
		00000010	02	3 copies		
		00000011	03	5 copies		
		00000100	04	9 copies		
		00000101	05	10 copies		
		00000110	06	20 copies		
		00000111	07	30 copies		
		00001000	08	50 copies		
		00001001	09	99 copies		
		00001010	0A	250 copies		
	Scan setting only when Sort is selected for a copy cycle to be run with originals placed on the original glass.	00000000	00	"Change Setting" and "Finish" keys become available after the document has been scanned.	00000000 / 00	-
		10000000	80	Keys unavailable (copy cycle is started)		
051	Settings for the life warning/replace display of the units	00000000	00	Normal display	00000000 / 00	• New Release

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
		00010000	10	Does not show the life warning/replace display of the photo conductor unit.		
		00100000	20	Does not show the life warning/replace display of the developing unit.		
		01000000	40	Does not show the life warning/replace display of the transfer roller unit.		
		10000000	80	Does not show the life warning/replace display of the fusing unit.		
069	When printing using the manual bypass tray in a custom size, allows for printing only with a printer driver settings.	00000000	00	After setting a paper in the manual bypass tray, touch [complete] key to start printing.	00000000 / 00	-
		00000001	01	Start printing with the paper settings specified by the printer driver as the manual bypass tray paper settings without giving a warning.		
070	Setting for alarm sound and screen display for communication errors occurring due to CSRC causes.	00000000	00	Communication error sound/screen display enabled.	00000000 / 00	-
		00010000	10	Communication error sound/screen display disabled.		
072	Import/export function of the address book through the USB memory	00000000	00	Import/export function is disabled.	00000000 / 00	-
		00000100	04	Import/export function is enabled.		
121	Operation when a double feed is detected, with ADF used.	00000000	00	Stops instantly	00000000 / 00	-
		00000010	02	Stops after outputting originals		
124	Function to restrict the file type of TX Fax	00000000	00	Restrict the file type.	00000000 / 00	-
		00000001	01	Do not restrict the file type.		
135	Setting for ID length of the HID Prox card	00000000	00	Reports that the 1st byte shows the ID length of the card, the 2nd byte and after shows the card ID.	00000000 / 00	-
		00000001	01	Reports the card ID with the ID length including the 1st byte.		
143	Expansion setting of the touch panel sensitive area when the web browser function is used *1	00000000	00	• 26 dots : 26 dots from the perimeter of the touch panel is a nonsensitive area.	00000000 / 00	• C.1.10 Web browser function
		00000001	01	• 16 dots : 16 dots from the perimeter of the touch panel is a nonsensitive area.		
		00000010	02	• 9 dots : 9 dots from the perimeter of the touch panel is a nonsensitive area.		
145	Switching to Auto detection for paper size in manual bypass tray	00000000	00	Enable	00000000 / 00	-
		00000001	01	Disable		
	Displaying message when the paper size in manual bypass tray is mismatched with the paper size specified on the control panel	00000000	00	Enable	00000000 / 00	-
		00000100	04	Disable		

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
	When running a copy cycle with originals placed on the original glass, and [Auto] is displayed in "Group/Sort" of the finishing function, [Auto] will be set as default. ("Sort" and "Offset" will be executed when [Auto] is selected.)	00000000	00	Enable	00000000 / 00	-
		00001000	08	Disable		
	Switch-over settings of Duplex printing and Billing permission Setting for allowing/prohibiting billing on exited paper when a paper size error occurred at the time of duplex printing	00000000	00	Allow (billing on one side of the paper)	00010000 / 00	-
		00010000	10	Prohibit		
146	Setting for enabling use of Non-Image Area Erase, Centering, and Original Size when the book original is used in the fax/scanner mode	00000000	00	Prohibits use of Non-Image Area Erase, Centering, and Original Size.	00000000 / 00	-
		00000100	04	Enables use of Non-Image Area Erase, Centering, and Original Size.		
151	Setting for displaying/hiding the Near Empty Display Time	00000000	00	Hide	00000000 / 00	• Warning Display - Near Empty Display Time
		00000010	02	Display		
152	The E-mail body print settings of E-Mail RX Print	00000000	00	Disables the E-mail body print settings	00000000 / 00	• This function supports the following languages. English, French, Italian, Germany, Spanish
		00000001	01	Allows the E-mail body print settings.		
155	Validation/invalidation of the debug setting of the log.	00000000	00	Debug setting is disabled.	00000000 / 00	• Debug Setting/ I.9.2 Starting/ Exiting • Debug Setting/ I.9.4.1 Basic mode
		00000001	01	Debug setting is enabled.		
157	Change the upper limit of the time for switching to power save mode.	00000000	00	Do not change the upper limit.	00000000 / 00	-
		00000010	02	Change the upper limit to 240 min.		
163	Setting for the auto execution of Self-diag.(Full)	00000000	00	Disable	00000000 / 00	-
		00000010	02	Enable The Self-diag. (Full) will be executed automatically only when the rank B/C trouble codes are detected.		
192	Set whether to enable the Android and iOS function	00000000	00	Disable	00000001 / 01	-
		00000001	01	Enable		
203	Setting to automatically change log-in authorization to a second user when the second user attempts card authentication after a first user has been authenticated through card authentication.	00000000	00	Log-in authorized.	00000000 / 00	-
		00000100	04	Log-in not authorized.		
206	Setting whether to enable Coverage Counter	00000000	00	Disable	00000000 / 00	• Coverage Counter Setting • Print Counter Clear • Coverage Counter Detail
		00000001	01	Enable		
227	Setting for the display of consumable level and warning. (Operatino panel, PSWC, Fiery)	00000000	00	Display	(Japan/North America/ Europe): 10000000 / 80	-
		10000000	80	Not display		

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
					(Others): 00000000 / 00	
230	Setting for the display of consumable level and warning. (PSES, MIB, Printfleet, SiteAudit)	00000000	00	Display	(Japan/North America/ Europe): 00001000 / 08 (Others): 00000000 / 00	-
		00001000	08	Not display		

- *1: The sensitive area of the control panel can be expanded by selecting “16 dots” or “9 dots” on the software switch No.143. Note that the control panel’s sensitive area expanded in this manner may not detect touches properly.

(4) Software Switch Setting list

- The list of the setting values of Software Switch Setting can be print from [Service Mode] -> [List Output] -> [Machine Management List].

Sample

Machine Manage
ment List

P 9
03/09/2012 09:30
Serial No.
TC: 0

DipSW Setting

No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex
000	00000000	00	064	00000000	00	128	00000000	00	192	00000000	00	256	00000000	00
001	00000000	00	065	00000000	00	129	00000000	00	193	00000000	00	257	00000000	00
002	00000000	00	066	00000000	00	130	00000000	00	194	00000000	00	258	00000000	00
003	00000000	00	067	00000000	00	131	00000000	00	195	00000000	00	259	00000000	00
004	00000000	00	068	00000000	00	132	00000000	00	196	00000000	00	260	00000000	00
005	00000000	00	069	00000000	00	133	00000000	00	197	00000000	00	261	00000000	00
006	00000000	00	070	00000000	00	134	00000000	00	198	00000000	00	262	00000000	00
007	00000000	00	071	00000000	00	135	00000000	00	199	00000000	00	263	00000000	00
008	00000000	00	072	00000000	00	136	00000000	00	200	00000000	00	264	00000000	00
009	00000000	00	073	00000000	00	137	00000000	00	201	00000000	00	265	00000000	00
010	00000010	02	074	00000000	00	138	00000000	00	202	00000000	00	266	00000000	00
011	00000000	00	075	00000000	00	139	00000000	00	203	00000000	00	267	00000000	00
012	00000000	00	076	00000000	00	140	00000000	00	204	00000000	00	268	00000000	00
013	00000000	00	077	00000000	00	141	00000000	00	205	00000000	00	269	00000000	00
014	00000000	00	078	00000000	00	142	00000000	00	206	00000000	00	270	00000000	00
015	00000000	00	079	00000000	00	143	00000000	00	207	00000000	00	271	00000000	00
016	00000000	00	080	00000000	00	144	00000000	00	208	00000000	00	272	00000000	00
017	00000000	00	081	00000000	00	145	00000000	00	209	00000000	00	273	00000000	00
018	00000000	00	082	00000000	00	146	00000000	00	210	00000000	00	274	00000000	00
019	00000000	00	083	00000000	00	147	00000000	00	211	00000000	00	275	00000000	00
020	00000000	00	084	00000000	00	148	00000000	00	212	00000000	00	276	00000000	00
021	00000000	00	085	00000000	00	149	00000000	00	213	00000000	00	277	00000000	00
022	00000000	00	086	00000000	00	150	00000000	00	214	00000000	00	278	00000000	00
023	00000000	00	087	00000000	00	151	00000000	00	215	00000000	00	279	00000000	00
024	00000000	00	088	00000000	00	152	00000000	00	216	00000000	00	280	00000000	00
025	00000000	00	089	00000000	00	153	00000000	00	217	00000000	00	281	00000000	00
026	00000000	00	090	00000000	00	154	00000000	00	218	00000000	00	282	00000000	00
027	00000000	00	091	00000000	00	155	00000001	01	219	00000000	00	283	00000000	00
028	00000000	00	092	00000000	00	156	00000000	00	220	00000000	00	284	00000000	00
029	00000000	00	093	00000000	00	157	00000000	00	221	00000000	00	285	00000000	00
030	00000000	00	094	00000000	00	158	00000000	00	222	00000000	00	286	00000000	00
031	00000000	00	095	00000000	00	159	00000000	00	223	00000000	00	287	00000000	00
032	00000000	00	096	00000000	00	160	00000000	00	224	00000000	00	288	00000000	00
033	00000000	00	097	00000000	00	161	00000000	00	225	00000000	00	289	00000000	00
034	00000000	00	098	00000000	00	162	00000000	00	226	00000000	00	290	00000000	00
035	00000000	00	099	00000000	00	163	00000000	00	227	00000000	00	291	00000000	00
036	00000000	00	100	00000000	00	164	00000000	00	228	00000000	00	292	00000000	00
037	00000000	00	101	00000000	00	165	00000000	00	229	00000000	00	293	00000000	00
038	00000000	00	102	00000000	00	166	00000000	00	230	00000000	00	294	00000000	00
039	00000000	00	103	00000000	00	167	00000000	00	231	00000000	00	295	00000000	00
040	00000001	01	104	00000000	00	168	00000000	00	232	00000000	00	296	00000000	00
041	00000000	00	105	00000000	00	169	00000000	00	233	00000000	00	297	00000000	00
042	00000000	00	106	00000000	00	170	00000000	00	234	00000000	00	298	00000000	00
043	00000011	03	107	00000000	00	171	00000000	00	235	00000000	00	299	00000000	00
044	00000000	00	108	00000000	00	172	00000000	00	236	00000000	00			
045	00000000	00	109	00000000	00	173	00000000	00	237	00000000	00			
046	00000000	00	110	00000000	00	174	00000000	00	238	00000000	00			
047	00000000	00	111	00000000	00	175	00000000	00	239	00000000	00			
048	00000000	00	112	00000000	00	176	00000000	00	240	00000000	00			
049	00000000	00	113	00000000	00	177	00000000	00	241	00000000	00			
050	00000000	00	114	00000000	00	178	00000000	00	242	00000000	00			
051	00000000	00	115	00000000	00	179	00000000	00	243	00000000	00			
052	00000000	00	116	00000000	00	180	00000000	00	244	00000000	00			
053	00000000	00	117	00000000	00	181	00000000	00	245	00000000	00			
054	00000000	00	118	00000000	00	182	00000000	00	246	00000000	00			
055	00000000	00	119	00000000	00	183	00000000	00	247	00000000	00			
056	00000000	00	120	00000000	00	184	00000000	00	248	00000000	00			
057	00000000	00	121	00000000	00	185	00000000	00	249	00000000	00			
058	00000000	00	122	00000000	00	186	00000000	00	250	00000000	00			
059	00000000	00	123	00000000	00	187	00000000	00	251	00000000	00			
060	00000000	00	124	00000000	00	188	00000000	00	252	00000000	00			
061	00000000	00	125	00000000	00	189	00000000	00	253	00000000	00			
062	00000000	00	126	00000000	00	190	00000000	00	254	00000000	00			
063	00000000	00	127	00000000	00	191	00000000	00	255	00000000	00			

5.16.7 CCD Calibration

(1) Use

- To set whether to use the calibration adjustment value set prior to the shipping. To display the current calibration adjustment value.
- When CCD board (front side)/CIS (back side: only when dual scan document feeder is mounted) has been replaced, set to “OFF.” After replacing the CCD board or CIS, the default generic value needs to be set since the calibration value set for each unit changes to control the differences in reading performance on each scanner (CCD).
- The original calibration adjustment value can be disabled to address image failure and other problems caused by individual CCD performance difference.
- When dual scan document feeder is mounted, this setting can be made separately for [Front Side] and [Back Side].

(2) Default setting

- ON

(3) Setting item
- ON
- OFF

NOTE
- **When the setting is changed, the function becomes available by turning the main power switch OFF and ON again.**

5.16.8 LCT (Built-in) Size Settings

(1) Use
- To set the paper size for the built-in LCT.
- To use when optional paper feed cabinet PC-410 (bizhub C368/C308/C258) or PC-415 (bizhub C658/C558/C458) is mounted.

(2) Default setting
- A4 (Except for North America)
- $8^1/_2$ x 11 (North America)

(3) Setting item
- A4
- $8^1/_2$ x 11

5.16.9 LCT Paper Size Setting

(1) Use
- To set an optional large capacity unit type (LU-302 or LU-207).
- To set the paper size for the optional large capacity unit LU-302 or LU-207.
- Use this feature upon the optional large capacity unit LU-302 or LU-207 set-up.

(2) Default setting
- A4LCT

(3) Setting item
- A4LCT
- A3LCT

* For a selected LCT type, set a paper size.

NOTE
- **When the LCT type setting is changed, the paper size setting in the LCT is returned to the default.**

(4) A4LCT

(a) Default setting
- A4 (Except for North America)
- $8^1/_2$ x 11 (North America)

(b) Setting item
- A4
- $8^1/_2$ x 11

(5) A3LCT

(a) Default setting
- A3 (Except for North America)
- 11 x 17 (North America)

(b) Setting item
- SRA3
- A3
- B4
- A4S
- A4
- 12 x 18
- 11 x 17
- $8^1/_2$ x 14
- $8^1/_2$ x 11
- $8^1/_2$ x 11S

5.16.10 Paper Reuse Box Setting

(1) Use
- This setting is to be configured when the optional Paper Reuse Box is used.
- Select the paper loading port (tray 1/tray 2) where a paper reuse box is installed.

(2) Default setting
- Do Not Use

(3) Setting item

1. Do Not Use
2. Tray 1
3. Tray 2

5.16.11 Line Mag Setting

(1) Use

- To set whether to use the offset value which has been set prior to the shipping. To display the current magnification offset value.
- When CCD board (front side)/CIS (back side: only when dual scan document feeder is mounted) has been replaced, set to “OFF.” After replacing the CCD board or CIS, the default generic value needs to be set since the magnification offset value between the lines set for each unit changes to control the differences in reading performance on each scanner (CCD).
- The original offset value can be disabled to address image failure and other problems caused by individual CCD performance difference.
- When dual scan document feeder is mounted, this setting can be made separately for [Front Side] and [Back Side].

(2) Default setting

- ON

(3) Setting item

- ON
- OFF

NOTE

- **When the setting is changed, the function becomes valid by turning the main power switch OFF and ON again.**

5.16.12 Data Capture

(1) Use

- When an error occurs, it acquires the print job data in order to analyze the cause of the error.
- When an error occurs, this will be used to analyze the cause of the error according to the print job data.

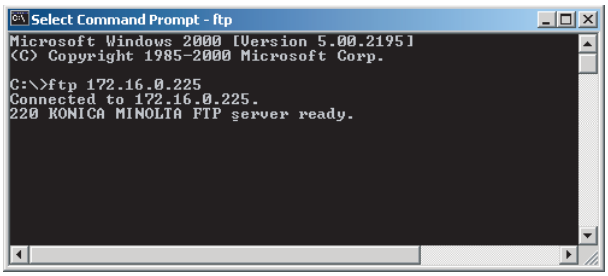
(2) Procedure

NOTE

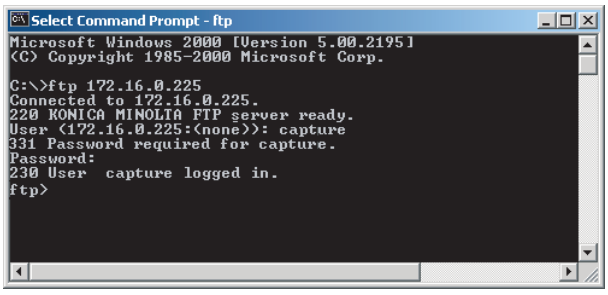
The following conditions are necessary for this function.

- **[Allow] must be set when selecting [Administrator Settings] [Security Setting] -> [Security Details] -> [Print Data Capture].**
- **The hard disk must be mounted to the machine.**
- **[ON] must be set when selecting [Administrator Settings] -> [Network Settings] -> [FTP Settings] -> [FTP Server Settings].**
- **This function also allows print job data stored in the HDD to be obtained from [Debug Settings] -> [Debug Log Output].**

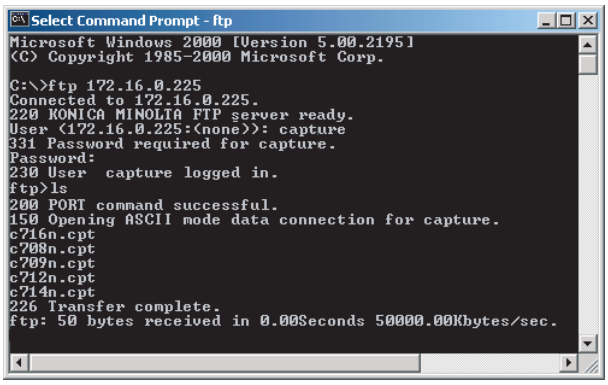
1. Select [Service Mode] -> [System 2], and touch [Data Capture]. Select [ON].
   (While the Data Capture setting is [ON], the print job data from the PC will be stored in the hard disk.)
   NOTE
   - **Maximum 5 print job data can be stored. The data will be overwritten beginning with the chronologically oldest one.**
2. Check the IP address of the machine.
3. Connect the PC (Windows) and the machine with ethernet cable.
4. Start the DOS command prompt of the PC, and specify the IP address of the machine to start FTP.



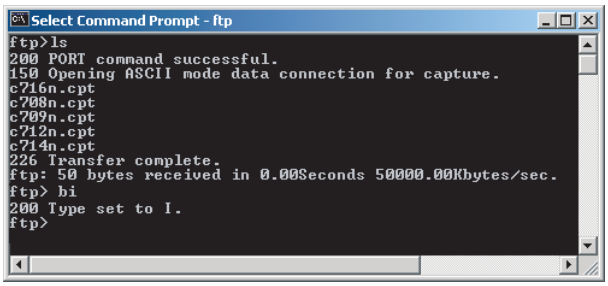
5. Input the user name and the password.
   - User name: capture
   - Password: sysadm



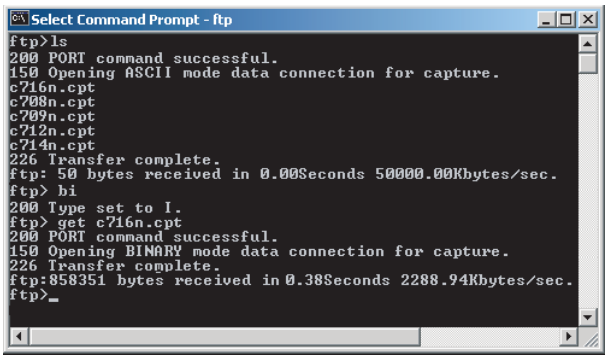
6. Using the “ls” command, display the list of the file available for capture.



7. Using the “binary” command, set the File transfer mode to the binary transfer.



8. Using the “get” command, transfer the data for capture to PC.



9. Finish the command prompt.
NOTE
- **After receiving capture data, select [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Print Data Capture], and select [Restrict] for the print data capture setting in order to delete the job data stored in the hard disk. When HDD Format or Overwrite Temporary Data is performed, job data is deleted.**

5.16.13 ADF Scan Glass Contamin. Set.

(1) ADF Scan Glass Contamin. Sensitivity

- To make each settings for contamination detection.
- When a dual scan document feeder is mounted, make the settings separately for the front side and the back side.

(a) Use

- To set the detection level for the pre-detection of stain on the DF original glass (or the CIS glass). In the back side pre-detection, stains of not only the CIS glass but also the back side glass cleaning roller are detected.
- Use when changing the setting for whether or not to detect the stain on the DF original glass when opening/closing DF as well as its detection level as the main power switch being ON, recovering from the sleep/low power mode, etc.

Not Set	Detection of stain on the glass will not be conducted.
Low	Stain on the glass will not be detected easily.
Normal	Normal detection level
High	Stain on the glass will easily be detected.

NOTE
- **Be aware that selecting "Not Set" and performing the pre-detection with [Service Mode] -> [Machine] -> [ADF Scan Glass Contamination] will display "NG."**
- **When "Not Set" is selected, the original glass cleaning operation after the job ends does not operate.**

(b) Default setting
- Normal

(c) Setting item
- Not Set
- Low
- Normal
- High

(2) ADF Scan Glass Contamin. Warn/Level

(a) Use
- To set how to display the warning when stain on the DF original glass (or the CIS glass) is detected.
- Use when changing the display of the warning which requests the cleaning of the stain on the glass detected by the pre-detection of the lines.

0	Warning will not be displayed.
1	Warning will be displayed by the maintenance mark. (Malfunction code: D-1/D-3)
2	Warning will be displayed on the message area on the basic screen.
3	Warning will be displayed on all screens.

NOTE
- **This setting is invalid when [ADF Scan Glass Contamin. Sensitivity] is set to "Not Set."**

(b) Default setting
- 1

(c) Setting item
- 0
- 1
- 2
- 3

(3) Feed Cleaning Settings

(a) Use
- To set the operation for detection and cleaning operation of stain on the DF original glass when feeding the original.
- Use when changing the operation for detection and cleaning operation of stain on the DF original glass when feeding the original.

0	The cleaning brush will stop moving when the original is fed, and will not perform cleaning the stain.
1	The cleaning brush will move between originals when feeding the original.

(b) Default setting
- 1

(c) Setting item
- 0
- 1

(4) Display Timing (only when dual scan document feeder is mounted)

(a) Use
- To set the timing at which a warning is displayed when contamination is detected on the surface of the CIS glass in a pre-detection process.

Back Scan Time	Displays the warning only when back side scanning mode is selected.
Warning Detection	Displays the warning whenever contamination is detected.

- This setting is enabled only when [Back Side] is selected.

(b) Default setting
- During the Back Side Scan

(c) Functions
- Warning Detection
- During the Back Side Scan

5.16.14 Stamp

(1) Use

- To set the mounting status of the optional stamp unit SP-501.
- To use when setting up the stamp unit SP-501.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

5.16.15 Network Fax Settings

(1) Use

- To set whether or not to use network fax function.
- To use network fax function (IP address fax, internet fax).
- Selection will be available when each network fax function is set to "ON" in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].

(2) Default setting

- OFF

(3) Setting item

IP Address Fax

- ON
- OFF

Internet Fax

- ON
- OFF

5.16.16 RX File Change Page Name

(1) Use

- To set whether to change the document file name to forward TX or take out a file from the Memory RX Box.

(2) Default setting

- Do Not Change

(3) Setting item

- Change
- Do Not Change

5.16.17 ADF Settings

(1) Use

- To configure ADF installation settings.

  NOTE

  - **It is not used on bizhub C658/C558/C458.**

(2) Default setting

- Unset

(3) Setting item

- Unset
- Single-Sided Scan Tx
- Dual Scan Document Feeder

5.16.18 Image Stabilization Setting

(1) Use

- To change the type and timing of image stabilization.
- To provide the desirable image stabilization control that depends on customer's machine usage pattern, i.e. the ratio of color to black print.

Standard	This mode is suitable for low-volume users and reduces the number of times image stabilization is carried out when the main power switch is turned ON.	If the change of absolute humidity is detected during warm-up, normal stabilization is performed during warm-up.
Color Priority	This mode is suitable for high-volume and high ratio of color print users.	Color stabilization sequence is performed unconditionally when the main power switch is turned ON.

Black Priority	This mode is suitable for users who use mainly black print and use less color print. It provides monochrome stabilization and reduces the number of times image stabilization is carried out when the main power switch is turned ON.	If the change of absolute humidity is detected during warm-up, monochrome stabilization is performed during the warm-up and color stabilization is performed before color printing.

(2) Default setting
- Standard

(3) Functions
- Standard
- Color Priority
- Black Priority

5.16.19 Multifeed Sensor Status (bizhub C658/C558/C458)
(1) Use
- To set the mounting status of the optional Double feed detection Kit UK-501.
- To use when setting up the Double feed detection Kit UK-501.

(2) Default setting
- UnSet

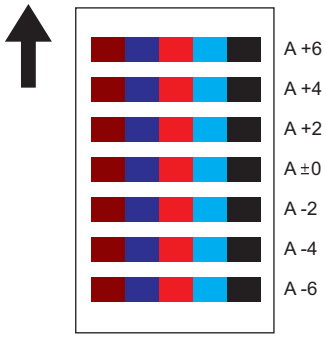
(3) Setting item
- Set
- UnSet

5.16.20 User Paper Settings
(1) Use
- To set and register individual user paper that includes a different basic weight, fusing temperature, 2nd image transfer fine adjustment value.
- User Paper Settings is also available from [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [User Paper Settings].
- To register a paper type that is suitable for individual customer's intended use and use environment.
- The following shows user paper registration keys and corresponding paper types.

User Paper 1/2	Plain paper
User Paper 3	Thick 1
User Paper 4	Thick paper 1+
User Paper 5	Thick 2
User Paper 6	Thick 3

(2) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶] -> [User Paper Settings].
3. Select the desired key from [User Paper 1] to [User Paper 6] to register user paper.
4. Select [Basic Weight] and enter a value with the [+] / [-] key.
5. Select [600dpi] or [1200dpi] and enter a fusing temperature with the [+] / [-] key.
   The setting range is -20 °C to +10 °C. (1 step: 5 °C)
   NOTE
   - **[1200dpi] is only displayed on bizhub C658/C558/C458.**
6. Select a target item of the [2nd Transfer Adj.], and enter a 2nd image transfer fine adjustment value with the [+] / [-] key. (Only [Front]/[Back] can be selected for User Paper 5 and User Paper 6.)
   The setting rage is -8 to +7. (1 step: 1 increment or decrement)
7. Load the manual bypass tray with paper.
   Paper Size: A4S, B4S, A3S, 81/2×14S, 81/2×11S, 11×17S
8. Select [1Side] (only front side) or [Front side] (only back side) and press the Start key.
9. Check the image of the output test pattern.
   If the image is not acceptable, adjust the settings and output the test pattern again.

(a) Test Pattern in User Paper Settings
- The printable test pattern for user paper settings is provided to ease determining the most appropriate 2nd image transfer output value when customizing user paper.
- The test pattern outputs a pattern for Standard value A (2nd image transfer output control) according to the 2nd image transfer fine adjustment setting range. (Every two steps)
- Refer to the printed pattern, and select the 2nd image transfer fine adjustment setting.



A: Standard voltage	

5.16.21 Coverage Rate Screen

(1) Use

- To set whether or not to display a coverage rate on the sales counter screen and sales counter list.
- Coverage Counter instead of Coverage Rate is displayed when Switch No. 206 is set to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].

(2) Default setting

- Do Not Display

(3) Setting item

- Display
- Do Not Display

5.16.22 JAM Code Display Setting

(1) Use

- To set whether or not to add a jam code to a jam warning display on the control panel when a jam occurs.

(2) Default setting

- Do Not Display

(3) Setting item

- Do Not Display
- Display

5.16.23 Purge Setting (bizhub C658/C558/C458)

(1) Use

- When a finisher equipped with a horizontal transport unit is mounted, set whether to use the reverse roller to discharge paper remained in the machine when a paper jam occurs in the transport path downstream from the exit port (inside the finisher equipped with the horizontal transport unit).
- When “Yes” is selected, paper remained in the machine when a paper jam occurs will be discharged into the horizontal transport unit.

(2) Default setting

- Yes

(3) Setting item

- Yes
- No

5.16.24 Import Config. Data

(1) BootUp Screen

NOTE

In the following conditions, import of BootUp Screen data is prohibited.

- **[Administrator Settings] -> [Security Settings] ->** [USB Connection Permission settings] **is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] ->** [Enhanced Security Mode] **is set to [ON].**

(a) Use

- To customize the BootUp Screen displayed upon machine start-up.
- Use this feature when changing the KonicaMinolta logo displayed on the control panel upon start-up to a client company logo or others for client’s intended use of the machine.
- Logo data can be registered to the eMMC board from USB memory.
- The following are the logo data specifications that should be met.

Image format	PNG format

File extension	".bin" or ".zip"	
FileName	BootUpScreen*.bin or BootUpScreen*.zip (* represents user-defined text)	
Image size	bizhub C368/C308/C258	800 x 480 dots
	bizhub C658/C558/C458	1024 x 600 dots
Color	256 colors (Palette that the machine specifies is used.)	

NOTE
- **When making the logo data, use the exclusive image making tool.**
- **If a USB memory is not connected or a nonconforming USB memory is connected, "USB NG" is displayed and logo data cannot be registered.**
- **If the file name of logo data does not conform to the above specifications, "File NG" message is displayed and logo data cannot be registered.**
- **To install logo data as a zip format file, compress the bin file of the same name (image data) and the Version.txt file (version information) in one zip file.**
- **Version information will be displayed as the version of BootUp Screen, when Version.txt is installed with the version information described in the Version.txt file and compressed with image data in one zip file. Usable character type is limited to ASCII (7-bit ASCII). Text strings of up to 21 characters can be used.**

(b) Procedure

1. Save logo data that conforms to the above specifications in the root directory of a USB memory device.
   NOTE
   - **Be sure to save data in the root directory as the machine cannot detect data saved in other directories.**
2. Connect the USB memory device to the machine USB port.
3. Touch [System 2] -> [▶] -> [Import Config. Data] -> [BootUp Screen].
4. Touch [Set].
5. Check result "OK" is displayed and touch [END].
   NOTE
   - **If logo data is already registered, new logo data overwrites the existing logo data.**
   - **The color of logo data may look different between the machine control panel and some PC screens. After registering logo data, restart the machine and check the color of the logo data on the BootUp screen.**

* To delete registered data, touch [Delete] and check result "OK" is displayed.

(2) Machine Image

NOTE
In the following conditions, import of machine image data is prohibited.
- **[Administrator Settings] -> [Security Settings] ->** [USB Connection Permission settings] **is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] ->** [Enhanced Security Mode] **is set to [ON].**

(a) Use

- To customize the exterior view of the machine displayed on the control panel.
- Use this function to change the exterior view of the machine displayed on the control panel to the exterior view of the customer business office according to the user's need.
- The exterior view data can be registered to the eMMC board from USB memory.
- Check the version of the installed exterior view data. (When the USB memory is not connected)

(b) Procedure

1. Save the exterior view data in the root directory of the USB memory.
   NOTE
   - **Be careful that the MFP is unable to recognize data saved in any directories other than the root directory.**
2. Connect the USB memory to the USB port of the machine.
3. Touch [System 2] -> [▶] -> [Import Config. Data] -> [Machine Image].
4. Touch [Set].
5. Check result "OK" is displayed.
6. Turn OFF and ON the main power switch.
   NOTE
   - **Any exterior view data that has previously been registered will be overwritten by subsequent new data as it is registered.**
   - **To delete registered data, touch [Delete] and make sure that "OK" appears.**

(3) Custom Auth. Setting

NOTE
Only when one of the following conditions is met, the authentication customize data can be imported.
- **A USB memory is inserted in the USB port.**
- **[Administrator Settings] -> [Security Settings] ->** [USB Connection Permission settings] **-> [Detail Setting] -> [External Memory (Service)] -> [Storage data backup] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [FW Update] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] ->** [Enhanced Security Mode] **is set to [OFF].**

(a) Use

- To install the authentication customize data used to customize the authentication process.

(b) Procedure

1. Save the authentication customize data to the root directory of a USB memory.
   NOTE
   - **Be careful that the MFP is unable to recognize data saved in any directories other than the root directory.**
2. Connect the USB memory to the USB port of the machine.
3. Touch [System 2] -> [▶] -> [Import Config. Data] -> [Custom Auth. Setting].
4. Touch [Set].
5. Check result “OK” is displayed.
6. Turn OFF and ON the main power switch.
   NOTE
   - **The new data will overwrite any existing authentication customize data.**
   - **To delete registered data, touch [Delete] and make sure that "OK" appears.**

5.16.25 Install Data

NOTE
In the following conditions, installation of data is prohibited.

- **[Administrator Settings] -> [Security Settings] ->** [USB Connection Permission settings] **is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] ->** [Enhanced Security Mode] **is set to [ON].**

(1) Use

- To install voice data, movie data, OCR dictionary data, or PDF/A font into HDD.
- To install panel sound data to FLASHROM inside the control panel unit.
- Selection of [OEM] makes customization of driver name, etc. possible by writing the OEM extended character string in the firmware package and downloading it.
- To use when the logical format of the hard disk is performed.

NOTE

- **The [Panel Sound Data] is displayed only when a sound IC chip has been installed.**

(2) Procedure

NOTE

- **To use voice guidance, optional upgrade kit UK-211 (It is only used on bizhub C368/C308/C258.) and i-Option LK-104 v3 must be activated.**
  Optional local interface kit EK-608 or EK-609 must be mounted.
- **To use OCR function, optional upgrade kit UK-211 (It is only used on bizhub C368/C308/C258.) and i-Option LK-105 v4 must be activated.**
- **To create PDF/A-compliant PDF files where PDF/A font is used, optional upgrade kit UK-211 (It is only used on bizhub C368/C308/C258.) and i-Option LK-102 v3 must be enabled.**

1. Save data (*.tar) into the root directory of a USB memory device.
2. To install the voice guidance, check if [Administrator Settings] -> [Voice Guidance Settings] -> [Voice Guidance] is set to “Yes”.
3. Connect the USB memory device to the machine USB port.
4. Touch [System 2] -> [▶] -> [Install Data].
5. Touch [Movie Data], [Voice Data], [OCR Dictionary], [PDF/A Font], [Panel Sound Data], or [OEM]. You can select the above six types of data at a time and install them.
6. Touch [Set].
7. Press the Start key to install the data.
8. Check result “OK” is displayed and touch [END].
   NOTE
   - **If data is already installed, it is necessary to delete old data before installing new one.**

* To delete registered data, select the data to be deleted, and touch [Delete] -> [Fix]. Check result “OK” is displayed.

5.16.26 Local Interface Kit Setting

(1) Use

- To set whether to enable or disable the Bluetooth function.
- Use this setting upon set-up of the optional local interface kit EK-609.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

5.16.27 CIS Image Adjustment

(1) Use

- To compensate colors so that the brightness, saturation, and hue of the back side image data (CIS image scanning quality) become consistent with those of the front side image data.
- It will be displayed only when dual scan document feeder is mounted.

Brightness	Increase in the positive (+) direction makes the data brighter (paler) and increase in the negative (-) direction makes the data darker (deeper).

Saturation	Increase in the positive (+) direction makes the data clearer and increase in the negative (-) direction makes the data more subdued.
Hue	Increase in the positive (+) direction processes and outputs the data in the way that corresponds to the clockwise rotation on the hue circle. Increase in the negative (-) direction processes and outputs the data in the way that corresponds to the counterclockwise rotation on the hue circle.

(2) Default setting
- 0

(3) Setting range
- -3 to +3 (step: 1)

(4) Procedure
1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶] -> [CIS Image Adjustment].
3. Select [Brightness], [Saturation] or [Hue].
4. Use the [+] or [-] key to change the setting value.
5. Touch [OK].

5.16.28 Display Eco Index

(1) Use
- To set whether or not to display [Power Consumption] and [CO2 Emission] in Menu -> [Counter] -> [Eco Info].
  The amount of power consumption displayed on MFP is an estimated value calculated from the average amount of power consumption and the operating hours of MFP, so that is not an exact power consumption value. Therefore, explain this to users before selecting the option of displaying these items.
- To set an emission coefficient used to calculate the amount of CO2 emissions.
  As the CO2 emission coefficient is different depending on the electric power provider with whom the user contracts and the user's MFP use environment, the coefficient needs to be set individually.

(2) Default setting
- Power Savings Display Level: OFF
- Output Coefficient Settings: 0.4166

(3) Procedure
1. Explain to users that [Power Consumption] and [CO2 Emission] displayed on MFP are estimated values, and obtain their consent.
2. Call the Service Mode to the screen.
3. Touch [System 2] -> [▶] -> [Display Eco Index].
4. Select [ON] in [Power Savings Display Level].
5. Depending on the user's MFP use environment, configure [Output Coefficient Settings] using the 10-key pad.
6. Touch [END].

5.16.29 Internal Error. Auto Cancel

(1) Use
- To set whether or not to automatically reset trouble when a trouble code classified as rank B or C occurs.

(2) Default setting
- Rank B: Yes
- Rank C: Yes

(3) Behavior
- When this setting is set to "Yes," MFP operates as follows:

1. When specified trouble occurs, the trouble warning screen displays for about 10 seconds the message that the trouble is automatically reset. Then automatic trouble reset is performed.
2. If the trouble reset is successful, MFP can be used.
   - If the trouble reset fails, retry is performed. (The number of retries is up to 2 times.)

5.16.30 Acquiring Settings

(1) Use
- To count frequency of use by each function and collect machine configuration information.
- This setting allows us to understand the trend in the market and the usage of MFP by collecting and counting frequency of use by each function.
- The collected information can be obtained only via CSRC and cannot be displayed on the control panel or printed.
- To send the collected information, [Administrator Settings] -> [System Settings] -> [List/Counter] -> [Transmission Meter Count and Device Information] must be set to “Allow.”

(2) Default setting
- ON

(3) Setting item
- ON
- OFF

5.16.31 Driver Install

NOTE

Only when one of the following conditions is met, the driver can be installed/uninstalled.

- **[Administrator Settings] -> [Security Settings] -> [**USB Connection Permission settings**] -> [Detail Setting] -> [External Memory (Service)] -> [Storage data backup] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [FW Update] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [**Enhanced Security Mode**] is set to [OFF].**

(1) Use

- To install/uninstall the loadable device driver.
- Used when the authentication device that needs the loadable device driver (include AU-102 and AU-201S) is attached.

(2) Procedure (Install)

1. Prepare a USB memory where only the loadable device driver is stored in the ROOT directory. (Only one loadable device driver must be stored in the USB memory, and please do not save any other data in the USB memory.)
2. Connect the USB memory to the USB port of the MFP.
3. Call the Service Mode to the screen.
4. Touch [System 2] -> [▶] -> [Driver Install] -> [Install].
5. Touch [Loadable Driver] and touch [Start] to install the data.
6. Check that data is normally installed from the message that appears on the control panel.
7. Turn OFF the main power switch.
8. Remove the USB memory.

(3) Procedure (Uninstall)

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶] -> [Driver Install] -> [Uninstall].
3. Select a driver to be uninstalled.
4. Touch [Start] to uninstall the data.
5. Check that data is normally uninstalled from the message that appears on the control panel.
6. Turn OFF and ON the main power switch.

5.16.32 Application Change Setting

(1) Use

- To set whether to allow a change of the settings for the specified application start.

(2) Default setting

- Permit

(3) Setting item

- Permit
- Prohibit
- If “Permit” is set, [Specified Application Start Setting] of the administrator settings can be configured.

5.16.33 Custom Pattern

NOTE

In the following conditions, installation of the custom pattern is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [**USB Connection Permission settings**] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [**Enhanced Security Mode**] is set to [ON].**

(1) Use

- To register or delete custom patterns.
- To customize the panel display by allowing MFP to read the setting file (CPD file) that defines whether or not to display the various setting keys that appear on the control panel.
- When making the setting file (CPD file), use the "Panel Customization Tool."

(2) Panel customization tool

(a) System requirement

PC	PC-AT compatible machine
CPU	Conforms to the specifications of the operating system
Memory (RAM)	Conforms to the specifications of the operating system
HDD	100 MB or more free space is required
Display	1280 x 800 pixels or more, 24bit full color
OS	• Windows 7 Professional (SP1 or later)* * 32-bit (x86) and 64-bit (x64) editions of Windows are supported.

(b) Operation procedures

When creating a new display setting file (CPD file):

1. Start up the Panel Customization Tool.
2. Set a name for your customization in [Name]. (1 to 24 characters consisting of one-byte alphanumerics and symbols. Comma cannot be used.)
3. Select a model in [Model].
4. Select a preset pattern or marketing area in [Preset]. (The number of functions displayed in the Function list below decreases in the order of Full > Standard > Basic.)
5. Select whether items should be displayed (ticked) or hidden (unticked) in [Function]. (Make this setting both in the Copy tab and the Scan/Fax tab.)
6. Save the setting file (CPD file) with one-byte alphanumerics and symbols in [Save as…].

When editing an existing setting file (CPD file):

1. Start up the Panel Customization Tool.
2. Select a model in [Model].
3. Select an existing setting file (CPD file) in [File] -> [Open].
4. Select whether items should be displayed (ticked) or hidden (unticked) in [Function].
5. Save the setting file (CPD file) with one-byte alphanumerics and symbols in [Save as…].

(3) Procedure

1. Copy the setting file (CPD file) to the root directory of a USB memory.
2. Connect the USB memory to the USB port of the MFP.
3. Call the Service Mode to the screen.
4. Touch [System 2] -> [▶] -> [Custom Pattern].
5. Select [Custom Pattern 1], [Custom Pattern 2] or [Custom Pattern 3].
6. Touch [Import] and press Start Key to import the data.
7. Select the registered custom pattern in [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Custom Function Pattern Selection].

NOTE

- **To delete the registered data, select the target Custom Display Pattern from the [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Custom Function Pattern Selection] menu while selecting, and touch [Delete] -> [Fix] and check that the result "OK" appears.**

5.16.34 Maintenance Mode

NOTE

- **To enable the maintenance mode, set [Maintenance Mode Access] in the administrator settings to [Allow]. [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access]**

- The authentication procedure to log on to Administrator Settings or Service Mode is canceled during setup or setup change to thereby achieve a shorter operating time.
- The following functions are enabled in the Maintenance Mode.
  - A bar appears in the upper row of the control panel.



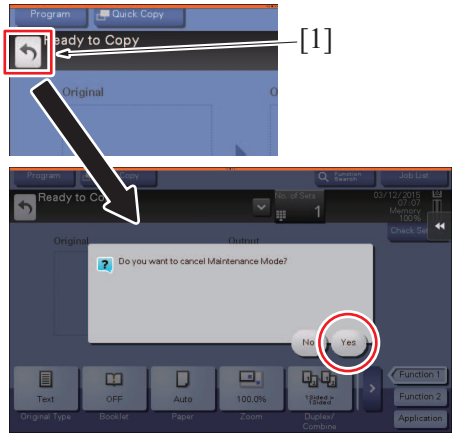
  - The Administrator password is skipped (there is no need to enter the password)
  - The CE password is skipped. (there is no need to enter the CE password)
  - Even if the software switch setting switch number is not set to [72], Import/Export the setting can be displayed.

(1) Setting items

Maintenance Mode	Set whether to enable or disable the Maintenance Mode. The default setting is "Invalid".
Display language	Select the language to be displayed in the Maintenance Mode. When [Not Set] is selected, the displayed language is that valid before the machine enters the Maintenance Mode. The default setting is "Not Set".
Job History Clear Upon Job Completion	Set whether to erase the past job history and the job history during the Maintenance Mode. The default setting is "Set".

(2) Exiting the Maintenance Mode

- To exit the Maintenance Mode, select [Service Mode] -> [System 2] -> [Maintenance Mode] and touch [Invalid], or touch the arrow key on the control panel and select [Yes].



[1]	Arrow key	-	-

5.16.35 Smart Fusing Control

(1) Use

- Specifies whether or not to apply low power fusing control.
- For details of the low power fusing control, see “Smart fusing control”.

[Permit]	Applies low power fusing control by lowering the target temperature as much as possible in response to the single sheet data. Cuts down electric power consumption (TEC value).
[Prohibit]	Controls the adjustment of the specified fusing temperature.

(2) Default setting

- Permit

(3) Setting item

- Permit
- Prohibit

5.16.36 Clean Unit Setting

(1) Use

- bizhub C368/C308/C258: Use this feature upon optional clean unit CU-101 set-up.
- bizhub C658/C558/C458: Use this feature upon optional clean unit CU-102 set-up.

(2) Default setting

- Nott Installed

(3) Setting item

- Installed
- Nott Installed

5.16.37 Auth. Function Enable

(1) Activation

(a) Use

- Use to activate the advanced function after certification.

(b) Procedure(Entering function codes manually)

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [Auth. Function Enable] -> [Activation].
3. Confirm that [Function Code] is selected, and the press the [Function Code].
4. Enter the function code and press [OK].
5. Confirm the instructions on-screen and press [Confirm].

(c) Procedure(Importing function codes via a USB device)

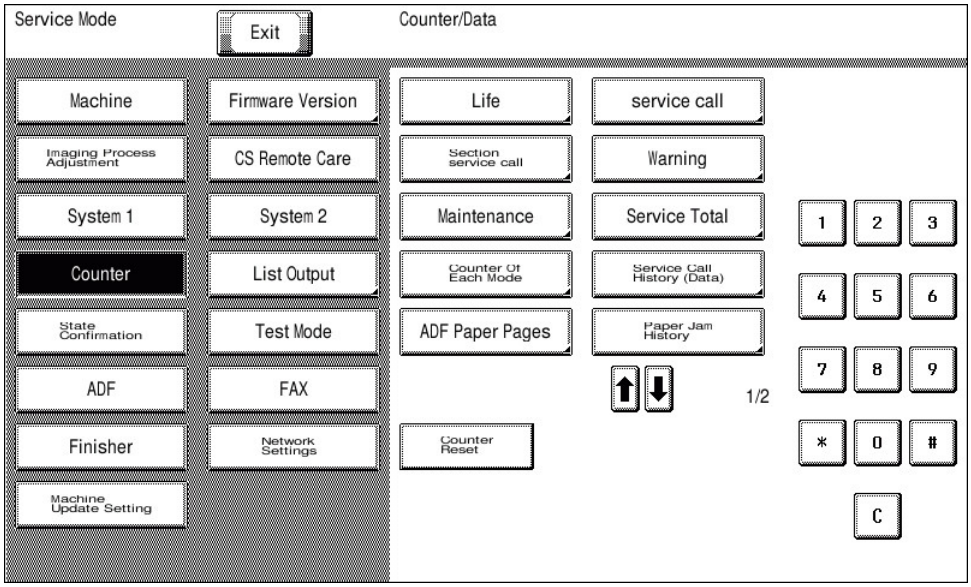
1. Connect the USB device that contains the functions codes to be activated.
2. Call the Service Mode to the screen.
3. Touch [System 2] -> [Auth. Function Enable] -> [Activation].
4. Confirm that [USB] is selected.
   NOTE
   - **[USB] is only displayed when a USB device that contains functions codes to be activated is connected.**
5. Confirm the instructions on-screen and press [Confirm].

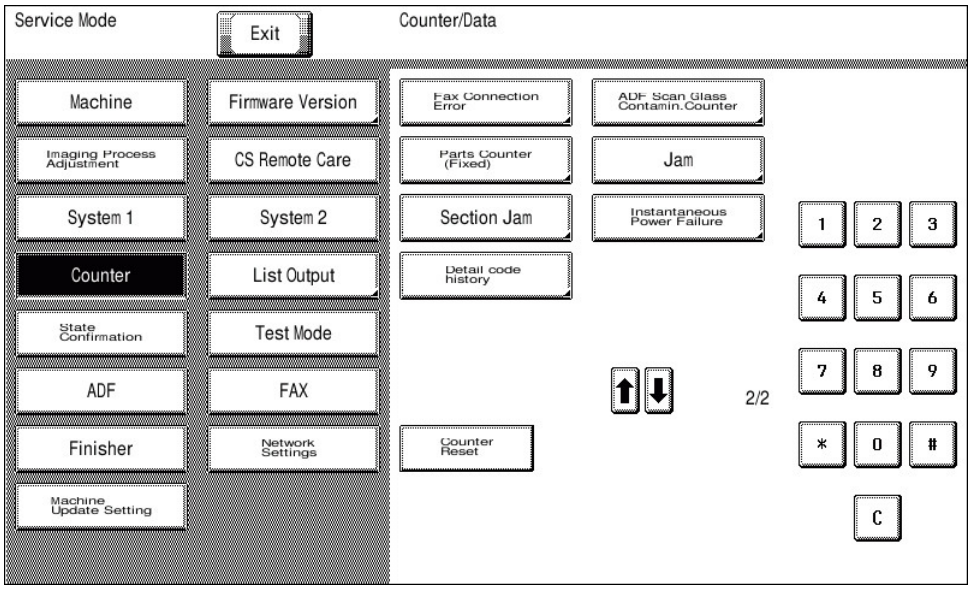
(2) List

(a) Use

- To display a list of currently activated functions.

5.17 Counter





- The counter displays the counts of various counters to allow the technical representative to check or set as necessary.

5.17.1 Common procedure

1. Call the Service Mode to the screen.
2. Touch [Counter] to show the counter menu.
3. Select the specific counter to be displayed.
4. To clear the counts of two or more counters within a group or across different groups at once, touch [Counter Reset], select the specific counters to be cleared, and touch [END]. Two or more counters can be selected. (However, the [Service Call], [Service Total], [Detail code history], and [JAM] counters cannot be selected.)

5.17.2 Life

(1) Use

- To check the number of hours or times each of the different maintenance parts has been used.
- To clear the count of each counter.
- To perform New Release in fusing unit and transfer belt unit.
- To check how many times maintenance parts have been used.
- When each of the maintenance parts is replaced.

(2) Procedure

(a) Counter clear

- To clear the count of a counter, select the specific part and touch Clear.
- It is not possible to clear the count of the counters for the fusing unit, transfer belt unit, transfer Roller Unit, drum unit, developing unit and TCR new article detection.
- For the count method of each counter, see the table “Count method of each life counter.”

Count method of each life counter

Counter item	Counting method
Fusing Unit Page Count	• Counts how many sheets have been ejected. The counter increases by 1 per every 216 mm in the paper feeding direction and shows the total count. For paper length less than 216 mm in the paper feeding direction, the counter uses 216 mm as the paper length.
Transfer Belt Unit Rotation Time	• Counts how many hours the transfer belt unit has turned.
Transfer Belt Unit Page Count	• Counts how many sheets have been ejected. The counter increases by 1 per every 216 mm in the paper feeding direction and shows the total count. For paper length less than 216 mm in the paper feeding direction, the counter uses 216 mm as the paper length.
Transfer Roller Unit	Counts how many hours the transfer roller unit has turned.
Toner Filter	• bizhub C368/C308/C258: Not used • bizhub C658/C558/C458: Counts how many sheets have been printed for color printing and black printing. For the life counter, value based on the calculation below is displayed. Value (1) or (2) below whichever is larger than the other one (1) Number of prints for black printing (2) Number of prints for color printing ÷150,000×300,000 (However, due to the formula for each internal counter for CMY and K, the toner filter counter may not count even when black and white printing is executed. Besides, the counter life threshold during printing with K only (300,000) is two times as large as that during printing with CMY only (150,000). Thus, the number of sheets printed with CMY only are doubled to count.)
Drum Unit (C) Rotation Time	• Counts how many hours PC drum has turned.
Drum Unit (M) Rotation Time	
Drum Unit (Y) Rotation Time	
Drum Unit (K) Rotation Time	
Developing Unit (C) Print Count	• Counts how many sheets have been printed. The counter increases by 1 per every 216 mm in the paper feeding direction and shows the total count. For paper length less than 216 mm in the paper feeding direction, the counter uses 216 mm as the paper length.
Developing Unit (Y) Print Count	
Developing Unit (M) Print Count	
Developing Unit (K) Print Count	
TCR new article detection (C)	• Count the number of the replacement of the toner cartridge.
TCR new article detection (M)	
TCR new article detection (Y)	
TCR new article detection (K)	
1st Feed Count	• Number of sheets of paper fed from tray 1
2nd Feed Count	• Number of sheets of paper fed from tray 2
3rd Feed Count	• Number of sheets of paper fed from tray 3
4th Feed Count	• Number of sheets of paper fed from tray 4
Manual Tray Feed Count	• Number of sheets of paper fed from the bypass
1st Feed Retry Count	• Count the frequency of paper feed retry of tray 1.
2d Feed Retry Count	• Count the frequency of paper feed retry of tray 2.
3rd Feed Retry Count	• Count the frequency of paper feed retry of tray 3.
4th Feed Retry Count	• Count the frequency of paper feed retry of tray 4.
Manual Tray Feed retry Count	• Count the frequency of paper feed retry of manual bypass tray.
LCT Feed Retry Count	• Count the frequency of paper feed retry of LCT.
LCT Parts	• bizhub C368/C308/C258: Number of sheets of paper fed from the LCT (LU-302). • bizhub C658/C558/C458: Number of sheets of paper fed from the LCT (LU-302 or LU-207).
LCT (Built-in) Parts	• bizhub C368/C308/C258: Number of sheets of paper fed from the built-in LCT(PC-410) • bizhub C658/C558/C458: Number of sheets of paper fed from the built-in LCT(PC-415)
ADF Feed	• Number of sheets of original fed through the take-up section of the DF
Scan Count (Original Glass)	• Count the number of reads via the original glass.
ADF Reverse	• bizhub C368/C308/C258: Number of sheets of original fed through the turnover unit of the DF (DF-629 only) • bizhub C658/C558/C458: Not used

(3) New Release

- After replacing a fusing unit or transfer belt unit, perform New Release to clear its life counter.

1. Touch [Counter] -> [Life] -> [New Release].
2. Open the front door or the lower front door.
3. Select a unit where New Release is made.
4. Press the Start key and perform New Release.

(4) New Release Disable mode

- To enable a unit that is used temporarily for troubleshooting to be used again as a new unit in another machine, the New Release Disable mode is provided.

- Applicable units are the following units that have the new unit detection feature.
  Drum unit (each color), developing unit (each color)
- See the " I.7.3.9 (4) Notes when using the New Release Disable mode" for the method of enabling the New Release Disable mode.

5.17.3 Service Call

(1) Use

- To count and display how many times trouble has been detected on a trouble type basis.
- Use this feature to check how many times trouble has occurred.

NOTE

- **In the service call counter list, "Reboot" shows how many times abort code (C-FXXX) has occurred.**

5.17.4 Section Service Call

(1) Use

- To count and display how many times trouble has been detected during a certain period, i.e. an interval between service visits, on a trouble type basis.
- Use this feature to check how many times trouble has occurred in a certain period, i.e. an interval between service visits.
- By clearing the counter at the time of visit to your customer, i.e. service visit, you can check how many times trouble has occurred since the previous visit.
  To reset the counter, use [Counter Reset].

NOTE

- **In the zone service call list, "Reboot" shows how many times abort code (C-FXXX) has occurred.**

5.17.5 Warning

(1) Use

- To count and display how many times malfunction code has been detected on a malfunction code type basis.
- To count and display how many times tray lift-up failure occur on a tray type.
- To clear of count value.
- To check the number of warning conditions detected according to the warming type.

(2) Procedure

- To clear the count of a counter, select the specific part and touch Clear.
- If a counter is cleared mistakenly, touch Interrupt which will undo the clearing operation.

5.17.6 Maintenance

(1) Use

- To set a count value for maintenance of any given part.
- When any given part is replaced.

(2) Procedure

Maint.-Set

- Enter the maintenance counter value from the 10-key pad.

Maint.-Count

- The number of sheets that have been ejected is counted up. (1 sided: 1 count, 2 sided: 2 count)
- Touch Clear will clear the count.

5.17.7 Service Total

(1) Total

(a) Use

- To display the count value for the service total counter.
- Use to check the total No. of printed pages including the ones printed by the Service Mode.

(b) Procedure

- Service Total: No. of pages printed by user mode and Service Mode.
- Service Total (Duplex): No. of pages printed by user mode and Service Mode in duplex.

(2) Paper Size 1/Paper Size 2

(a) Use

- To display the count value for service total counter of each paper size.
- To check the total number of printed pages including the one at Service Mode according to each paper size.
- The count of Paper Size 1 and Paper Size 2 that contain the following paper sizes is provided respectively.

Paper Size 1	SRA3, A3, A4, A4S, A5, A6, B4, B5, B5S, B6, Post., 12 x 18, 11 x 17, 8 $^1/_2$ x 14, 8 $^1/_2$ x 11, 8 $^1/_2$ x 11S, 7 $^1/_4$ x 10 $^1/_2$, 5 $^1/_2$ x 8 $^1/_2$, 4 x 6, Foolscap
Paper Size 2	8K, 16K, Banner Paper, Others

5.17.8 Counter of Each Mode

(1) Use

- To display the printed pages in the following specified modes; copy, printer, scanner, and fax. It also displays the count value of using the specified mode.

Copy/Print/Scanner counter	Displays individual counts in copy, printer, and scan mode.

Fax-related counter	Displays individual counts in fax mode.
Counter by finishing option	Displays individual counts on a finishing option basis.
Stabilization counter	Displays individual counts on a basis of the factors that cause image stabilization. The counter helps to understand what causes image stabilization and how to improve image stabilization control.
PJ counter	Job modes of jobs processed by the main unit are classified and labeled using count values 1P/J, 2P/J, ..., 10P/J, 11P/J, and so on. The counter is used to understand how the machine has been used in the field.

5.17.9 Service Call History (Data)

(1) Use

- To display the trouble history in chronological order.

5.17.10 ADF Paper Pages

(1) Use

- To display the No. of sheets and mixed originals fed to the automatic document feeder.

5.17.11 Paper Jam History

(1) Use

- To display the jam history in chronological order.

NOTE

- **[Code] displayed on the screen of JAM history indicates JAM code. For details of JAM code, see "List of the JAM code."**

5.17.12 Fax Connection Error

(1) Use

- To display the No. of fax transmission errors occurred.

5.17.13 ADF Scan Glass Contamin. Counter

(1) Use

- To display the average number of detected stain on the DF original glass (front side)/CIS glass (back side) at the pre-detection.
- Detection of CIS glass (back side) is available only when dual scan document feeder is mounted.

Pre-detection small size (Front Side)	Small-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
Pre-detection small size (Back Side)	Small-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
Cleaning brush rotation count (Front Side)	Total rotation count is displayed by counting 1 per one rotation of cleaning brush.
Cleaning brush rotation count (Back Side)	Total rotation count is displayed by counting 1 per one rotation of cleaning brush.

(2) Procedure

- To clear each counter value, select the items to be cleared, and touch Clear.

5.17.14 Parts Counter (Fixed)

- It will be displayed only when the optional finisher is mounted.

(1) Use

- When the optional finisher is mounted, the parts counter screen displays the relevant parts and their counts.
- When the relevant parts are replaced, their counters need to be reset to update the service history.
- Service history can be maintained from this menu.

NOTE

- **See the table below for the relevant parts and count method.**

(2) Procedure

1. Touch in the order of [Service Mode] -> [Counter] -> [↑] -> [Parts Counter (Fixed)].
2. Check the parts counter or display the relevant part of which counter will be reset.
3. Check the part count. To reset the count value, touch the key of the part where the counter is reset. Touch the Clear key.

(3) Fixed parts to be counted

No.	CSRC parameter	Parts name	Parts number	Limit value	Count condition	FS-534 / FS-534SD	FS-533
001	22	FNS 2-Staple Stapler	PJ085601	300,000	-	-	-
002	23	FNS Center Staple & Fold Stapler	A10D9293	200,000	1 count for each sheet ejection in both 1 staple and 2 staple mode.	○	-

No.	CSRC parameter	Parts name	Parts number	Limit value	Count condition	FS-534 / FS-534SD	FS-533
003	3A	Stacker Accessory Plate Movement Monitor	56AA8002	3,000,000	-	-	-
004	26	FNS 1st Mid Fold Knife Motor	A3ERPP4S	2,000,000	1 count for each sheet ejection in half-fold, saddle stitch, and tri-fold mode	○	-
005	56	FNS 2nd Mid Fold Knife Motor	A3ERPP5R	2,000,000	1 count for each sheet ejection in tri-fold mode	○	-
006	34	FNS Output roller/A	A3ERPP4S	300,000	-	-	-
007	57	FNS FD Alignment Roller	A2YUPPG0/4	1,000,000	1 count for each 1 stack	-	○
008	29	PI sheet paper feed clutch (Upper)	13QN8201	1,000,000	-	-	-
009	2A	PI sending Roller Pair/A (Upper)	50BA-574	200,000	-	-	-
010	2B	PI sending Roller Pair/B (Upper)	50BA-575	100,000	-	-	-
011	2C	PI Reversal Rubber Pair (Upper)	13QN-443	100,000	-	-	-
012	2D	PI Torque Limiter (Upper)	13QN4073	600,000	-	-	-
013	3C	PI Tray Up/Down Motor (Up)	12GQ8002	1,000,000	-	-	-
014	2E	PI sheet paper feed clutch (Lower)	13QN8201	1,000,000	-	-	-
015	2F	PI sending Roller Pair/A (Lower)	50BA-574	200,000	-	-	-
016	30	PI sending Roller Pair/B (Lower)	50BA-575	100,000	-	-	-
017	31	PI Reversal Rubber Pair (Lower)	13QN-443	100,000	-	-	-
018	32	PI Torque Limiter (Lower)	13QN4073	600,000	-	-	-
019	3D	PI Tray Up/Down Motor (Down)	12GQ8002	1,000,000	-	-	-
020	33	PI Regist	13QN8201	1,000,000	-	-	-
021	3B	Punch Motor	A4JUM101	1,000,000	-	-	-
022	37	PK Counter	-	-	-	-	-
023	38	Punch scrap transportation motor pair	12GQ-417	1,000,000	-	-	-
024	39	Punch clutch	13NKK001	1,000,000	-	-	-

No.	CSRC parameter	Parts name	Parts number	Limit value	Count condition	FS-536/ FS-536SD	FS-537/ FS-537SD
001	22	FNS 2-Staple Stapler	A3EP5601	300,000	1 count for each sheet ejection in both	○	-
			A07P7901	500,000	1 staple and 2 staple mode.	-	○
002	23	FNS Center Staple & Fold Stapler	A3ER9293	200,000	1 count for each sheet ejection in both 1 staple and 2 staple mode.	○	○
003	3A	Stacker Accessory Plate Movement Monitor	56AA8002	3,000,000	1 count for each sheet ejection in front 1 staple, rear 1 staple, 2 staples in sort staple mode as well as shift sort m	-	○
004	26	FNS 1st Mid Fold Knife Motor	A3ERPP4S	2,000,000	1 count for each sheet ejection in half-fold, saddle stitch, and tri-fold mode	○	○
005	56	FNS 2nd Mid Fold Knife Motor	A3ERPP5R	2,000,000	1 count for each sheet ejection in tri-fold mode	○	○
006	34	FNS Output roller/A	122H4825	300,000	1 count for each sheet ejection to the FNS main tray. 1 count for each sheet ejection in staple mode	-	○
007	57	FNS FD Alignment Roller	A2YUPPG0/4	1,000,000	-	-	-
008	29	PI sheet paper feed clutch (Upper)	13QN8201	1,000,000	1 count for each sheet fed from the PI upper tray	-	○
009	2A	PI sending Roller Pair/A (Upper)	50BA-574	200,000		-	○

No.	CSRC parameter	Parts name		Parts number	Limit value	Count condition	FS-536/ FS-536SD	FS-537/ FS-537SD
010	2B	PI sending Roller Pair/B (Upper)		50BA-575	100,000		-	○
011	2C	PI Reversal Rubber Pair (Upper)		13QN-443	100,000		-	○
012	2D	PI Torque Limiter (Upper)		13QN4073	600,000		-	○
013	3C	PI Tray Up/Down Motor (Up)		12GQ8002	1,000,000	1 count for each job where paper is fed from the PI upper tray	-	○
014	2E	PI sheet paper feed clutch (Lower)		13QN8201	1,000,000	1 count for each sheet fed from the PI lower tray	-	○
015	2F	PI sending Roller Pair/A (Lower)		50BA-574	200,000		-	○
016	30	PI sending Roller Pair/B (Lower)		50BA-575	100,000		-	○
017	31	PI Reversal Rubber Pair (Lower)		13QN-443	100,000		-	○
018	32	PI Torque Limiter (Lower)		13QN4073	600,000	1 count for each sheet fed from the PI lower tray	-	○
019	3D	PI Tray Up/Down Motor (Down)		12GQ8002	1,000,000	1 count for each job where paper is fed from the PI lower tray	-	○
020	33	PI Regist		13QN8201	1,000,000	1 count each time a sheet is ejected from PI.	-	○
021	3B	Punch Motor		A4JUM101	1,000,000	Number of sheets ejected in punch mode	○	○
022	37	PK Counter	2-Holes	A3EWPP36	1,000,000	Number of punch kit punching	○	-
				A4JUR7040			-	○
			2-Holes/3-Holes	A3EWPP37			○	-
				A4JUR7050			-	○
			2-Holes/4-Holes	A3EWPP39			○	-
				A4JUR7060			-	○
			SWE4 holes	A3EWPP38			○	-
				A4JUR7070			-	○
023	38	Punch scrap transportation motor pair		12GQ-417	1,000,000	-	-	-
024	39	Punch clutch		13NKK001	1,000,000	-	-	-

5.17.15 Jam

(1) Use

- To count and display how many times jam has been detected on a jam location basis.

5.17.16 Section JAM

- To count and display how many times jam has been detected in a certain period, i.e. an interval between service visits, on a jam location basis.
- Use this feature to check how many times jam has occurred in a certain period, i.e. an interval between service visits.
- By clearing the jam counter at the time of visit to your customer site, i.e. service visit, you can check how many times jam has occurred since the previous visit.
  To reset the counter, use [Counter Reset].

5.17.17 Instantaneous Power Failure

(1) Use

- To display the latest 10 power shutdown events during operation of this machine in time axis.
- To reset the counter, use [Counter Reset].

5.17.18 Detail code history

(1) Use

- To display up to 250 detailed codes of the trouble code FA14 (thread soft error)and E301 by “Time series order”, “Monthly occurrence” or “Detailed Code Differentiator”.

5.17.19 Recoverable error counter

NOTE

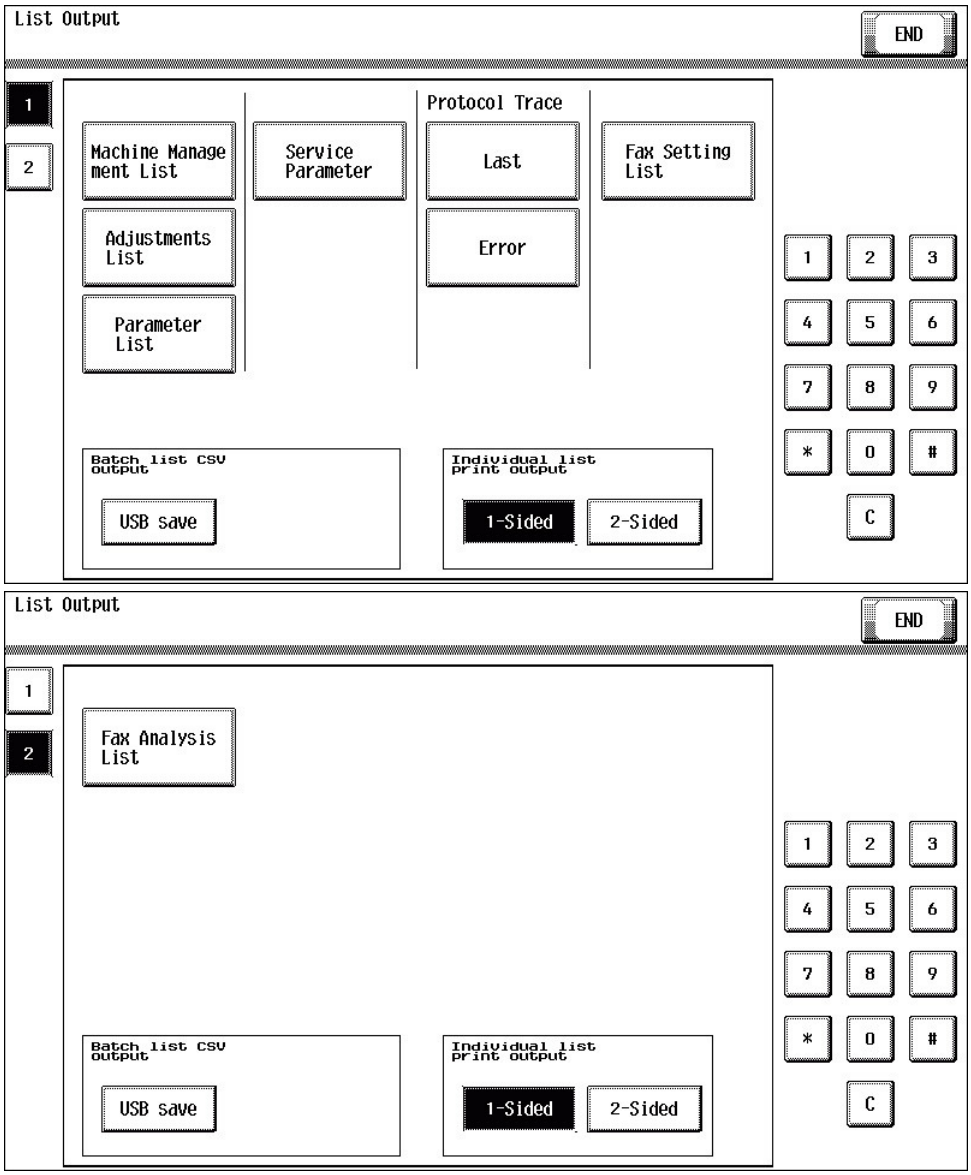
- **This function is displayed only when touching [Counter Reset].**
- **Check the detailed codes of this function as shown below.**

- **Check with the Machine Management List which is output by setting [Service Mode] -> [List Output] -> [USB save].**
- **Check the count of network error using CSRC.**

(1) Use

- To count the detected network error and an error that can be recovered with a function via the network by each root cause.
- To reset the counter.

5.18 List Output



5.18.1 Batch list CSV output

NOTE

This setting is displayed only when the following conditions are satisfied.

- **[Detail Setting] is selected in [Administrator Settings] -> [Security Settings] -> [USB connection Permission setting].**
- **[Administrator Settings] -> [Security Settings] -> [USB connection Permission setting] -> [External Memory (Service)] -> [Individual Settings] is selected.**
- **Enhanced Security Mode is disabled.**

(1) Use

- To save various lists data into a USB memory device all together with the CSV format.
- Compared to output to paper, outputting various lists data to the USB memory device can save time, paper, and toner. With the output data, analyzing the machine statistically becomes easier.
- Lists data to be output are as follows:

Target list	Data symbol
Machine Management List	S1
Adjustments List	S2
Parameter List	S3
Service Parameter	S4
Protocol Trace List	S5

Target list	Data symbol
Fax Setting List	S6
Management List	A1
Paper Size/Type Counter	A2
Network Settings List	A3
Configuration Page	U1
PCL Font List	U2
PS Font List	U3
Meter Count	C1

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [List Output].
3. Insert the USB memory device to the USB port (for user).
4. Touch [USB save] displayed in the Batch List CSV Output.
5. Press the Start key. Then, List data are transferred to the USB memory device.
6. Confirm that “OK” is displayed as the result of data saving.

(a) File names of lists data

- Each list data has its file name in accordance with the following file name rule.
  [2-digit data symbol that corresponds to each list (see the above table)] + [_(underscore)] + [13-digit serial number] + [6-digit date (year, month, and day)] + [2-digit hour] + [2-digit minute].csv

5.18.2 Machine Management List

(1) Use

- To produce an output of a list of setting values, adjustment values, total counter values, and others.
- At the end of setup.
- At occurrence of a malfunction.
- To produce an output of a list of Software Switch Setting.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

NOTICE

- When performing list output, a detail code history list will be output.
- This [Detail code] is set to analyze the cause of the C-FA14 error or the C-E301 error.
- The refer, to send inquiries to KM, also send the “detail code history list”.

5.18.3 Adjustments List

(1) Use

- To output the adjustment list for machine adjustment, process adjustment, etc. in Service Mode.
- At the end of setup.
- At occurrence of a malfunction.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.4 Parameter List

(1) Use

- Output a nonvolatile parameter list.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.5 Service Parameter

(1) Use

- Output a FAX Service Mode set value list.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.6 Protocol Trace

(1) Use

- Protocol Trace List (Last): The facsimile protocol of the communication which was executed previously is output.
- Protocol Trace List (Error): Output the facsimile procedure for the last error communication.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.7 Fax Setting List

(1) Use

- Output a FAX user set value list. (Items vary depending on models.)

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.8 Fax Analysis List

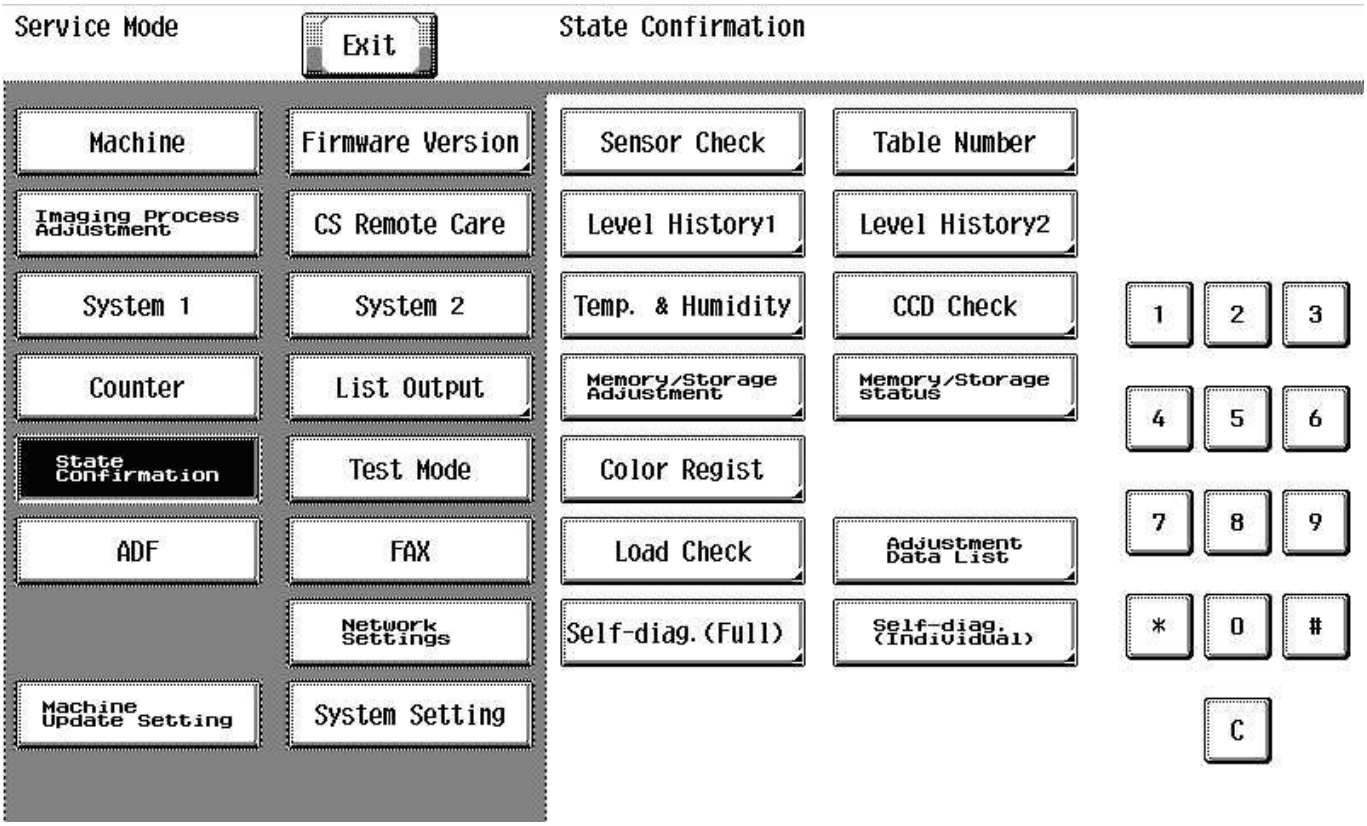
(1) Use

- Following list is output in the Fax Analysis List.
  - Parameter List
  - Machine Management List
  - Protocol Trace List (Error)
  - Fax Setting List
  - Communication Management List
  - Service Parameter List

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.19 State Confirmation



5.19.1 Sensor Check

(1) Use

- To display the states of the input ports of sensors and switches when the machine remains stationary.
- Used for troubleshooting when a malfunction or a misfeed occurs.

(2) Procedure

- The operation of each of the switches and sensors can be checked on a real-time basis.
- It can be checked as long as the 5-V power line remains intact even when a door is open.

(a) Electrical components check procedure through input data check

- When a paper misfeed occurs in the paper feed section of the machine, the tray 2 paper feed sensor is considered to be responsible for it.

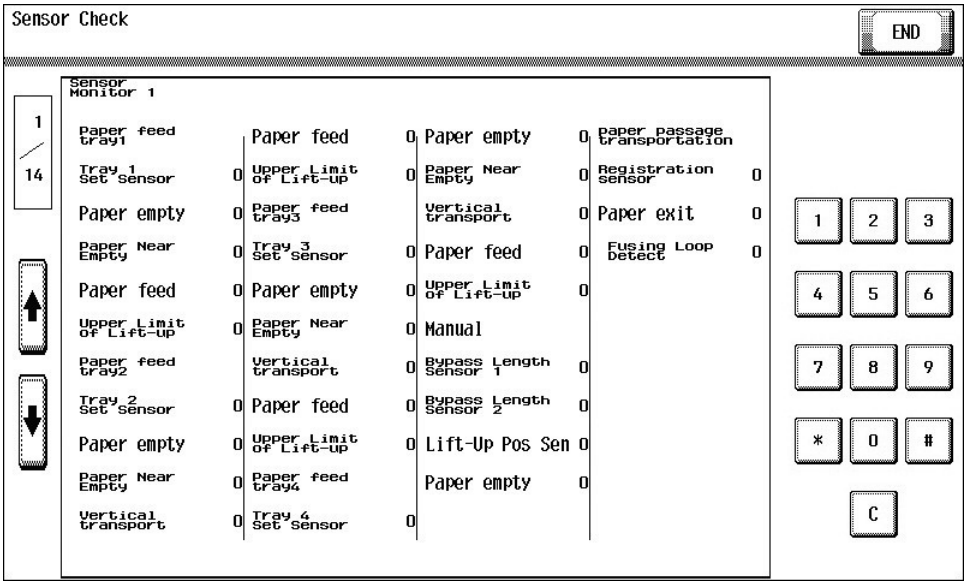
1. Remove the sheet of paper misfed.
2. From the sensor check list that follows, check the panel display of the tray 2 paper feed sensor.
   - For the tray 2 paper feed sensor, you check the data of “Paper feed” of “Paper feed tray2.”
3. Call the Service Mode to the screen.
4. Select [State Confirmation] -> [Sensor Check] and then select the screen that contains “Paper feed” under “Paper feed tray2.”
   - For “Paper feed” under “Paper feed tray2,” display the “Sensor monitor 1” screen.
5. Check that the data for “Paper feed” under “Paper feed tray2” is “0” (sensor blocked).
6. Move the actuator to unblock the tray 2 paper feed sensor.
7. Check that the data for “Paper feed” under “Paper feed tray2” changes from “0” to “1” on the screen.
8. If the input data is “0,” change the sensor.

(3) Sensor check screens

- These are only typical screens which may be different from what are shown on each individual machine.

(a) bizhub C368/C308/C258

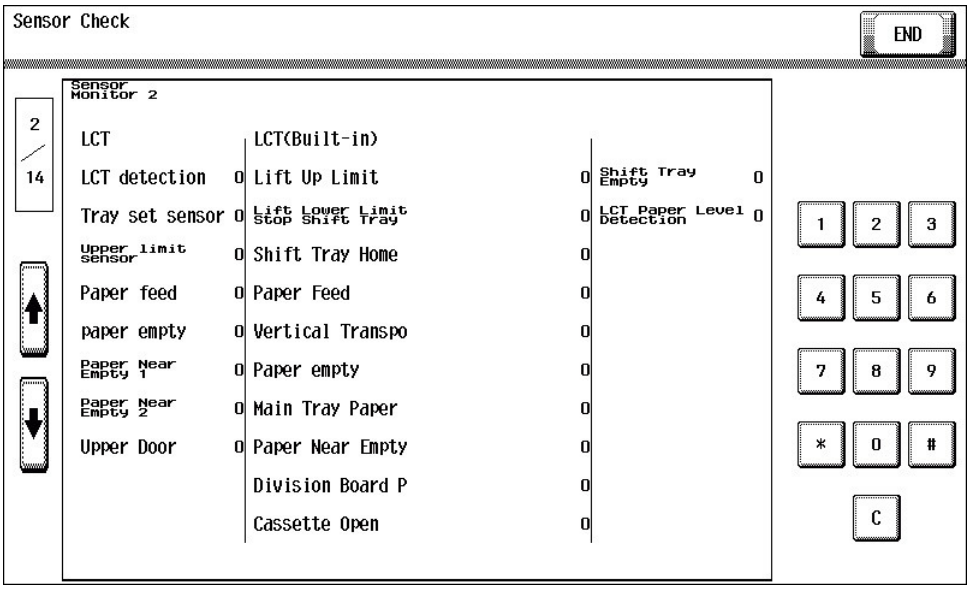
- Sensor monitor 1 (Main body, PC-110/210)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Paper feed tray 1			
-	Tray 1 Set Sensor	-	Set	Out of position
PS24	Paper empty	Tray 1 paper empty sensor	Paper not present	Paper present
PS11	Paper Near Empty	Tray 1 paper near empty sensor	Near empty	Other than near empty
PS23	Paper feed	Tray 1 paper feed sensor	Paper present	Paper not present
PS25	Upper Limit of Lift-up	Tray 1 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 2			
-	Tray 2 Set Sensor	-	Set	Out of position
PS21	Paper empty	Tray 2 paper empty sensor	Paper not present	Paper present
PS12	Paper Near Empty	Tray 2 paper near empty sensor	Near empty	Other than near empty
PS19	Vertical transport	Tray 2 vertical transport sensor	Paper present	Paper not present
PS20	Paper feed	Tray 2 paper feed sensor	Paper present	Paper not present
PS22	Upper Limit of Lift-up	Tray 2 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 3			
-	Tray 3 Set Sensor	-	Set	Out of position
PS114	Paper empty	Tray 3 paper empty sensor	Paper not present	Paper present
PS115	Paper Near Empty	Tray 3 paper near empty sensor	Near empty	Not near empty

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS113	Vertical transport	Tray 3 vertical transport sensor	Paper present	Paper not present
PS112	Paper feed	Tray 3 paper feed sensor	Paper present	Paper not present
PS116	Upper Limit of Lift-up	Tray 3 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 4			
-	Tray 4 Set Sensor	-	Set	Out of position
PS124	Paper empty	Tray 4 paper empty sensor	Paper not present	Paper present
PS125	Paper Near Empty	Tray 4 paper near empty sensor	Near empty	Not near empty
PS123	Vertical transport	Tray 4 vertical transport sensor	Paper present	Paper not present
PS122	Paper feed	Tray 4 paper feed sensor	Paper present	Paper not present
PS126	Upper Limit of Lift-up	Tray 4 upper limit sensor	At raised position	Not at raised position
	Manual			
PS28	Bypass Length Sensor 1	Bypass FD paper size sensor/1	Paper present	Paper not present
PS29	Bypass Length Sensor 2	Bypass FD paper size sensor/2	Paper present	Paper not present
PS26	Lift-Up Pos Sen	Bypass lift-up position sensor	Paper feed position	Standby position
PS27	Paper empty	Bypass paper empty sensor	Paper not present	Paper present
	Paper passage transportation			
PS1	Registration sensor	Registration sensor	Paper present	Paper not present
PS3	Paper exit	Paper exit sensor	Paper present	Paper not present
PS2	Fusing Loop Detect	Fusing loop sensor	Loop present	Loop not present

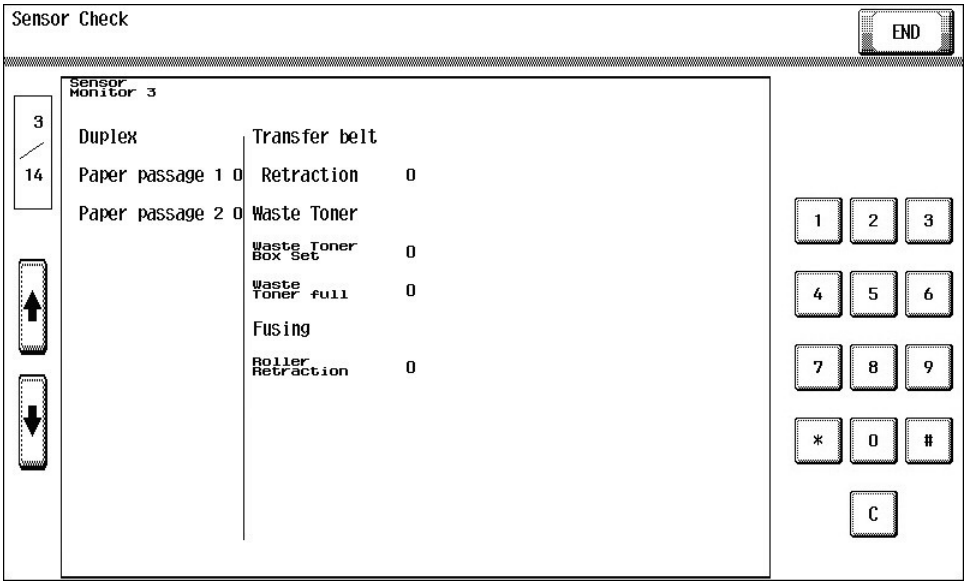
- Sensor monitor 2 (Main body, PC-410)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	LCT			
-	LCT detection	LCT identification signal	Set	Unset
PS1	Tray set sensor	LU-302: Tray set sensor	Set	Out of position
PS2	Upper limit sensor	LU upper limit sensor	At raised position (Blocked)	Not at raised position (Unblocked)
PS3	Paper Feed	LU paper feed sensor	Paper present	Paper not present
PS4	paper empty	LU paper empty sensor	Paper not present	Paper present
PS5	Paper Near Empty 1	LU near empty sensor /1	Near empty	Unblocked
PS6	Paper Near Empty 2	LU near empty sensor /2	Near empty	Unblocked
MS1	Upper Door	LU door switch	Close	Open
	LCT (Built-in)			
PS136	Lift Up Limit	Main tray upper limit sensor	At raised position	Not at raised position
PS138	Lift Lower Limit/Stop Shift Tray	Shifter stop / lower limit position sensor	At lower position	Not at lower position

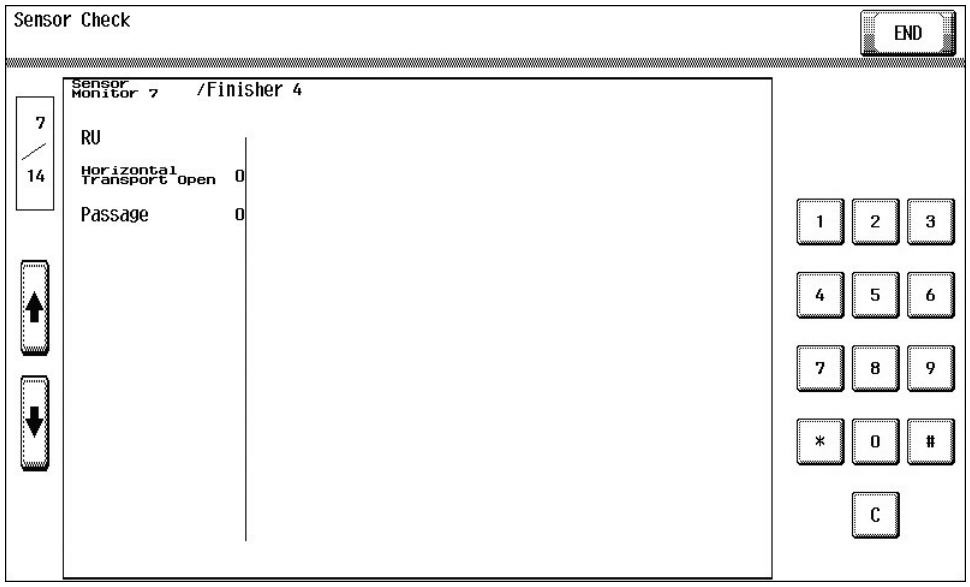
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS139	Shift Tray Home	Shifter home sensor	At home	Not at home
PS132	Paper Feed	Paper feed sensor	Paper present	Paper not present
PS133	Vertical Transport	Vertical transport sensor	Paper present	Paper not present
PS137	Paper empty	Main tray upper paper empty sensor	Empty	Paper present
PS134	Main Tray Paper Empty	Main tray paper empty sensor	Empty	Paper present
PS135	Paper Near Empty	Main tray paper near empty sensor	Near empty	Not near empty
PS142	Division Board Position	Division board sensor	Set	Unset
PS143	Cassette Open	Cassette set sensor	Open	Close
PS140	Shift Tray Empty	Sub tray paper empty sensor	Empty	Paper present
PS141	LCT Paper Level Detection	Sub tray paper remaining amount sensor	Paper present	Paper not present

- Sensor monitor 3 (Main body)



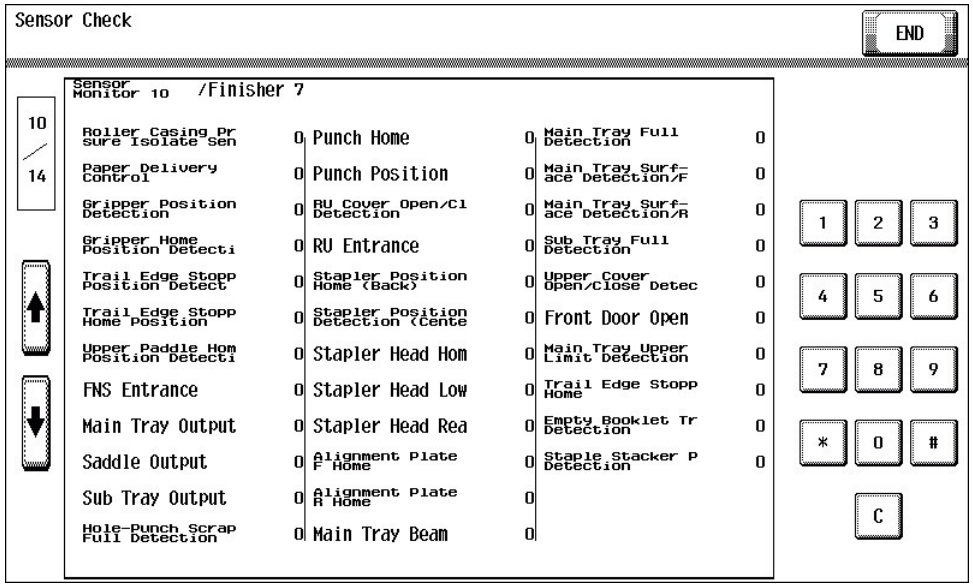
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Duplex			
PS40	Paper passage 1	ADU paper passage sensor/1	Paper present	Paper not present
PS41	Paper passage 2	ADU paper passage sensor/2	Paper present	Paper not present
	Transfer belt			
PS39	Retraction	1st transfer pressure sensor	Not released	Released
	Waste Toner			
PS100	Dispose Toner Box Set	Waste toner box set sensor	Set	Out of position
PS101	Waste Toner full	Waste toner full sensor	Blocked	Unblocked
	Fusing			
PS38	Roller Retraction	Fusing pressure home sensor	Not released	Released

- Sensor monitor 4
  - Not used
- Sensor monitor 5
  - Not used
- Sensor monitor 6
  - Not used
- Sensor monitor 7



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	RU			
PS3	Horizontal Transport Open	RU cover open/close detection sensor	Open	Closed
PS2	Passage	RU entrance sensor	Paper present	Paper not present

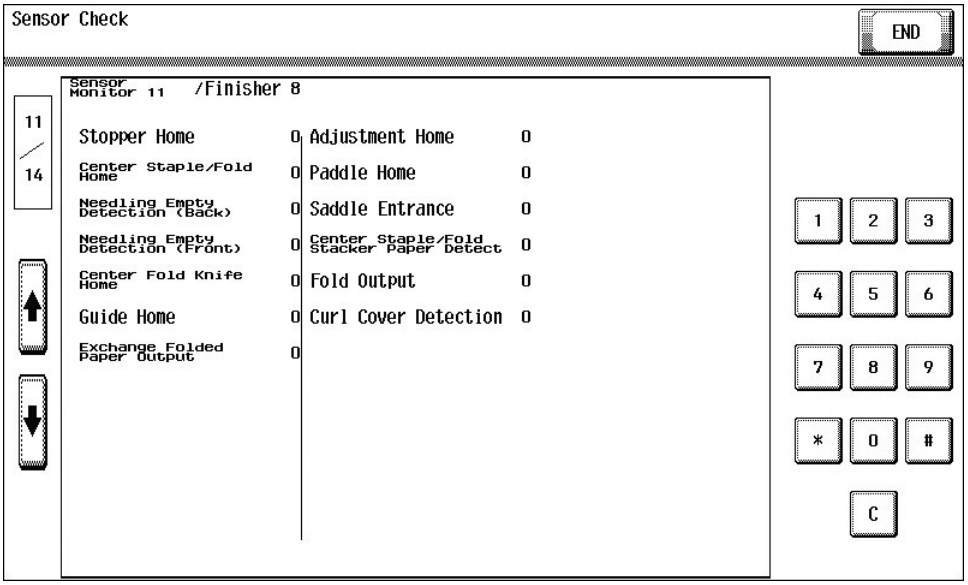
- Sensor monitor 8
  - Not used
- Sensor monitor 9
  - Not used
- Sensor monitor 10 (FS-534/FS-534SD)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 7			
PS11	Roller Casing Pressure Isolate Sen	Receiving roller retraction sensor	Not released	Released
PS28	Paper Delivery Control	Paper delivery control sensor	At home	Not at home
PS19	Gripper Position Detection	Gripper position detection sensor	Not at home	At home
PS18	Gripper Home Position Detection	Gripper home position sensor	At home	Not at home
PS22	Trail Edge Stopper Position Detect	Pre-eject away sensor	Not at home	At home
PS20	Trail Edge Stopper Home Position	Trailing edge stopper home position detection sensor	At home	Not at home
PS14	Upper Paddle Home Position Detection	Upper paddle home position detection sensor	At home	Not at home

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS4	FNS Entrance	FNS entrance sensor	Paper present	Paper not present
PS16	Main Tray Output	Paper delivery control sensor	Paper present	Paper not present
PS5	Saddle Output	Saddle exit sensor	Paper present	Paper not present
PS8	Sub Tray Output	Sub tray exit sensor	Paper present	Paper not present
PS4/PS5	Hole-Punch Scrap Full Detection	Punch dust full sensor	Full	Other than full
PS1	Punch Home	Punch home sensor	At home	Not at home
PS2	Punch Position	Puncher home sensor	At home	Not at home
PS3	RU Cover Open/Close Detection	RU cover open/close detection sensor	Open	Closed
PS2	RU Entrance	RU entrance sensor	Paper present	Paper not present
PS23	Stapler Position Home (Back)	Stapler home position sensor (Rear)	At home	Not at home
PS24	Stapler Position Detection (Center)	Stapler position sensor (Center)	Detected	Not detected
PS9	Stapler Head Home	Center stapler /fold home sensor	At home	Not at home
-	Stapler Head Low	Staple empty detect sensor	Staple present	Staple not present
-	Stapler Head Ready	-	Staple available	Staple unavailable
PS12	Alignment Plate F Home	Alignment plate/F home sensor	At home	Not at home
PS13	Alignment Plate R Home	Alignment plate/R home sensor	At home	Not at home
PS6/PS7	Main Tray Beam	Main tray upper position sensor	Blocked	Unblocked
PS29	Main Tray Full Detection	Main tray full detection sensor	Full	Other than full
PS27	Main Tray Surface Detection/F	Main tray upper position sensor/F	Upper position	Other than upper position
PS26	Main Tray Surface Detection/R	Main tray upper position sensor/R	Upper position	Other than upper position
PS9/PS10	Sub Tray Full Detection	Sub tray full detection sensor	Full	Other than full
PS32	Upper Cover Open/Close Detection	Upper cover open/close detection sensor	Open	Closed
SW1	Front Door Open	Front door open detect switch	Open	Closed
SW2	Main Tray Upper Limit Detection	Main tray upper position detect switch	At upper limit position	Not at upper limit position
PS6	Trail Edge Stopper Home	Stopper home sensor	At home	Not at home
PS13/PS14	Empty Booklet Tray Detection	Booklet tray empty detection sensor	Paper present	Paper not present
PS31	Staple Stacker Paper Detection	Staple stacker paper detection sensor	Paper present	Paper not present

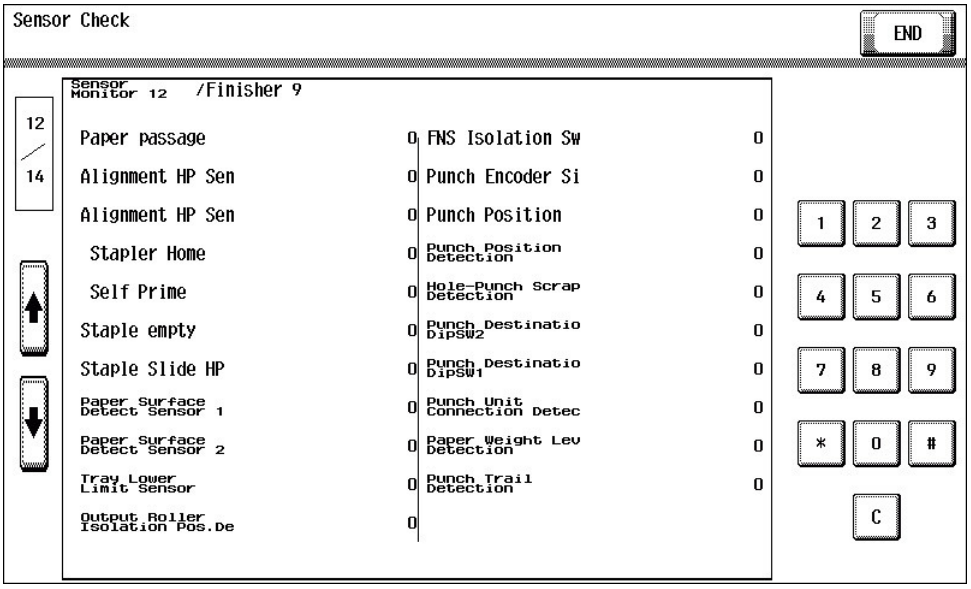
- Sensor monitor 11 (FS-534/FS-534SD)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 8			

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS20	Stopper Home	Trailing edge stopper home position detection sensor	At home	Not at home
PS9	Center Staple/Fold Home	Center stapler /fold home sensor	At home	Not at home
PS15	Needling Empty Detection (Back)	Staple empty detection sensor (Rear)	Staple not present	Staple present
PS16	Needling Empty Detection (Front)	Staple empty detection sensor (Front)	Staple not present	Staple present
PS8	Center Fold Knife Home	Center fold knife home sensor	At home	Not at home
PS7	Guide Home	Guide home sensor	At home	Not at home
PS30	Exchange Folded Paper Output	Exchange folded paper output sensor	At home	Not at home
PS4	Adjustment Home	Alignment home sensor	At home	Not at home
PS5	Paddle Home	Paddle home sensor	At home	Not at home
PS1	Saddle Entrance	SD entrance sensor	Paper present	Paper not present
PS3	Center Staple/Fold Stacker Paper Detect	Center staple/fold stacker paper detect sensor	Paper present	Paper not present
PS12	Fold Output	Fold exit sensor	Paper present	Paper not present
PS2	Curl Cover Detection	Curl cover detection sensor	Not at home	At home

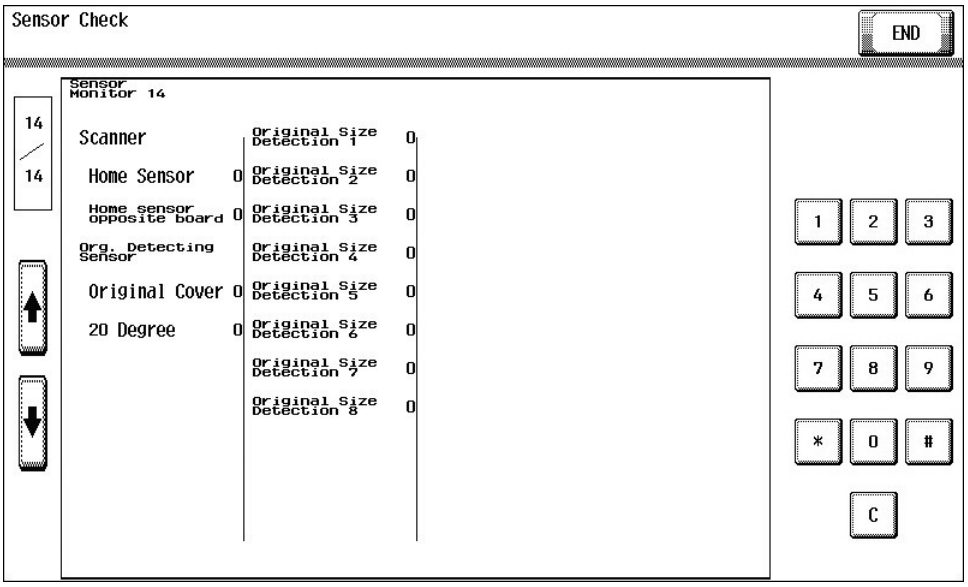
- Sensor monitor 12 (FS-533)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 9			
PS101	Paper Passage	Paper feed sensor	Paper present	Paper not present
PS108	Alignment HP Sensor (Front)	Alignment plate home sensor/F	At home	Not at home
PS109	Alignment HP Sensor (Rear)	Alignment plate home sensor/R	At home	Not at home
PS110	Stapler Home	Stapler home sensor	At home	Not at home
PS112	Self Prime	Self prime sensor	Staple present	Staple not present
PS113	Staple empty	Staple empty sensor	Staple not present	Staple present
PS111	Staple Slide HP	Stapler home sensor	At home	Not at home
PS102	Paper Surface Detect Sensor 1	Paper surface detect sensor/1	Paper present	Paper not present
PS104	Paper Surface Detect Sensor 2	Paper surface detect sensor/2	Blocked	Unblocked
PS107	Tray Lower Limit Sensor	Paper exit tray home sensor	At lower position	Not at lower position
PS105	Output Roller Isolation Pos. Detect	Pick up roller position sensor	At home	Not at home
SW1	FNS Isolation Switch	Finisher lock switch	Open	Closed
PS202	Punch Encoder Signal	Punch motor sensor	Blocked	Unblocked
PS204	Punch Position	Puncher home sensor	At home	Not at home

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS203	Punch Position Detection	Puncher drive cam sensor	At home	Not at home
PS205	Hole-Punch Scrap Detection	Punch dust full sensor	ON	OFF
-	Punch Destination DipSW2	-	ON	OFF
-	Punch Destination DipSW1	-	ON	OFF
-	Punch Unit Connection Detection	-	Connected	Not connected
PS103	Paper Weight Lever Detection	Paper weight lever sensor	Blocked	Unblocked
PS201	Punch Trail Detection	Paper feed sensor	Paper present	Paper not present

- Sensor monitor 13
  - Not used
- Sensor monitor 14 (Scanner section of the MFP)

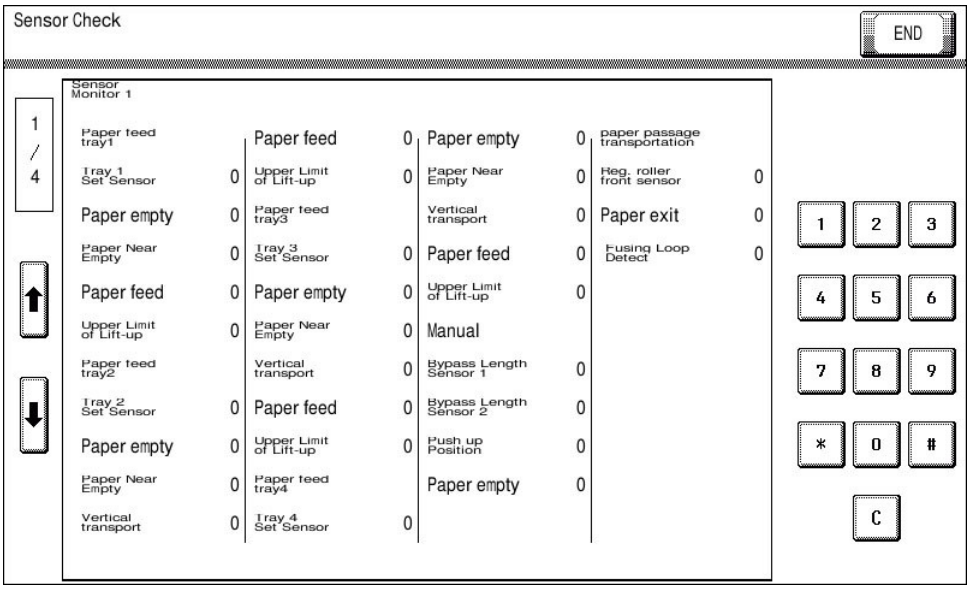


Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Scanner			
PS201	Home Sensor	Scanner home sensor	At home	Out of home
PS13/PS12	Home sensor opposite board	Document reading glass cleaning sensor	At home	Out of home
	Org. Detecting Sensor			
RS201	Original Cover	Original cover sensor	Lowered	Raised
PS202	20 Degree	Angle sensor	Less than 20 degree *1	20 degree or more *1
PS204	Original Size Detection 1	Original size sensor/1	Original loaded Not mounted	Original not loaded
PS205	Original Size Detection 2	Original size sensor/2	Original loaded Not mounted	Original not loaded
-	Original Size Detection 3	Not used	-	-
-	Original Size Detection 4	Not used	-	-
-	Original Size Detection 5	Not used	-	-
-	Original Size Detection 6	Not used	-	-
-	Original Size Detection 7	Not used	-	-
-	Original Size Detection 8	Not used	-	-

- *1: When DF-704/DF-629is mounted, machine detected the angle at 14.5 degrees.

(b) bizhub C658/C558/C458

- Sensor monitor 1 (Main body, PC-115/215)

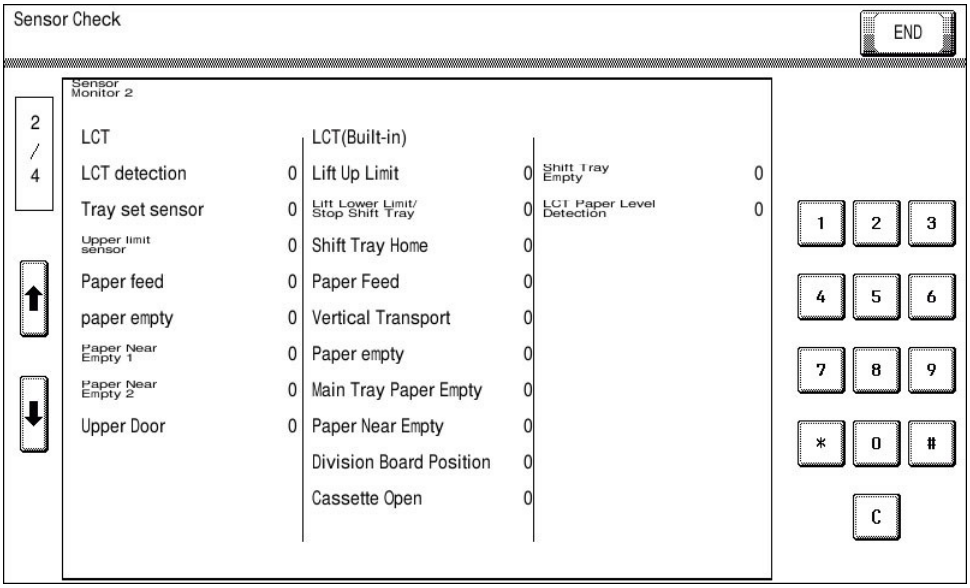


Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Paper feed tray 1			
-	Tray 1 Set Sensor	-	Set	Out of position
PS24	Paper empty	Tray 1 paper empty sensor	Paper not present	Paper present
PS11	Paper Near Empty	Tray 1 paper near empty sensor	Near empty	Other than near empty
PS23	Paper feed	Tray 1 paper feed sensor	Paper present	Paper not present
PS25	Upper Limit of Lift-up	Tray 1 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 2			
-	Tray 2 Set Sensor	-	Set	Out of position
PS21	Paper empty	Tray 2 paper empty sensor	Paper not present	Paper present
PS12	Paper Near Empty	Tray 2 paper near empty sensor	Near empty	Other than near empty
PS19	Vertical transport	Tray 2 vertical transport sensor	Paper present	Paper not present
PS20	Paper feed	Tray 2 paper feed sensor	Paper present	Paper not present
PS22	Upper Limit of Lift-up	Tray 2 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 3			
-	Tray 3 Set Sensor	-	Set	Out of position
PS114	Paper empty	Tray 3 paper empty sensor	Paper not present	Paper present
PS115	Paper Near Empty	Tray 3 paper near empty sensor	Near empty	Not near empty
PS113	Vertical transport	Tray 3 vertical transport sensor	Paper present	Paper not present
PS112	Paper feed	Tray 3 paper feed sensor	Paper present	Paper not present
PS116	Upper Limit of Lift-up	Tray 3 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 4			
-	Tray 4 Set Sensor	-	Set	Out of position
PS124	Paper empty	Tray 4 paper empty sensor	Paper not present	Paper present
PS125	Paper Near Empty	Tray 4 paper near empty sensor	Near empty	Not near empty
PS123	Vertical transport	Tray 4 vertical transport sensor	Paper present	Paper not present
PS122	Paper feed	Tray 4 paper feed sensor	Paper present	Paper not present
PS126	Upper Limit of Lift-up	Tray 4 upper limit sensor	At raised position	Not at raised position
	Manual			
PS28	Bypass Length Sensor 1	Bypass FD paper size sensor/1	Paper present	Paper not present
PS29	Bypass Length Sensor 2	Bypass FD paper size sensor/2	Paper present	Paper not present
PS26	Push up Position	Bypass lift-up position sensor	Paper feed position	Standby position
PS27	Paper empty	Bypass paper empty sensor	Paper not present	Paper present
	Paper passage transportation			
PS1	Reg. roller front sensor	Registration sensor1	Paper present	Paper not present

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS3	Paper exit	Paper exit sensor	Paper present	Paper not present
PS2	Fusing Loop Detect	Fusing loop sensor	Loop present	Loop not present
PS72	Registration sensor2 *	Registration sensor2	Paper present	Paper not present

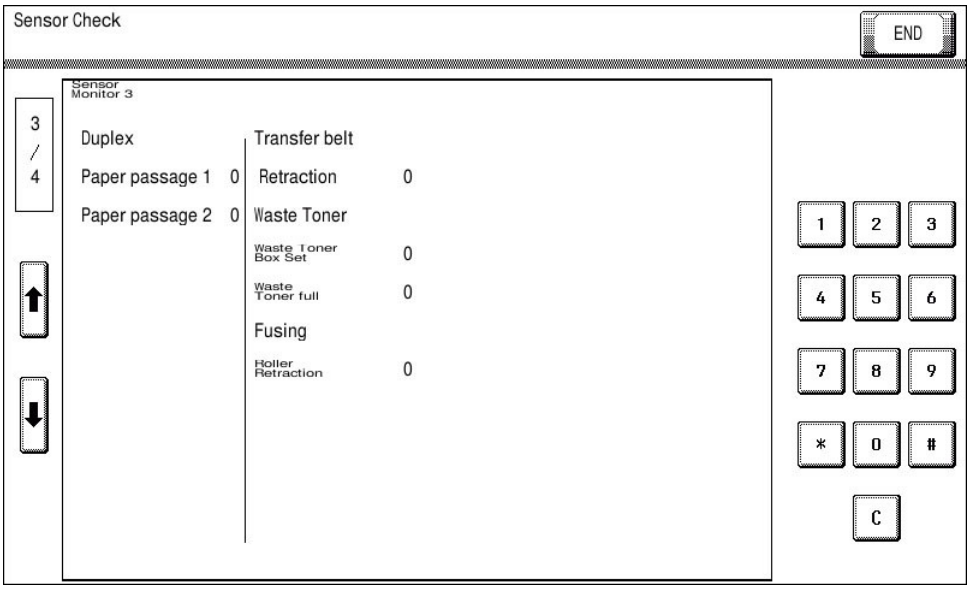
- *: It is only displayed on bizhub C658/C558.

- Sensor monitor 2 (Main body, PC-415)



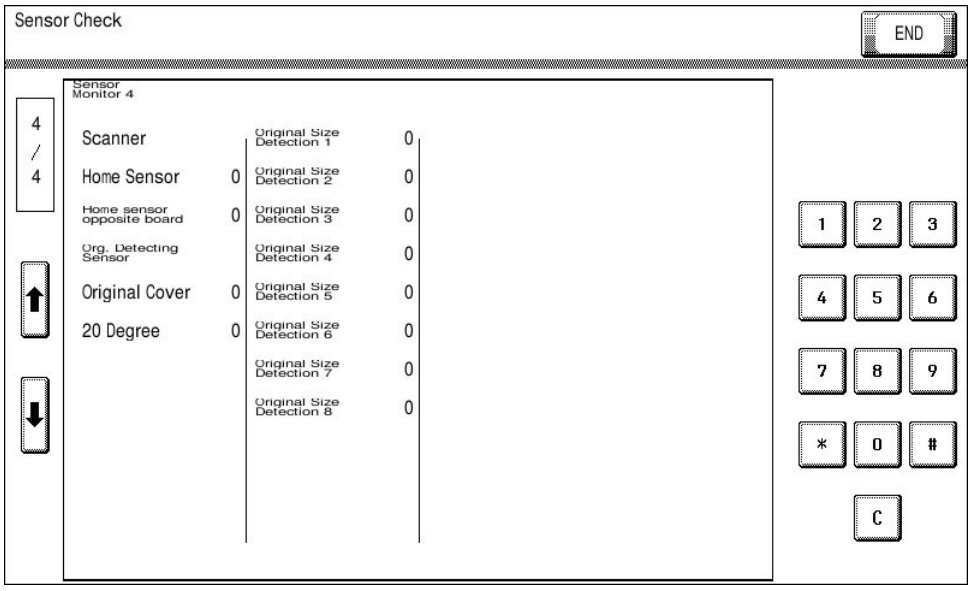
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	LCT			
-	LCT detection	LCT identification signal	Set	Unset
PS1	Tray set sensor	LU set sensor	Set	Out of position
PS2	Upper limit sensor	LU upper limit sensor	At raised position (Blocked)	Not at raised position (Unblocked)
PS3	Paper Feed	LU paper feed sensor	Paper present	Paper not present
PS4	paper empty	LU paper empty sensor	Paper not present	Paper present
PS5	Paper Near Empty 1	LU near empty sensor /1	Near empty	Unblocked
PS6	Paper Near Empty 2	LU near empty sensor /2	Near empty	Unblocked
MS1	Upper Door	LU door switch	Close	Open
	LCT (Built-in)			
PS136	Lift Up Limit	Main tray upper limit sensor	At raised position	Not at raised position
PS138	Lift Lower Limit/Stop Shift Tray	Shifter stop / lower limit position sensor	At lower position	Not at lower position
PS139	Shift Tray Home	Shifter home sensor	At home	Not at home
PS132	Paper Feed	Paper feed sensor	Paper present	Paper not present
PS133	Vertical Transport	Vertical transport sensor	Paper present	Paper not present
PS137	Paper empty	Main tray upper paper empty sensor	Empty	Paper present
PS134	Main Tray Paper Empty	Main tray paper empty sensor	Empty	Paper present
PS135	Paper Near Empty	Main tray paper near empty sensor	Near empty	Not near empty
PS142	Division Board Position	Division board sensor	Set	Unset
PS143	Cassette Open	Cassette set sensor	Open	Close
PS140	Shift Tray Empty	Sub tray paper empty sensor	Empty	Paper present
PS141	LCT Paper Level Detection	Sub tray paper remaining amount sensor	Paper present	Paper not present

- Sensor monitor 3 (Main body)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Duplex			
PS40	Paper passage 1	ADU paper passage sensor/1	Paper present	Paper not present
PS41	Paper passage 2	ADU paper passage sensor/2	Paper present	Paper not present
	Transfer belt			
PS39	Retraction	1st transfer pressure sensor	Not released	Released
	Waste Toner			
PS100	Waste Toner Box Set	Waste toner box set sensor	Set	Out of position
PS101	Waste Toner full	Waste toner full sensor	Blocked	Unblocked
	Fusing			
PS38	Roller Retraction	Fusing pressure home sensor	Not released	Released

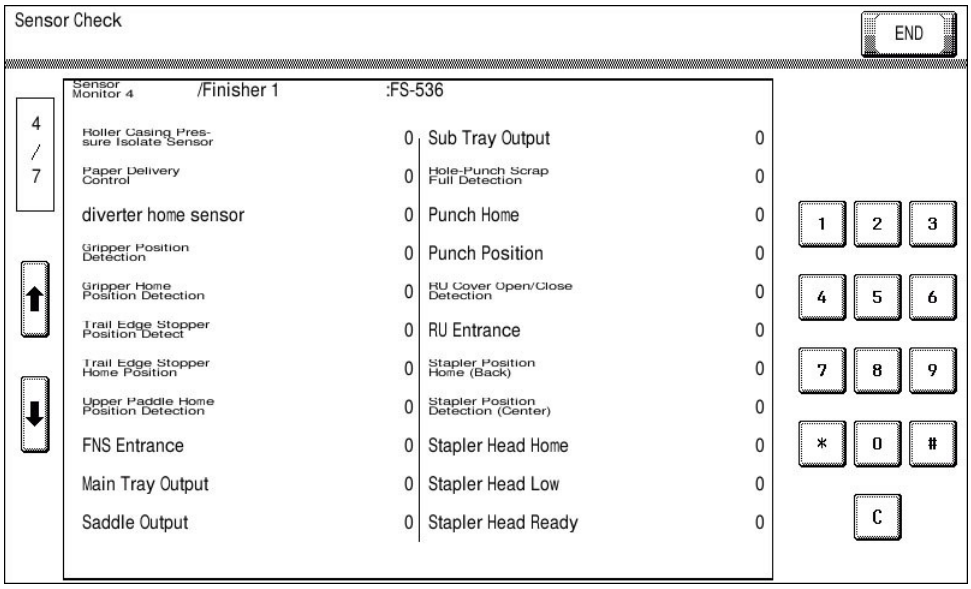
- Sensor monitor 4
  - Main body (FS-536 or FS-536SD mounted: sensor monitor 7, FS-537 or FS-537SD mounted: Sensor monitor 9, FS-533 mounted: Sensor monitor 5, JS-502 mounted: Sensor monitor 5)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Scanner			
PS201	Home Sensor	Scanner home sensor	At home	Out of home
PS13/PS12	Home sensor opposite board	Document reading glass cleaning sensor	At home	Out of home
	Org. Detecting Sensor			
RS201	Original Cover	Original cover sensor	Lowered	Raised

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS202	20 Degree	Angle sensor	Less than 20 degree *1	20 degree or more *1
PS204	Original Size Detection 1	Original size sensor/1	Original loaded Not mounted	Original not loaded
PS205	Original Size Detection 2	Original size sensor/2	Original loaded Not mounted	Original not loaded
-	Original Size Detection 3	Not used	-	-
-	Original Size Detection 4	Not used	-	-
-	Original Size Detection 5	Not used	-	-
-	Original Size Detection 6	Not used	-	-
-	Original Size Detection 7	Not used	-	-
-	Original Size Detection 8	Not used	-	-

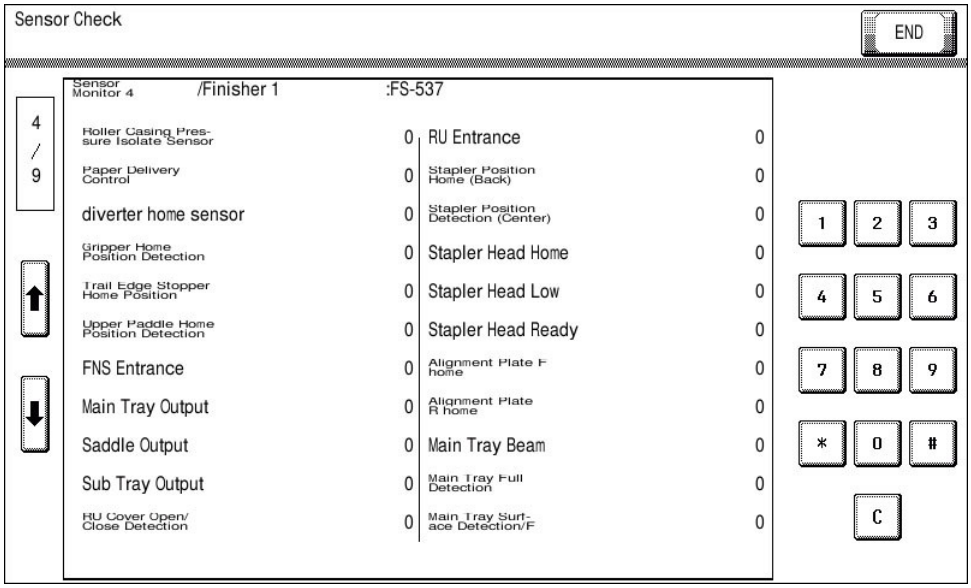
- FS-536/FS-536SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS11	Roller Casing Pressure Isolate Sensor	Receiving roller retraction sensor	Not Retracted	Retracted
PS28	Paper Delivery Control	Paper delivery control sensor	At home	Not at home
PS30	diverter home sensor	Exchange folded paper output sensor	At home	Not at home
PS19	Gripper Position Detection	Gripper position detection sensor	Not at home	At home
PS18	Gripper Home Position Detection	Gripper home position sensor	At home	Not at home
PS22	Trail Edge Stopper Position Detect	Pre-eject away sensor	Not at home	At home
PS21	Trail Edge Stopper Home Position	Pre-eject home sensor	At home	Not at home
PS14	Upper Paddle Home Position Detection	Upper paddle home position detection sensor	At home	Not at home
PS4	FNS Entrance	FNS entrance sensor	Paper present	Paper not present
PS6/PS7	Main Tray Output	Main tray upper sensor (out/in)	Paper present	Paper not present
PS5	Saddle Output	Saddle exit sensor	Paper present	Paper not present
PS8	Sub Tray Output	Sub tray exit sensor	Paper present	Paper not present
PS4/PS5	Hole-Punch Scrap Full Detection	Punch dust full sensor	Full	Other than full
PS1	Punch Home	Punch home sensor	At home	Not at home
PS2	Punch Position	Punch position sensor	At home	Not at home
PS61	RU Cover Open/Close Detection	RU door open/close sensor	Open	Closed
PS60	RU Entrance	RU transport sensor	Paper present	Paper not present

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS23	Stapler Position Home (Back)	Stapler home position sensor (Rear)	At home	Not at home
PS24	Stapler Position Detection (Center)	Stapler position sensor (Center)	Detected	Not detected
-	Stapler Head Home	-	At home	Not at home
-	Stapler Head Low	Staple empty detect sensor	Staple present	Staple not present
-	Stapler Head Ready	-	Staple available	Staple unavailable

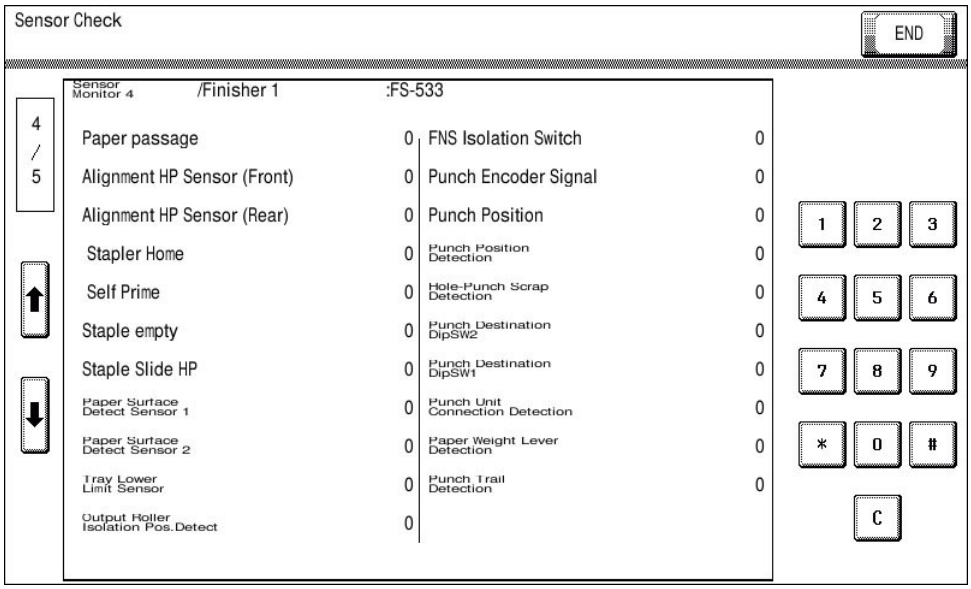
- FS-537/FS-537SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS22	Roller Casing Pressure Isolate Sensor	Receiving roller retraction sensor	Pressure	Release
PS11	Paper Delivery Control	Paper delivery control sensor	At home	Not at home
PS21	diverter home sensor	Route change gate home sensor	Paper path: sub tray	Paper path: main tray
PS3	Gripper Home Position Detection	Gripper home position sensor	At home	Not at home
PS31	Trail Edge Stopper Home Position	Trailing edge stopper home sensor	At home	Not at home
PS25	Upper Paddle Home Position Detection	Paddle home sensor	At home	Not at home
PS34	FNS Entrance	FNS entrance sensor	Paper present	Paper not present
PS37	Main Tray Output	Main tray exit sensor	Paper present	Paper not present
PS35	Saddle Output	SD discharge sensor	Paper present	Paper not present
PS24	Sub Tray Output	Sub tray exit sensor	Paper present	Paper not present
PS61	RU Cover Open/Close Detection	RU door open/close sensor	Open	Closed
PS60	RU Entrance	RU transport sensor	Paper present	Paper not present
PS19	Stapler Position Home (Back)	Stapler home position sensor (Rear)	At home	Not at home
PS20	Stapler Position Detection (Center)	Stapler position sensor (Center)	Detected	Not detected
-	Stapler Head Home	-	At home	Not at home
-	Stapler Head Low	Staple empty detect sensor	Staple present	Staple not present
-	Stapler Head Ready	-	Staple available	Staple unavailable
PS9	Alignment Plate F Home	Alignment plate/F home sensor	At home	Not at home
PS6	Alignment Plate R Home	Alignment plate/R home sensor	At home	Not at home
PS38/PS40	Main Tray Beam	Main tray upper sensor	Blocked	Unblocked
PS12	Main Tray Full Detection	Main tray full detection sensor	Full	Other than full

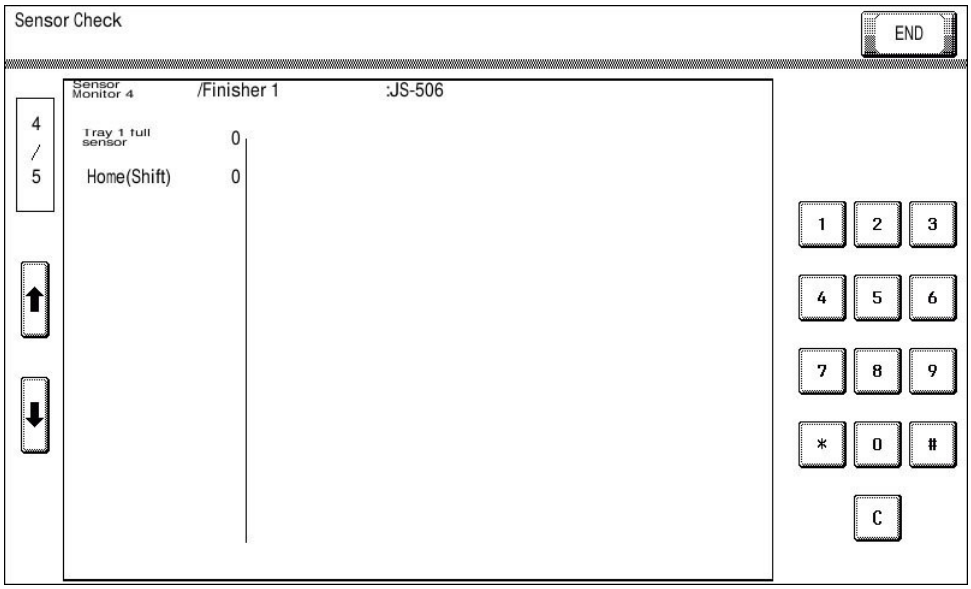
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS16	Main Tray Surface Detection/F	Main tray lift up detection sensor/F	Not at home	At home

- FS-533



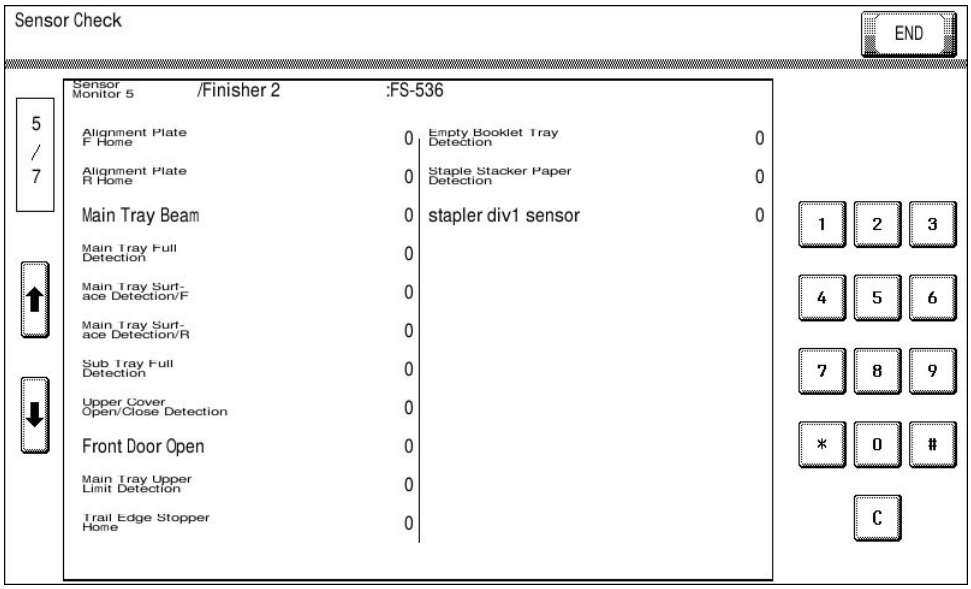
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS101	Paper Passage	Paper feed sensor	Paper present	Paper not present
PS108	Alignment HP Sensor (Front)	Alignment plate home sensor/F	At home	Not at home
PS109	Alignment HP Sensor (Rear)	Alignment plate home sensor/R	At home	Not at home
PS110	Stapler Home	Stapler home sensor	At home	Not at home
PS112	Self Prime	Self prime sensor	Staple present	Staple not present
PS113	Staple empty	Staple empty sensor	Staple not present	Staple present
PS111	Staple Slide HP	Stapler home sensor	At home	Not at home
PS102	Paper Surface Detect Sensor 1	Paper surface detect sensor/1	Paper present	Paper not present
PS104	Paper Surface Detect Sensor 2	Paper surface detect sensor/2	Blocked	Unblocked
PS107	Tray Lower Limit Sensor	Paper exit tray home sensor	At lower position	Not at lower position
PS105	Output Roller Isolation Pos. Detect	Pick up roller position sensor	At home	Not at home
SW1	FNS Isolation Switch	Finisher lock switch	Open	Closed
PS202	Punch Encoder Signal	Punch motor sensor	Blocked	Unblocked
PS204	Punch Position	Puncher home sensor	At home	Not at home
PS203	Punch Position Detection	Puncher drive cam sensor	At home	Not at home
PS205	Hole-Punch Scrap Detection	Punch dust full sensor	ON	OFF
-	Punch Destination DipSW2	-	ON	OFF
-	Punch Destination DipSW1	-	ON	OFF
-	Punch Unit Connection Detection	-	Connected	Not connected
PS103	Paper Weight Lever Detection	Paper weight lever sensor	Blocked	Unblocked
PS201	Punch Trail Detection	Paper feed sensor	Paper present	Paper not present

- JS-506



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS2	Tray 1 full sensor	Tray 1 paper feed full sensor	Full	Other than full
PS1	Home (Shift)	Tray shift home sensor	At home	Not at home

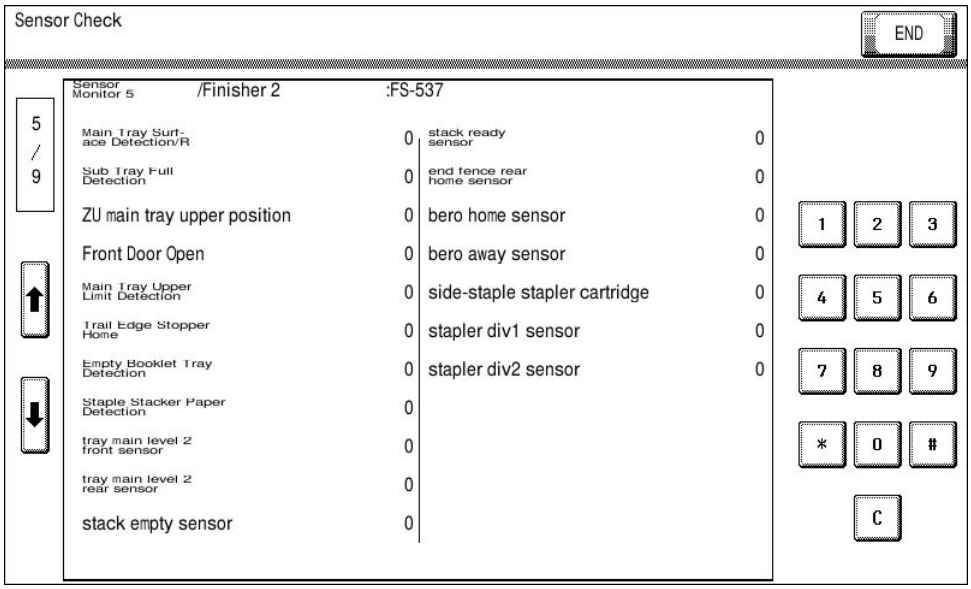
- Sensor monitor 5
  - FS-536/FS-536SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 2			
PS12	Alignment Plate F Home	Alignment plate/F home sensor	At home	Not at home
PS13	Alignment Plate R Home	Alignment plate/R home sensor	At home	Not at home
-	Main Tray Beam	-	Blocked	Unblocked
PS29	Main Tray Full Detection	Main tray full detection sensor	Full	Other than full
PS27	Main Tray Surface Detection/F	Main tray upper position sensor/F	Upper position	Other than upper position
PS26	Main Tray Surface Detection/R	Main tray upper position sensor/R	Upper position	Other than upper position
PS9/PS10	Sub Tray Full Detection	Sub tray full detection sensor (out/in)	Full	Other than full
PS32	Upper Cover Open/Close Detection	Upper door open/close detection sensor	Open	Closed
SW1	Front Door Open	Front door open detect switch	Open	Closed
SW2	Main Tray Upper Limit Detection	Main tray upper position detect switch	Upper position	Other than upper position

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS6	Trail Edge Stopper Home	Stopper Home sensor	At home	Not at home
PS13/PS14	Empty Booklet Tray Detection	Booklet tray empty detection sensor (in/out)	Paper present	Paper not present
PS31	Staple Stacker Paper Detection	Staple stacker paper detection sensor	Paper present	Paper not present
PS36	stapler div1 sensor	Wide flat limit sensor	Side-staple staple position	Except for side-staple staple position

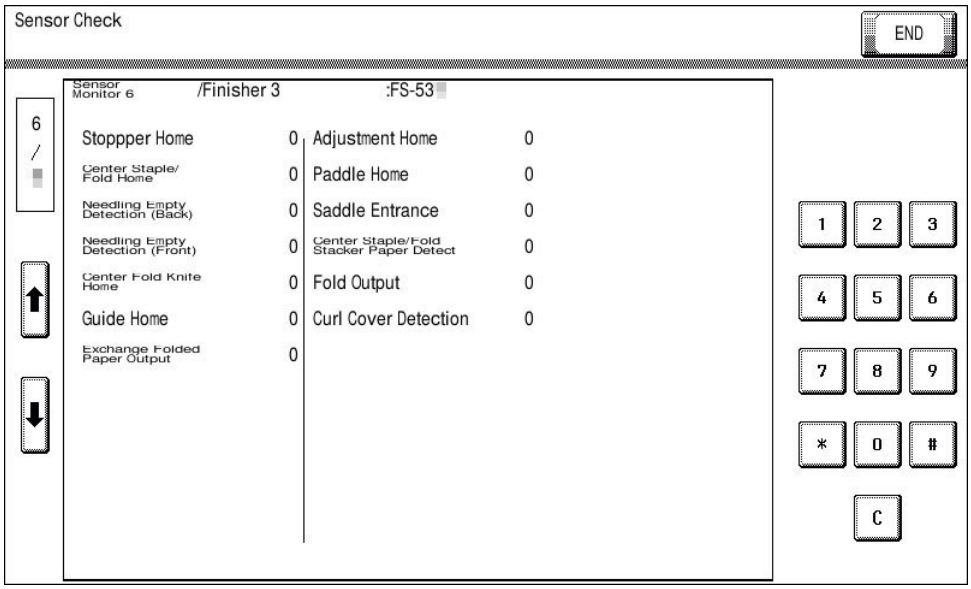
- FS-537/FS-537SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 2			
PS17	Main Tray Surface Detection/R	Main tray lift up detection sensor/R	Not at home	At home
PS39/PS41	Sub Tray Full Detection	Sub tray full detection sensor	Full	Other than full
PS503 PS504 PS505 PS506	ZU main tray upper position	Upper limit sensor/1/2/3/4	Upper position	Other than upper position
SW1	Front Door Open	Front door open	Open	Closed
-	Main Tray Upper Limit Detection	-	At upper limit position	Not at upper limit position
PS10	Trail Edge Stopper Home	Trail edge stopper sensor/F	At home	Not at home
PS35	Empty Booklet Tray Detection	SD exit full sensor	Paper present	Paper not present
PS32	Staple Stacker Paper Detection	Alignment plate paper detection sensor	Paper present	Paper not present
PS14	tray main level 2 front sensor	Main tray lift down detection sensor/F	Not at home	At home
PS15	tray main level 2 rear sensor	Main tray lift down detection sensor /R	Not at home	At home
PS13	stack empty sensor	Main tray paper detection sensor	Paper present	Paper not present
PS13	stack ready sensor	Main tray paper detection sensor	Paper not present	Not at home
PS17		Main tray lift up detection sensor /R	At home	
PS16		Main tray lift up detection sensor/F	At home	
PS7	end fence rear home sensor	Trail edge stopper sensor/R	At home	Not at home
PS30	bero home sensor	Stacker plate home sensor	At home	Not at home
PS29	bero away sensor	Stacker plate position sensor	Not at home	At home
-	side-staple stapler cartridge	Stapleless detection sensor	Cartridge present	Cartridge not present

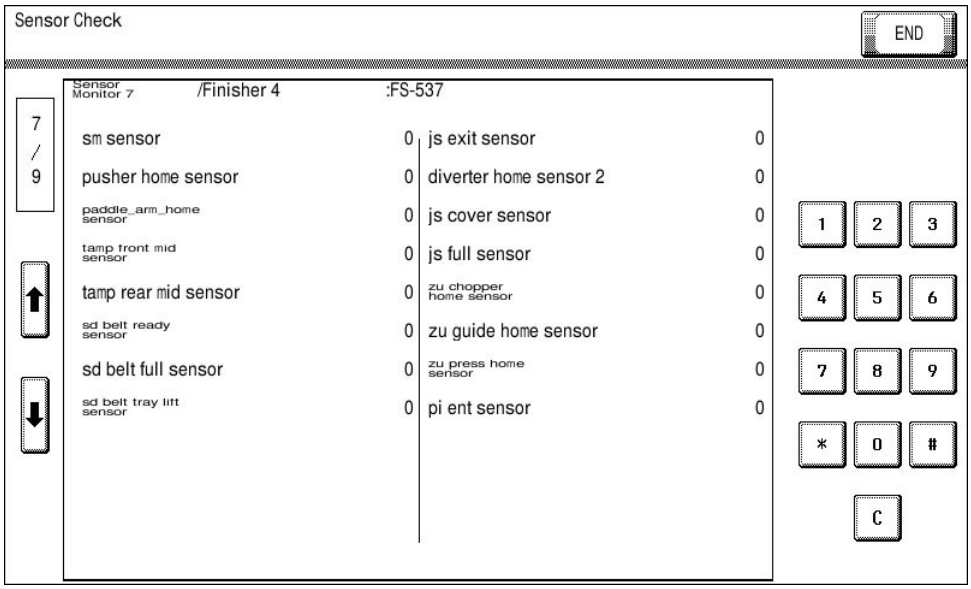
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS18	stapler div1 sensor	Stapler home position sensor (Corner)	Stapler side-staple corner position	Except for stapler side-staple corner position
PS18	stapler div2 sensor	Stapler home position sensor (Corner)	Stapler side-staple corner position	Except for stapler side-staple corner position

- Sensor monitor 6
  - FS-536/FS-536SD/FS-537/FS-537SD



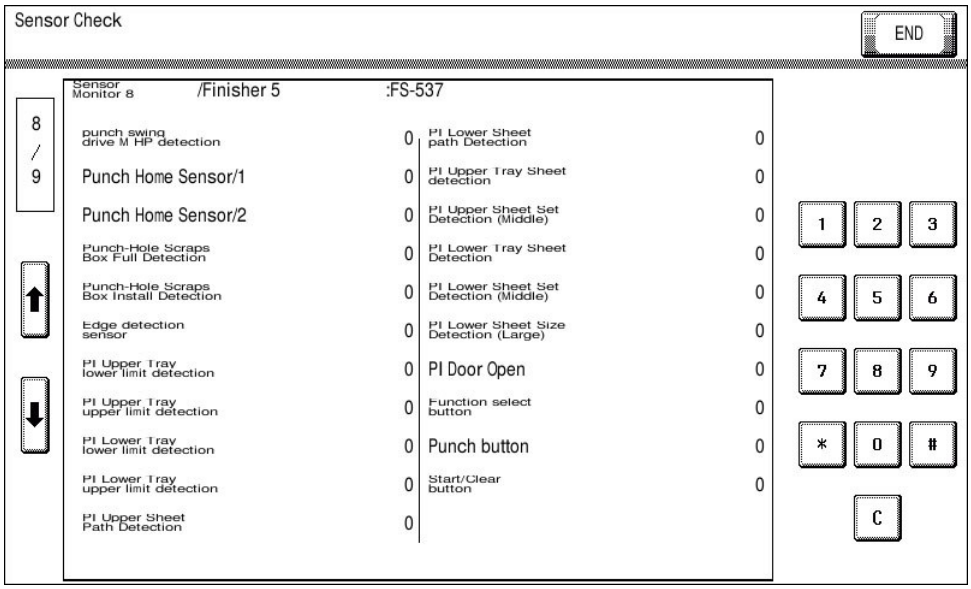
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 3			
PS20	Stopper Home	Trailing edge stopper home position detection sensor	At home	Not at home
-	Center Staple/Fold Home	-	At home	Not at home
-	Needling Empty Detection (Back)	Staple switch	Staple present	Staple not present
-	Needling Empty Detection (Front)	Staple switch	Staple present	Staple not present
PS8	Center Fold Knife Home	Center fold knife home sensor	At home	Not at home
PS7	Guide Home	Guide home sensor	At home	Not at home
PS11	Exchange Folded Paper Output	Tri-folding gate home sensor	At home	Not at home
PS4	Adjustment Home	Alignment home sensor	At home	Not at home
PS5	Paddle Home	Paddle home sensor	At home	Not at home
PS1	Saddle Entrance	SD entrance sensor	Paper present	Paper not present
PS3	Center Staple/Fold Stacker Paper Detect	Center staple/fold stacker paper detect sensor	Paper present	Paper not present
PS12	Fold Output	Fold exit sensor	Paper present	Paper not present
PS2	Curl Cover Detection	Curl cover detection sensor	Not at home	At home

- Sensor monitor 7
  - FS-537/FS-537SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 4			
PS36	sm sensor	FNS middle sensor	Paper present	Paper not present
PS26	pusher home sensor	Arm home position sensor	At home	Not at home
PS27	paddle_arm_home sensor	Paddle up/down home sensor	At home	Not at home
PS8	tamp front mid sensor	Alignment plate/F position sensor (Center)	Alignment plate/F center position	Except for alignment plate/F center position
PS5	tamp rear mid sensor	Alignment plate/R position sensor (Center)	Alignment plate/R center position	Except for alignment plate/R center position
PS12	sd belt ready sensor	Fold exit sensor	Paper present	Paper not present
PS35	sd belt full sensor	SD exit full sensor	Full	Other than full
PS43	sd belt tray lift sensor	SD exit tray lift sensor	Lift-up	Other than Lift-up
PS402	js exit sensor	Job tray paper exit sensor	Paper present	Paper not present
PS23	diverter home sensor 2	Sub tray/JS route change gate home sensor	At home	Not at home
PS401	js cover sensor	Job tray door sensor	Open	Closed
PS403	js full sensor	Job tray full sensor	Full	Other than full
PS501	zu chopper home sensor	Chopper home sensor	At home	Not at home
PS500	zu guide home sensor	Guide home sensor	At home	Not at home
PS502	zu press home sensor	Press home sensor	At home	Not at home
PS33	pi ent sensor	PI discharge sensor	Paper present	Paper not present

- Sensor monitor 8
  - FS-537/FS-537SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 5			
PS303	punch swing drive M HP detection	PK punch oscillating home sensor	At home	Not at home
PS307	Punch Home Sensor/1	PK punch home sensor/1	Not at home	At home
PS301	Punch Home Sensor/2	PK punch home sensor/2	Not at home	At home
PS302	Punch-Hole Scraps Box Full Detection	PK punch hole scraps box full sensor	Other than full	Full
PS28	Punch-Hole Scraps Box Install Detection	Punch scraps box set sensor	Set	Not set
PSDTB	Edge detection sensor	Paper size detect board	Paper end not detected	Paper end detected
PS205	PI Upper Tray lower limit detection	Tray lower limit sensor /Up	At lower limit position	Not at lower limit position
PS204	PI Upper Tray upper limit detection	Tray upper limit sensor /Up	At upper limit position	Not at upper limit position
PS210	PI Lower Tray lower limit detection	Tray lower limit sensor /Lw	At lower limit position	Not at lower limit position
PS209	PI Lower Tray upper limit detection	Tray upper limit sensor /Lw	At upper limit position	Not at upper limit position
PS201	PI Upper Sheet Path Detection	Paper entrance sensor /Up	Paper present	Paper not present
PS206	PI Lower Sheet path Detection	Paper entrance sensor /Lw	Paper present	Paper not present
PS202	PI Upper Tray Sheet detection	Paper empty sensor /Up	Paper present	Paper not present
PS203	PI Upper Sheet Set Detection (Middle)	Paper set sensor /Up	Paper present	Paper not present
PS207	PI Lower Tray Sheet Detection	Paper empty sensor /Lw	Paper present	Paper not present
PS208	PI Lower Sheet Set Detection (Middle)	Paper set sensor /Lw	Paper present	Paper not present
PS212	PI Lower Sheet Size Detection (Large)	L size sensor /Lw	Paper present	Paper not present
MS205	PI Door Open	Upper door open/close switch	Open	Closed
-	Function select button	Post inserter unit manual function selection button SW	ON	OFF
-	Punch button	Post inserter unit manual punch button SW	ON	OFF
-	Start/Clear button	Post inserter unit manual start/clear SW	ON	OFF

5.19.2 Table Number

(1) Vdc-C Vg-C

(a) Use

- When IDC is detected, for plain paper, Thick 1/1+, Thick 2/3/4, and Black, the machine independently displays each Vg/Vdc output value that is calculated based on the density (toner amount stuck on the belt) of the test pattern created on the transfer belt.

- Standard values:
  - Vdc: around 300 V to 400 V
  - Vg: around 450 V to 550 V
- Used for troubleshooting of image problems.
- If the value is high: It is decided that the image density is low by the IDC detection, and the Vg/Vdc value is corrected high.
- If the value is low: It is decided that the image density is high by the IDC detection, and the Vg/Vdc value is corrected low.

(2) LD Light Value

(a) Use

- Shows the LD light value of each color of toner during print image formation.

(3) Charging AC Output Value 1

(a) Use

- Shows the AC voltage value applied to the charging roller of each color of toner during print image formation.

(4) Charging AC Output Value 2

(a) Use

- Shows the current value applied to the charging roller of each color of toner during print image formation.

5.19.3 Level History 1

(1) Use

- To display TCR (T/C ratio), IDC/registration sensor output values, and fusing temperature.
- Used for troubleshooting of image problems.

(2) Procedure

TCR-C/-M/-Y/-K	Shows the T/C output reading taken last.
IDC1/IDC2	Shows the latest IDC data.
Middle heat temperature	Not used
Medium Heating Temperature	Displays the latest detected temperature of the heating roller thermistor/2.
Heat edge temperature	Displays the latest detected temperature of the heating roller thermistor/1.
Main Heating Temperature	Displays the latest detected temperature of the heating roller temperature sensor.

“Reading taken last” means

- Density of toner of the latest image.
- When a test pattern is produced by pressing the Start key while level history 1 is being displayed.

5.19.4 Level History 2

(1) Use

- IDC Sensor (Transfer belt bare surface level) as adjusted through the image stabilization sequence and ATVC value.
- Used for troubleshooting of image problems.

(2) Procedure

IDC Sensor Adjust 1/2	Shows the intensity adjustment value (0 to 255) of the IDC sensor. The normal value is 35 to 110, but the value increases depending on how long the machine has been used.
ATVC -C/-M/-Y/-K	Shows the first image transfer nearest output value. (5 to 40 µA)
ATVC -2nd	Shows the second image transfer nearest output value. (0 to 4,800 V)

5.19.5 Temp. & Humidity

(1) Use

- Displays the temperature and humidity in the machine.
- Used as reference information when a malfunction occurs.

(2) Procedure

Temp-Inside	0 to 80 °C in 1 °C increments
Humidity	10 to 90 % in 1 % increments
Absolute Humidity	0 to 255 in 1 increments
Paper temperature	0 to 100 °C in 1 °C increments

5.19.6 CCD Check

(1) Use

- To display the D/A value of CCD clamp/gain for R, G, and B.
- To display the D/A value of CIS clamp/gain. (Only when dual scan document feeder is mounted)
- Used for troubleshooting for the CCD sensor/CIS.

(2) Procedure

- Use the following guidelines on the correct range of values.

(a) CCD

- CLAMP: 0 (remain static)
- GAIN: The maximum value and the minimum value of the output value should be within the range shown below.

Acceptable gain range	Minimum value	Maximum value
R	20	238
G	10	222
B	70	247

(b) CIS (Only when dual scan document feeder is mounted)

- CLAMP: -36 to +36 * Show the maximum value for controlling the black level of the CIS.
- GAIN: 70 to 255 * Show data themselves

5.19.7 Memory/Storage Adjustment

(1) Memory Check

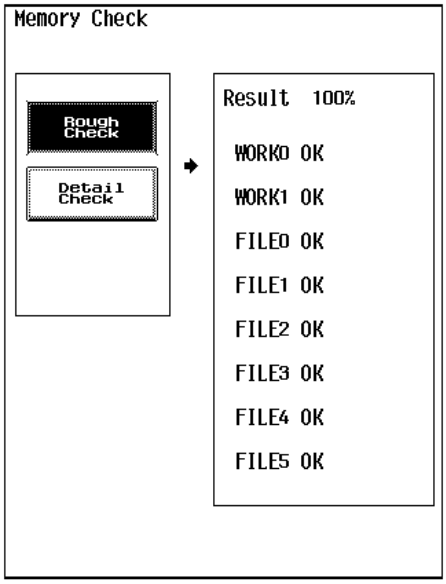
(a) Use

- If the copy image is faulty.
- To check correspondence of data written to and that read from memory through write/read check.
- The following shows the memory names that correspond to each memory where check is made.

WORK0	Standard memory (onboard)
WORK1	Standard memory (DIMM)
FILE0, 1	ASIC777 memory installed in the MFP board
FILE2, 3	Memory of ASIC30 installed in the EIF board for IC-416
FILE4, 5	Memory of ASIC777 installed in the DS board (only when dual scan image processing board is mounted)

<Rough Check>

- A check is made for each memory to see if the image data reading and writing are correctly made in a very limited area.
- The progress of the check sequence is displayed in percentage. (calculated based on all checks from WORK0 to FILE5 constituting 100%)
- When the rough checks of all memories are completed, results are displayed beside the memory display. (OK/NG)
  Rough check time: approx. 10 sec.
- Typical rough check result display: Exemplary display when all memories have been checked okay



<Detail Check>

- A write check and a read check are repeated in all areas for each memory.
  NOTE
  - **For a write check, a specific write value is set and the specific value is written in all areas of the memory and the written data is thereafter read. This sequence is performed for all memories (from WORK0 to FILE5). (which forms one cycle of the check sequence)**
  - **When one cycle of the check sequence is completed, the write value is changed automatically and a new check cycle is performed. This sequence is repeated with the write value changed for each sequence.**
  - **Unlike the rough check, the detail check is not automatically terminated. The check cycle is repeated until the Stop key is pressed.**
- The progress of the check sequence is displayed in percentage. (calculated based on all checks from WORK0 to FILE5 constituting 100%)
  NOTE
  - **The check progress status display is 100% when one cycle of the check sequence is completed.**

- **The check progress status display is automatically reset to 0% and restarted as soon as a new check sequence is started.**

- The detail check of all memories (one cycle) is completed in about 3 min.
- The press of the Stop key will terminate the detail check.
- If a write/read error is detected, NG appears beside the memory display and the check sequence is automatically terminated.

(b) Rough check procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check].
3. Touch [Rough Check].
4. Press the Start key to start the check procedure.
   NOTE
   - **The rough check procedure can be interrupted by pressing the Stop key.**
5. The procedure is automatically completed (in about 10 sec.) and the results are shown on the screen.
6. If the check results for WORK0 to 1 are NG, check the memory for connection or replace the memory with a new one.
   - If the check results for FILE0 to 1 are NG, replace the MFP board with a new one.
   - If the check results for FILE2 to 3 are NG, replace the EIF board for IC-416 with a new one.
   - If the check results for FILE4 to 5 are NG, replace the dual scan image processing board with a new one. (only when dual scan image processing board is mounted)

(c) Detail check procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check].
3. Touch [Detail Check].
4. Press the Start key to start the detail check procedure.
   - The check sequence is started and the current check progress status is displayed in percentage.
5. When the check progress status display is 100% after the start of the check sequence, the first check cycle is completed. (which takes about 3 min.)
   - The results are displayed on the screen. (The sequence has been checked okay, if NG does not appear.)
   - The current check progress status display is associated with the latest check sequence.
     NOTE
     ▪ If a write/read error is detected, NG appears beside the memory display and the check cycle is automatically terminated.
6. Press the Stop key at any timing to terminate the detail check procedure.
7. If the check results for WORK0 to 1 are NG, check the memory for connection or replace the memory with a new one.
   - If the check results for FILE0 to 1 are NG, replace the MFP board with a new one.
   - If the check results for FILE2 to 3 are NG, replace the EIF board for IC-416 with a new one.
   - If the check results for FILE4 to 5 are NG, replace the dual scan image processing board with a new one. (only when dual scan image processing board is mounted)

(2) Compress / Decompression Check

(a) Use

- To check whether compression and decompression are carried out properly.
- If the copy image is faulty.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Compress/Decompression Check].
3. Press the Start key to start the check procedure.
4. The check result will be displayed.

(3) Memory Bus Check

(a) Use

- To check to see if image data is correctly transferred from scanner to memory, and from memory to printer.
- Bus check between scanner and memory has two steps; the scanner internal check step as internal processing and the check step between scanner and memory. If either of the two steps is NG, NG1 or NG2 is displayed respectively.
- If the copy image is faulty.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check].
3. Select either [Scanner -> Memory], [Memory -> PRT], or both.
4. Pressing the Start key will start the memory bus check and be terminated automatically.
5. The check result will be displayed, [OK] or [NG].

(4) DSC Bus Check

(a) Use

- To check the connection between the DSC board and the scanner section when optional security kit SC-508 is installed.
- When an error is detected after checking, NG1 or NG2 is displayed depending on the location of the board where the defect is found.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [DSC Bus Check].

3. Select “Front side” or “Back side”, and touch [Scanner -> DSC].
   NOTE
   - **The DSC bus check for the back side can be performed only when dual scan document feeder is mounted.**
4. Press the Start key to start the check procedure.
5. The check result will be displayed.

(5) Storage R/W Check

(a) Use

- To check to see if the hard disk is connected properly, and if read/write operation of the hard disk is correctly performed.
- When the hard disk is mounted.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the results are shown on the screen.

(6) Format

(a) Use

- To format the hard disk.
- The function proceeds in the order of physical format to logical format.
- If the hard disk is yet to be formatted, the malfunction code “C-D010” will appear. Ignore this code and continue with the formatting procedure.
- Use when replacing the standard equipment hard disk. (Logical format)
  NOTE
  - **When replacing the hard disk during the mirroring operation (when optional hard disk HD-524 is installed), it is necessary to execute [HDD Mirroring Rebuild]. Logical formatting is not required.**
- When the hard disk is to be initialized. (Physical format to logical format)

NOTE

- **As HDD formatting deletes Movie data, Voice data, OCR dictionary data, PDF/A font, and OCR font, and Unicode font you need to reinstall these data as necessary after using this function.**
- **When HDD formatting is executed with the HD-524 installed, both HDD (A) and HDD (B) are formatted. All data on the Slave is deleted.**
- **By using in conjunction with the security setting HDD Data Backup function , data can be restored to the HDD once it is formatted.**

(b) Procedure (Physical Format)

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Physical Format].
4. Press the Start key to start the formatting sequence.
5. The sequence will be automatically terminated as it is completed.
6. Turn off the main power switch and turn it on again more than 10 seconds after.

NOTE

- **If [HDD Encryption Setting] is not set to “ON,” when the physical format is completed and the main power switch is turned OFF/ON, a message that prompts you to set an encrypting word is displayed.**
  If you perform [HDD Encryption Setting], after setting an encrypting word, perform the logical format.

Procedure (Logical formatting (when initially setting up a standard replacement HDD))

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Logical Format].
4. Press the Start key to start the formatting sequence.
5. The sequence will be automatically terminated as it is completed.
6. Turn off the main power switch and turn it on again more than 10 seconds after.

* Formatting the hard disk will erase all data contained in it.

(7) eMMC -> HDD Data Copy

- Use prohibited

NOTE

- **The use of this function is prohibited.**
- **Executing this function automatically formats the HDD, erasing all data recorded on the HDD.**

(8) HDD Mirroring Rebuild

(a) Use

- Displayed when optional hard disk HD-524 is installed.
- Use when setting up optional hard disk HD-524.
  Copy data from the standard equipped hard disk to the additionally installed hard disk.
- Use when replacing a failed hard disk.
  Copy data from a normally operating hard disk to a replacement hard disk.

NOTE

- **The HDD mirroring rebuilding process takes approx. 1 hour.**

(b) Procedure

1. Install the second hard disk.
2. Turn ON the main power switch.
3. Call the Service Mode to the screen.
4. Select [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild].
5. Press the Start key. Copy the entire data from the Master disk to the Slave disk.
   The Start key orange light turns ON, and the operation progress displays in the screen. (Processing time: approx. 1 hour)
   NOTE
   - **Never turn Off the main power supply or pull out the power plug during HDD mirroring rebuilding (below: rebuilding).**
   - **When rebuilding is executed, the process cannot be paused or forcibly quit until rebuilding is completed.**
   - **Jobs can still be executed even during rebuilding. However, it will take a longer time to complete the rebuilding.**
   - **To execute a job during rebuilding, touch the [OK] key twice, and exit Service Mode. Rebuilding will continue to run in the background.**
   - **Check the mirroring rebuilding progress by selecting [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment].**
6. When the data has finished copying, the screen displays 100%, and the Start key light changes color to blue.
7. Touch [OK] twice, and exit Service Mode
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.19.8 Memory/Storage Status

(1) Use

- To display the condition and amount of the memory and hard disk.
- Displays the hard disk operating state, Master disk designation, rebuilding state when optional hard disk HD-524 is installed.

5.19.9 Color Regist

(1) Use

- To check each of C, M, and Y for color shift amount.
- The data is updated after a color shift correction has been made or color shift adjustment has been completed.
- To check when there is a color shift.
- To display the results of skew adjustment.

(2) Procedure

- For each of C, M, and Y, the color shift amount (in X and Y directions) at two locations (one at the front and the other in the rear) and the difference in color shift amount between the front and rear (X and Y directions) are displayed.
- Display unit: dots
- Individual color shifts of C, M, and Y are based on K and their amounts are displayed.
- For details of skew adjustment, see the " I.5.4.9 Print Head Skew Adj.".

5.19.10 Load Check

(1) Use

- To check each device (electric component) for proper condition by individually activating the load associated with the device.
- To identify faults at the time of troubleshooting.

NOTE

Take note of the following during the load check mode.

- **No malfunction is detected and no count is taken of consumables life and related items.**
- **Two or more devices (motors, clutches, solenoids, and fans) cannot be checked simultaneously.**
- **Detection of proper installation of various types of units and waste toner box does not function. During the check procedure, therefore, make sure that the unit in question is installed correctly or yet to be installed.**

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Load Check].
3. Open the front door, the lower front door or the right door.
4. Touch [Start Load Check].
5. Close the door opened on step3.
6. Referring to the load check list, enter a check code.
7. Referring to the load check list, enter a multi code.
8. Press the Start key. When pressing the Start key, the specified load is activated. The Start key blinks in orange.
9. Check the load operation and output of signals.
10. Press the Stop key to stop the check operation and check the result.
    NOTE
    - **Depending on the type of load being activated, after the lapse of the specified time or after the transition to the specified state, the corresponding device automatically stops working.**
    - **When 'NG' is displayed, check the wiring and connectors.**
11. To check another load or signal output, repeat steps 6 to 10.
12. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

NOTE

- **To exit from the load check mode, be sure to turn off and on the main power switch.**
  At the point when you display [Service Mode] -> [State Confirmation] -> [Load Check], MFP enters into load check mode. Regardless of whether load check is actually performed or not, the main power switch must be turned off and on to exit from load check mode.

(3) Load check list

Check code	Multi code	Symbol	Load name	Operation outline	Note
8	1	EL/Y, EL/M, EL/C	Erase LED /Y,M,C	Outputs erase LED. <At the time of start> 1. Turns on erase LED/Y, M, C remote. 2. Turns on erase LED/K low light intensity remote. 3. Turns on erase LED/K. <At the time of stop> 1. Turns off erase LED/Y, M, C remote. 2. Turns off erase LED/K low light intensity remote. 3. Turns off erase LED/K.	-
	2	EL/K	Erase LED /K		-
20	1	CL3	Tray1 paper feed clutch	Drives the specified clutch.	It is only used on bizhub C368/C308/C258.
	2	CL1	Tray2 paper feed clutch		-
	3	CL7	Bypass paper feed clutch		-
21	1	CL2	Tray2 vertical transport clutch	Drives the specified clutch.	It is only used on bizhub C368/C308/C258.
	2	CL4	Registration clutch		It is only used on bizhub C558/C458/C368/C308/C258.
	3	CL8	Paper exit clutch	Drives the specified clutch.	It is only used on bizhub C658/C558/C458.
	4	CL9	Paper exit deceleration clutch		
23	1	-	Bypass tray lift-up plate elevator motor /down	Drives the transport motor in the specified direction.	The motor stops when the upper limit sensor or lower limit is detected.
	3	SD1	Bypass pick-up solenoid	Turns ON the solenoid.	The solenoid will stop after a lapse of predetermined time.
	4	M12	Tray1 lift-up motor	Starts the lift-up operation.	The motor stops when the upper limit sensor or lower limit is detected.
	5	M13	Tray2 lift-up motor		The motor stops when the upper limit sensor or lower limit is detected.
	6	M113	Tray3 lift-up motor		• On bizhub C368/C308/C258, only when PC-110 or PC-210 is mounted. • On bizhub C658/C558/C458, only when PC-115 or PC-215 is mounted. • The motor stops when the upper limit sensor or lower limit is detected.
	7	M123	Tray4 lift-up motor		• On bizhub C368/C308/C258, only when PC-210 is mounted. • On bizhub C658/C558/C458, only when PC-215 is mounted. • The motor stops when the upper limit sensor or lower limit is detected.

	8	M1	LU lift-up motor		• On bizhub C368/C308/C258, only when LU-302 is mounted. • On bizhub C658/C558/C458, only when LU-302 or LU-207 is mounted. • The motor stops when the upper limit sensor or lower limit is detected.
	9	M134	LCT elevator motor moving up		• On bizhub C368/C308/C258, only when PC-410 is mounted. • On bizhub C658/C558/C458, only when PC-415 is mounted. • The motor stops when the upper limit sensor or lower limit is detected.
	10		LCT elevator motor moving down		
	11	M133	Shifter motor move to home position	Starts the shifter operation.	• On bizhub C368/C308/C258, only when PC-410 is mounted. • On bizhub C658/C558/C458, only when PC-415 is mounted.
	12		Shifter motor shift operation		
24	1	-	1st transfer roller (Y,M,C) pressure	Starts the pressure/release operation of the 1st transfer roller. **NOTE** **Be sure to perform the release operation whenever the pressure/release operation has been performed. *1**	-
	2	-	1st transfer roller release		
26	1	M24	Registration motor high speed	Drives the motor at the specified speed.	It is only used on bizhub C658.
	2		Registration motor middle speed		
	3		Registration motor low speed		
	4		Registration motor minimum speed		
28	1	M131	LCT paper feed motor high speed	Drives the motor at the specified speed.	• On bizhub C368/C308/C258, only when PC-410 is mounted. • On bizhub C658/C558/C458, only when PC-415 is mounted. • The paper lifting plate must not be at upper limit position.
	2		LCT paper feed motor middle speed		
	3		LCT paper feed motor low speed		
	4		LCT paper feed motor minimum speed		• On bizhub C658/C558/C458, only when PC-415 is mounted. • The paper lifting plate must not be at upper limit position.
	5	M132	LCT vertical transport motor high speed		• On bizhub C368/C308/C258, only when PC-410 is mounted. • On bizhub C658/C558/C458, only when PC-415 is mounted.
	6		LCT vertical transport motor middle speed		
	7		LCT vertical transport motor low speed		

8		LCT vertical transport motor minimum speed	• On bizhub C658/C558/C458, only when PC-415 is mounted. • The paper lifting plate must not be at upper limit position.
9	M111	Tray3 paper feed motor high speed	• On bizhub C368/C308/C258, only when PC-110 or PC-210 is mounted. • On bizhub C658/C558/C458, only when PC-115 or PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
10		Tray3 paper feed motor middle speed	
11		Tray3 paper feed motor low speed	
12		Tray3 paper feed motor minimum speed	• On bizhub C658/C558/C458, only when PC-115 or PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
13	M121	Tray4 paper feed motor high speed	• On bizhub C368/C308/C258, only when PC-210 is mounted. • On bizhub C658/C558/C458, only when PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
14		Tray4 paper feed motor middle speed	
15		Tray4 paper feed motor low speed	
16		Tray4 paper feed motor minimum speed	• On bizhub C658/C558/C458, only when PC-115 or PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
17	M112	Tray3 vertical transport motor high speed	• On bizhub C368/C308/C258, only when PC-210 is mounted. • On bizhub C658/C558/C458, only when PC-215 is mounted.
18		Tray3 vertical transport motor middle speed	
19		Tray3 vertical transport motor low speed	
20		Tray3 vertical transport motor minimum speed	• On bizhub C658/C558/C458, only when PC-115 or PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
21	M122	Tray4 vertical transport motor high speed	• On bizhub C368/C308/C258, only when PC-210 is mounted.
22		Tray3 vertical transport motor middle speed	

	23		Tray4 vertical transport motor low speed		• On bizhub C658/C558/C458, only when PC-215 is mounted.
	24		Tray4 vertical transport motor minimum speed		• On bizhub C658/C558/C458, only when PC-215 is mounted. • The paper lifting plate must not be at upper limit position.
	25	M22	Paper feed motor high speed	Drives the motor at the specified speed.	It is only used on bizhub C658/C558/C458.
	26		Paper feed motor middle speed		
	27		Paper feed motor low speed		
	28		Paper feed motor minimum speed		
	29	M23	Tray2 vertical transport motor high speed	Drives the motor at the specified speed.	It is only used on bizhub C658/C558/C458.
	30		Tray2 vertical transport motor middle speed		
	31		Tray2 vertical transport motor low speed		
	32		Tray2 vertical transport motor minimum speed		
	101	-	Tray1 paper feed roller drive high speed	The transport motor and Tray1 paper feed clutch are driven.	The paper lifting plate of the tray 1 must not be at upper limit position.
	102		Tray1 paper feed roller drive middle speed		
	103		Tray1 paper feed roller drive low speed		
	104		Tray1 paper feed roller drive minimum speed		
	105	-	Tray2 paper feed roller drive high speed	The transport motor and Tray2 paper feed clutch are driven.	The paper lifting plate of the tray 2 must not be at upper limit position.
	106		Tray2 paper feed roller drive middle speed		
	107		Tray2 paper feed roller drive low speed		
	108		Tray2 paper feed roller drive minimum speed		
	109	-	Tray3 paper feed roller drive high speed	-	The paper lifting plate of the tray 3 must not be at upper limit position.
	110		Tray3 paper feed roller drive middle speed		
	111		Tray3 paper feed roller drive low speed		
	113	-	Tray4 paper feed roller drive high speed	-	The paper lifting plate of the tray 4 must not be at upper limit position.
	114		Tray4 paper feed roller drive middle speed		
	115		Tray4 paper feed roller drive low speed		
	117	-	Manual bypass paper feed roller drive high speed	The transport motor and manual bypass paper feed clutch are driven.	-
	118		Manual bypass paper feed roller drive middle speed		-
	119		Manual bypass paper feed roller drive low speed		-
	120		Manual bypass paper feed roller drive minimum speed		It is only used on bizhub C658/C558/C458.
32	1	M14	Polygon motor high speed	Drives the motor at the specified speed. Drives the power supply cooling fan at the same timing.	-
	2		Polygon motor middle speed		-
	3		Polygon motor low speed		-
	4		Polygon motor minimum speed		-

40	1	M1	Transport motor high speed	Drives the motor at the specified speed. **NOTE** **Perform the operation check after the drum unit/K and the transfer belt unit have been removed. *2**	-
	2		Transport motor middle speed		
	3		Transport motor low speed		
	4		Transport motor minimum speed		It is only used on bizhub C658/C558/C458.
41	1	M2	PC motor high speed	Drives the motor at the specified speed. **NOTE** **Perform the operation check after the drum units/Y,M,C have been removed. *3**	-
	2		PC motor middle speed		
	3		PC motor low speed		
	4		PC motor minimum speed		It is only used on bizhub C658/C558/C458.
42	1	FM1	Power supply cooling fan	Drives the specified fan.	-
	2	FM2	Transfer belt cleaner cooling fan		-
	3	FM4	Toner cartridge cooling fan		-
	4	FM8	Paper cooling fan		It is only used on bizhub C368/C308/C258.
		FM14	Exhaust fan/1		• It is only used on bizhub C368/C308/C258. • Only when CU-101 is mounted.
		FM15	Exhaust fan/2		
		FM16	Suction fan		
	4	FM7	IH coil cooling fan full speed		It is only used on bizhub C658/C558.
	5		IH coil cooling fan half speed		
	6	FM12	Fusing power supply cooling fan full speed		It is only used on bizhub C658/C558.
	7		Fusing power supply cooling fan half speed		
	8	FM11	Toner suction fan		-
	9	FM8	Paper cooling fan full speed		It is only used on bizhub C658/C558.
		FM14	Exhaust fan1 full speed		• It is only used on bizhub C658/C558. • Only when CU-102 is mounted.
		FM15	Exhaust fan2 full speed		
	10	FM8	Paper cooling fan half speed		It is only used on bizhub C658/C558.
		FM14	Exhaust fan1 half speed		• It is only used on bizhub C658/C558. • Only when CU-102 is mounted.
		FM15	Exhaust fan2 half speed		
	11	FM12	Fusing power supply cooling fan		It is only used on bizhub C458.
	12	FM17	UFP exhaust fan1		It is only used on bizhub C658/C558/C458.
		FM18	UFP exhaust fan2		It is only used on bizhub C658/C558.
45	1	M3	Fusing motor high speed	Drives the motor at the specified speed.	-
	2		Fusing motor middle speed		-
	3		Fusing motor low speed		-
	4		Fusing motor minimum speed		-
	5		Fusing motor standby speed		-
	6	M11	Fusing pressure motor drive (pressure)	Starts the pressure/release operation of the pressure roller. **NOTE** **Be sure to perform the release operation whenever the pressure/release operation has been performed. *4**	-
	7		Fusing pressure motor drive (release)		

	8	SD5	Soaking roller pressure solenoid	Turn ON the solenoid and release the soaking roller for a predetermined time	• The solenoid will stop after a lapse of predetermined time. • It is only used on bizhub C658/ C558/C458.
50	1	M21	Developing motor high speed	Drives the motor at the specified speed. **NOTE** **Perform the operation check after the drum units/Y,M,C and the developing units/Y,M,C have been removed. *5**	-
	2		Developing motor middle speed		
	3		Developing motor low speed		
	4		Developing motor minimum speed		It is only used on bizhub C658/C558/ C458.
60 (bizhub C368/ C308/ C258)	1	M2	Original feed motor : Speed 1/ normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	DF-629/DF-704
	2		Original feed motor: Speed 2/ normal rotation		DF-629/DF-704
	3		Original feed motor: Speed 3/ normal rotation		DF-629/DF-704
	5		Original feed motor: Speed 1/ reverse rotation		DF-629/DF-704
	17	M3	Registration motor: Speed 1/ normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	DF-629/DF-704
	18		Registration motor: Speed 2/ normal rotation		DF-629/DF-704
	19		Registration motor: Speed 3/ normal rotation		DF-629/DF-704
	20		Registration motor: Speed 4/ normal rotation		DF-629/DF-704
	33	M1	Original reading motor: Speed 1/ normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	DF-629
	34		Original reading motor: Speed 2/ normal rotation		DF-629/DF-704
	35		Original reading motor: Speed 3/ normal rotation		DF-629/DF-704
	36		Original reading motor: Speed 4/ normal rotation		DF-629
	37		Original reading motor: Speed 5/ normal rotation		DF-629/DF-704
	38		Original reading motor: Speed 1/ reverse rotation		DF-629
	39		Original reading motor: Speed 2/ reverse rotation		DF-629
	65	M4(DF-629)/ M6(DF-704)	Normal rotation	Drives the glass cleaning motor/original reading glass cleaning motor.	DF-629/DF-704
	66		Reverse rotation		DF-629/DF-704
	67		High-speed sweeping		DF-629/DF-704
	81	M5(DF-629)/ M4(DF-704)	Pressure	Pressure/release the reading roll.	DF-629/DF-704
	82		Release		DF-629/DF-704
	113	FM1	Full speed	• Drives the DF cooling fan motor/DF cooling fan motor. • Stop rotating when pressing the Stop key.	DF-629/DF-704
	129	SD2(DF-629)/ SD1(DF-704)	Stamp solenoid	Turns ON the solenoid.	DF-629/DF-704
	130	SD1	Exit solenoid	Turns ON the solenoid.	DF-629
	769	M5	Facing plate home detection operation	Drives the CIS cleaning motor.	DF-704
	770		Facing plate brush return operation		DF-704
	771		Facing plate high-speed rotation operation		DF-704
	785	-	Rear panel lamp turns ON	Turns OFF after 60 seconds or by pressing the Stop key.	DF-704

60 (bizhub C658/ C558/ C458)	1	M1	Take-up motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	Dual scan document feeder
	2		Take-up motor: Speed 2/normal rotation		
	3		Take-up motor: Speed 3/normal rotation		
	17	M2	Registration motor: Speed 1/ normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	18		Registration motor: Speed 2/ normal rotation		
	19		Registration motor: Speed 3/ normal rotation		
	20		Registration motor: Speed 4/ normal rotation		
	33	M3	Reading motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	34		Reading motor: Speed 2/normal rotation		
	35		Reading motor: Speed 3/normal rotation		
	49	M4	Exit motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	50		Exit motor: Speed 2/normal rotation		
	51		Exit motor: Speed 3/normal rotation		
	52		Exit motor: Speed 4/normal rotation		
	65	M8	Normal rotation	Drives the front side cleaning motor.	
	66		Reverse rotation		
	67		High-speed sweeping		
	81	M6	Pressure	Pressure/release the reading roll.	
	82		Release		
	97	M5	Document feed tray up	Drives the lift-up motor in the specified direction.	
	98		Document feed tray down		
	113	FM	Cooling fan motor	Drives the fan.	
	129	SD1	Stamp solenoid	Turns ON the solenoid.	
	145	CL1	Take-up clutch	Turns ON the clutch.	
	161	MFDB/1	Multi feed detection board/1	Outputs the multi feed detection signal. (Only when connecting the multi feed detection board)	
		MFDB/2	Multi feed detection board/2		
81	0	CL6	ADU transport clutch	Drives the specified clutch.	It is only used on bizhub C368/C308/ C258.
83	0	SD3	Gate switch solenoid	Turns ON the solenoid.	The solenoid will stop after a lapse of predetermined time.
84	1	M4	Reverse motor high speed (Normal rotation)	Drives the motor at the specified speed and direction.	-
	2		Reverse motor middle speed (Normal rotation)		-
	3		Reverse motor low speed (Normal rotation)		-
	4		Reverse motor minimum speed (Normal rotation)		It is only used on bizhub C658/C558/ C458.
	5		Reverse motor high speed (Reverse rotation)		-
	6		Reverse motor middle speed (Reverse rotation)		-
	7		Reverse motor low speed (Reverse rotation)		-
	8		Reverse motor minimum speed (Reverse rotation)		It is only used on bizhub C658/C558/ C458.

85	1	M5	ADU transport motor high speed	Drives the motor at the specified speed.	-
	2		ADU transport motor middle speed		-
	3		ADU transport motor low speed		-
	4		ADU transport motor minimum speed		It is only used on bizhub C658/C558/ C458.
	5	M26	ADU transport motor2 high speed	Drives the motor at the specified speed.	It is only used on bizhub C658/C558/ C458.
	6		ADU transport motor2 middle speed		
	7		ADU transport motor2 low speed		
	8		ADU transport motor2 minimum speed		

NOTE

- ***1: If the PC motor is energized with the 1st transfer roller in its pressed position, the transfer belt and the photoconductor drum may be damaged.**
- ***2: The cleaning blades of the drum unit/K and the transfer belt unit, if driven with no toner deposited, may be curved to warp.**
- ***3: The cleaning blades of the drum unit/Y,M,C, if driven with no toner deposited, may be curved to warp.**
- ***4: The pressure roller, if left to stand in the pressed position, may be deformed. The drive gear may be damaged if the fusing unit is removed with the pressure roller in the pressed position.**
- ***5: If the machine is driven with the specified units left mounted on it, the developing roller and developer contact the photoconductor drum to damage it.**
  If the machine is driven with the developing units/Y,M,C left mounted on it, the developing roller, which is yet to be charged, is driven, so that toner may scatter around.

5.19.11 Adjustment Data List

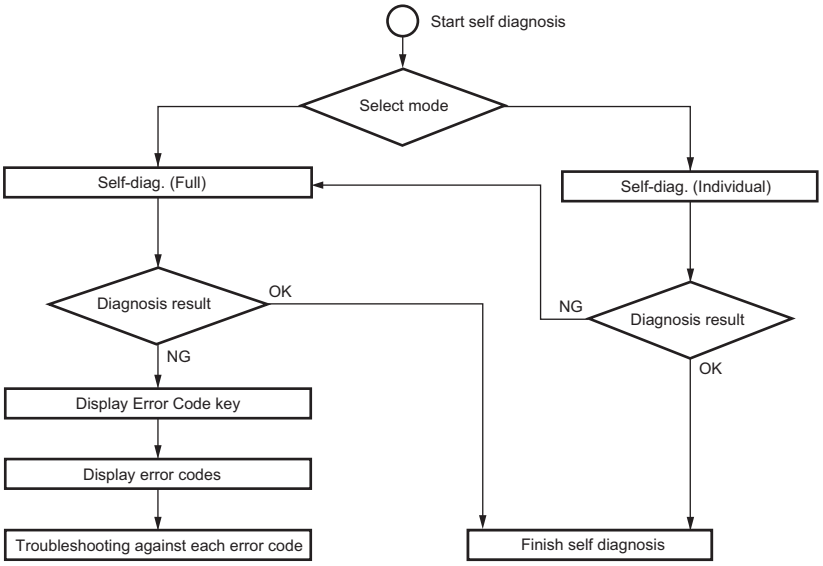
(1) Use

- To display the adjustment and setting value set in the main body.

5.19.12 Self-diag. (Full)

(1) Overview of self-diagnostic function

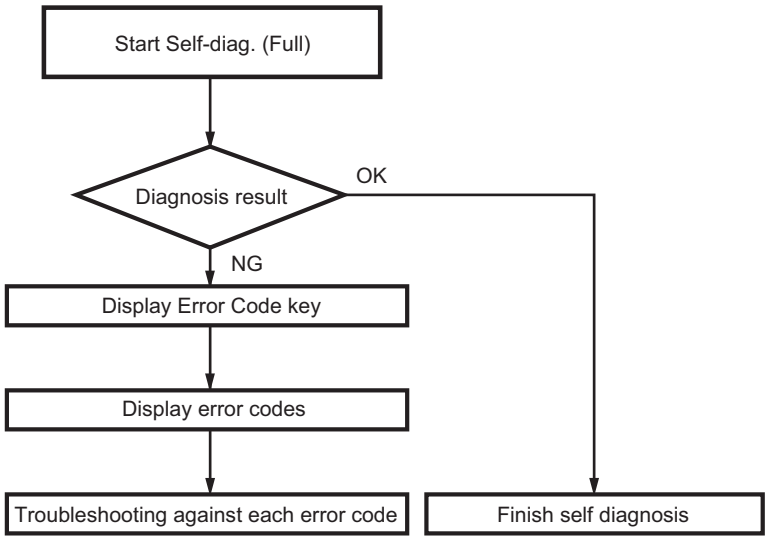
- Conducts diagnosis for the defective and replaced areas of memory and various boards in main body when a trouble code is output or a trouble such as main body activation failure occurs, and identifies the defective parts need to be replaced.
- The self-diagnostic function is divided into two functions, the "Self-diag. (Full)" function and the "Self-diag. (Individual)" function.
- "Self-diag. (Full)" diagnoses all items together, those are diagnosed individually with "Self-diag. (Individual)", and identifies the area where trouble occurred and the parts need to be replaced. The diagnosis result is displayed as [OK] or [NG], and if [NG] is detected, the [Error Code] key will be displayed on the [Full Self Diagnostic] screen. Touch the [Error Code] key to display the [Error Code] screen.
- "Self-diag. (Individual)" diagnoses each item individually, and identifies the area where trouble occurred. The diagnosis result is displayed as [OK] or [NG].



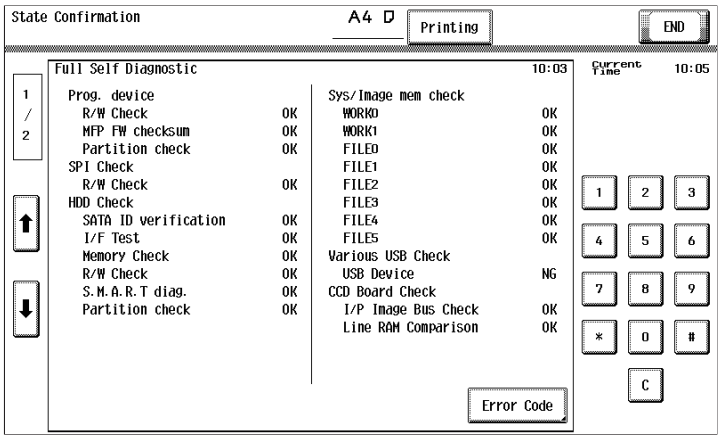
(2) Use

- To diagnose all items together, those are diagnosed individually with "Self-diag. (Individual)", and identify the area where trouble occurred and the parts need to be replaced.
- When a trouble code is displayed, by performing "Self-diag. (Full)", troubles on the hardware device can be diagnosed.
- The diagnosis result is displayed as [OK] or [NG], and if [NG] is detected, the [Error Code] key will be displayed on the [Full Self Diagnostic] screen. Touch the [Error Code] key, to display the [Error Code List] screen.

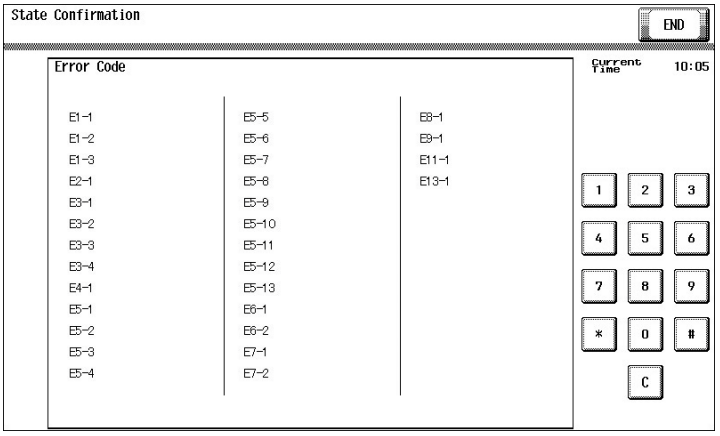
Self-diag. (Full) Flow



Example of Self-diag. (Full) screen



Example of Error Code screen



NOTE
A sample of screen showing all error codes. Only displays the detected error codes. (This sample shows a case that all errors are detected.)

Self-diagnostic item

No.	Check item	
1	Prog. device	R/W Check
		MFP FW checksum
		Partition check
2	SPI Check	R/W Check
3	HDD Check	SATA ID verification
		I/F Test
		Memory Check
		R/W Check
		S.M.A.R.T diag.
		Partition check
4	Sys/Image mem check	WORK0
		FILE0
		FILE1
		WORK1
		FILE2
		FILE3
		FILE4
		FILE5
5	Various USB Check	USB Device
		Keyboard*
		USB Memory*
6	CCD Board Check	I/P Image Bus Check
		Line RAM Comparison
7	DF Board Check	MINET communication check
8	FAX Board Check	Line1

No.	Check item	
9	MFP Board Check	Compress/exp check
		O/P Image Bus Check
		Memory path check
		Ping test*
10	PCIe Check	PCIe device check

- ***: The item can be diagnosed with Self-diag. (Individual) only.**

NOTE

- **It takes approx. 200 seconds for check if all items are OK.**
- **If trouble codes (C6###, C91##, CE301, CE304) are displayed, the Self-diag. (Full) may not complete. In that case, finish the Self-diag. (Full), and perform the troubleshooting against each trouble code.**
- **Configuration of DIMM, non-volatile memory, boards and HDD vary by models.**
- **When operation is disabled (screen frozen) during displaying the diagnosis result confirmation screen, turn OFF the main power switch to finish the diagnosis. Wait for 10 sec. or more, and turn ON the main power switch.**

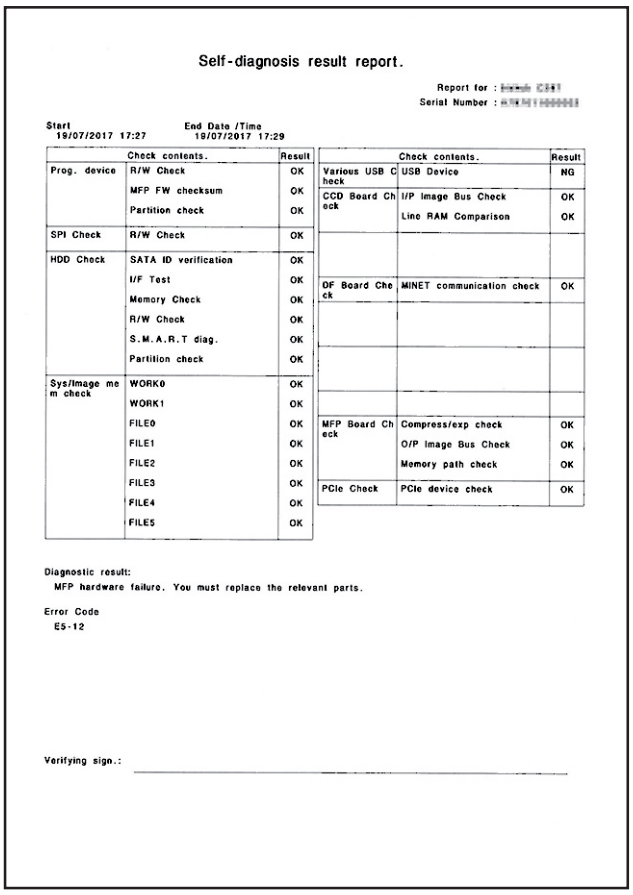
(3) Procedure (from SERVICE MODE menu)

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Full)].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the result of the diagnosis is displayed for every item. (OK/NG)
5. After completing the Self-diag. (Full), load A4/A4S paper in the manual bypass tray, the [Printing] key will appear in the top area of the screen. If the self-diagnosis result report is required, touch the [Printing] key to print out the “Self-diagnosis result report.”. If it is not required, go to the next step.
6. If [OK] is displayed for all diagnosis items, press the [OK] key.

NOTE

- **If a trouble code is detected during executing the Self-diag. (Full), the trouble screen will be displayed, and the Self-diag. (Full) will be interrupted. When the trouble screen is displayed, turn OFF the main power switch to finish the Self-diag. (Full). Then, turn ON the main power switch while pressing the power key to restart the Self-diag. (Full).**
- **The “Self-diagnosis result report.” can be printed out after completing the Self-diag. (Full). (Printable even if NG is displayed)**
- **If there is no paper loaded on the manual bypass tray, the [Printing] key will not appear. Also, if any paper with a size other than A4/A4S is loaded, the [Printing] key will not appear.**

Example of the self-diagnosis result report



Self-diagnosis result report.

Report for : [redacted]
Serial Number : [redacted]

Start 19/07/2017 17:27 End Date /Time 19/07/2017 17:29

Check contents.		Result
Prog. device	R/W Check	OK
	MFP FW checksum	OK
	Partition check	OK
SPI Check	R/W Check	OK
HDD Check	SATA ID verification	OK
	I/F Test	OK
	Memory Check	OK
	R/W Check	OK
	S.M.A.R.T diag.	OK
	Partition check	OK
Sys/Image mem check	WORK0	OK
	WORK1	OK
	FILE0	OK
	FILE1	OK
	FILE2	OK
	FILE3	OK
	FILE4	OK
	FILE5	OK

Check contents.		Result
Various USB Check	USB Device	NG
CCD Board Check	I/P Image Bus Check	OK
	Line RAM Comparison	OK
OF Board Check	MINET communication check	OK
MFP Board Check	Compress/exp check	OK
	O/P Image Bus Check	OK
	Memory path check	OK
PCIe Check	PCIe device check	OK

Diagnostic result:
MFP hardware failure. You must replace the relevant parts.

Error Code
E5-12

Verifying sign.:

(4) Procedure (from main power switch ON)

1. Turn the main power switch on while pressing the power key.
   - After a short beep sound is made once, release your hands from the power key.
   - Wait to display the Self-diag. (Full) screen.
2. Display the self diagnosis screen. The following procedures (from SERVICE MODE menu) are same.
3. If [OK] is displayed for all diagnosis items, turn OFF the main power switch.

NOTE

- **If the self diagnosis (full) is started with the main power switch, you cannot call the Normal Mode or the Service Mode to the screen. To switch the mode, turn OFF the main power switch, and turn ON again after 10 seconds.**

(5) Procedure (when NG is detected)

1. If [NG] is detected, the [Error Code] key will be displayed on the diagnosis screen.
2. Touch the [Error Code] key to display the Error Code screen.
3. Check the displayed "Error Code", and turn OFF the main power switch.
4. Refer to the Service Manual [Error Code List], and perform the troubleshooting against each error code.

(6) Auto Execution of Self-diag. (Full)

- Set the [Switch NO.163] to [00000010] at [Bit assignment] and [02] at [HEX assignment] in [Service Mode] -> [System 2] -> [Software Switch Setting], so that the "Self-diag. (Full)" can be executed automatically when a "trouble code" occurred.

NOTE

- **If this function is set on a client MFP, make sure to reset the settings after completing an operation check and troubleshooting.**

Sequence of Auto Execution of Self-diag. (Full)

1. Errors are detected. (Trouble codes are displayed, and the MFP stops.)
2. The MFP reboots automatically. (The MFP reboots automatically up to three times.)
3. The Self-diag. (Full) is executed automatically.
4. After completing the Self-diag. (Full), the MFP stops with the self diagnosis screen being displayed.
   Perform the following procedures manually.
5. If [OK] is displayed for all diagnosis items, turn OFF the main power switch to finish the Self-diag. (Full).
6. If [NG] is displayed, touch the [Error Code] key to display the Error Code screen.
7. Check the displayed "Error Code", and turn OFF the main power switch.
8. Refer to the Service Manual [Error Code List], and perform the troubleshooting against each error code.

NOTE

- **The Self-diag. (Full) will be executed automatically only when the rank B/C trouble codes are detected. When the rank A trouble codes are detected, the MFP will stop with troubles being detected, and stand by.**

5.19.13 Self-diag. (Individual)

(1) Prog. device

(a) Use

- To check each item of the program storage device individually.

Diagnosis item	Reason of error	Relevant parts
R/W Check	Engagement failure	MFP board (MFPB) eMMC board (eMMC)
	Mounting failure	
MFP FW checksum	eMMC error (data failure)	
Partition check		

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [Prog. device].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [R/W Check] / [MFP FW checksum] / [Partition check]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(2) SPI Check

(a) Use

- To check each item of the SPI individually.

Diagnosis item	Reason of error	Relevant parts
R/W Check	Mounting failure	MFP board (MFPB)

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [SPI Check] -> [R/W Check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the check result will be displayed. (OK/NG)
5. If [OK] is displayed, press the [OK] key.
6. If [NG] is displayed, execute the Self-diag. (Full).

(3) HDD Check

(a) Use

- To check each item of the HDD individually.

Diagnosis item	Reason of error	Relevant parts
SATA ID verification	SATA board (engagement/mounting failure)	HDD cable HDD SATA board MFP board (MFPB)
	SPI for SATA (data failure)	
I/F Test	HDD error	HDD cable HDD SATA board MFP board (MFPB)
Memory Check		
R/W Check		
S.M.A.R.T diag.		
Partition check		

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [HDD Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [SATA ID verification] / [I/F Test] / [Memory Check] / [R/W Check] / [S.M.A.R.T diag.] / [Partition check]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(4) Sys/Image mem check

(a) Use

- To check each item of the system memory and image memory individually.

Diagnosis item	Reason of error	Relevant parts
WORK0	Engagement failure Mounting failure DRAM failure	DIMM board MFP board (MFPB)
WORK1		
FILE0		
FILE1		

Diagnosis item	Reason of error	Relevant parts
FILE2		
FILE3		
FILE4		
FILE5		

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [Sys/Image mem check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the check result will be displayed. (OK/NG)
   NOTE
   - **If a trouble occurs on the memory, the self diagnosis may not complete. In that case, finish the Self-diag. (Full) forcibly, and perform the troubleshooting against each trouble code.**
   - **Turning OFF the main power switch will finish the Self-diag. (Full) forcibly.**
5. If [OK] is displayed, press the [OK] key.
6. If [NG] is displayed, execute the Self-diag. (Full).
   NOTE
   - **[NG] will also be displayed if the DIMM is not mounted. If an additional DIMM is not used, no error occurs even if [NG] is displayed, and no troubleshooting is required.**

(5) Various USB Check

(a) Use

- To check each item of the USB device individually.

Diagnosis item	Reason of error	Relevant parts
USB Device	USB interface (connection failure/parts defect) HUB chip (connection failure/parts defect)	MFP board (MFPB)
	SATA board (engagement/mounting failure)	SATA board (SATAB)
	USB board (connection failure/parts defect)	USB board (USBB)
	FAX board (connection failure/parts defect)	FAX board (FAXB)
	Wireless LAN board (connection failure/parts defect)	Wireless LAN board (PWB-WLAN)
	Authentication unit (connection failure/device defect)	Authentication unit
Keyboard*	Connection failure Parts defect	USB keyboard
USB Memory*	Connection failure Parts defect*	USB memory

- ***: The item can be diagnosed with Self-diag. (Individual) only.**

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [Various USB Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [USB Device] / [Keyboard] / [USB Memory]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
   NOTE
   - **When checking [USB Device], [NG] will be displayed if the FAX board is mounted and the mounting settings are not enabled.**
   - **When checking [Keyboard] or [USB Memory], [NG] will be displayed if no device is connected.**
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, perform the following procedures.

- If [NG] is displayed for [USB Device], execute the Self-diag. (Full).
- If [NG] is displayed for [Keyboard], perform the troubleshooting when NG is detected on keyboard.
- If [NG] is displayed for [USB Memory], perform the troubleshooting when NG is detected on USB memory.

(6) CCD Board Check

(a) Use

- To check each item of the CCD board individually.

Diagnosis item	Reason of error	Relevant parts
I/P Image Bus Check	Image bus failure CCD sensor failure	Connection cable CCD relay board CCD board MFP board (MFPB)
Line RAM Comparison		

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [CCD Board Check].

3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [I/P Image Bus Check] / [Line RAM Comparison]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
   NOTE
   - **If a trouble occurs on the CCD board, the self diagnosis may not complete. In that case, finish the self diagnosis forcibly, and perform the troubleshooting against the trouble code C-6756.**
   - **Turning OFF the main power switch will finish the self diagnosis forcibly.**
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(7) CIS Board Check

(a) Use

- To check each item of the CIS board individually.

Diagnosis item	Reason of error	Relevant parts
I/P Image Bus Check	Image bus failure	CIS cable CIS module (CIS) DS image processing board (DSIPB)
Line RAM Comparison	CIS sensor failure	

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [CIS Board Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [I/P Image Bus Check] / [Line RAM Comparison]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed.
   NOTE
   - **If a trouble occurs on the CIS board, the self diagnosis may not complete. In that case, finish the self diagnosis forcibly, and perform the troubleshooting against the trouble code C-6753.**
   - **Turning OFF the main power switch will finish the self diagnosis forcibly.**
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(8) DF Board Check

(a) Use

- To check each item of the ADF board individually.

Diagnosis item	Reason of error	Relevant parts
MINET communication check	ADF microcomputer communication failure	DF control board cable DF control board MFP Board

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [DF Board Check] -> [MINET communication check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the check result will be displayed.
5. If [OK] is displayed, press the [OK] key.
6. If [NG] is displayed, execute the Self-diag. (Full).

(9) DSIP Board Check

(a) Use

- To check each item of the DS image processing board individually.

Diagnosis item	Reason of error	Relevant parts
Compress/exp check	ASIC image error	DS image processing board
Memory path check	Image memory error	

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [DSIP Board Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [Compress/exp check] / [Memory path check]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(10) DSC Board Check

NOTE

- **It will be displayed when the DSC board is mounted and enabled.**
- **[Service Mode] -> [System 2] -> [Option Board Status] -> [DSC1] or [DSC2]**

(a) Use

- To check each item of the DSC board individually.

Diagnosis item	Reason of error	Relevant parts
Image Bus Check (Front Side)	Engagement failure Mounting failure	DSC board1 (DSCB/1) MFP board (MFPB)
Image Bus Check (Back Side)		DSC board2 (DSCB/2) MFP board (MFPB)

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [DSC Board Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
   [Image Bus Check (Front Side)] / [Image Bus Check (Back Side)]
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
   NOTE
   - **If a trouble occurs on the DS image processing board, the self-diagnosis may not complete. In that case, turn OFF the main power switch, disconnect power cord from the outlet, and remove the DS image processing board from the MFP board.**
   - **Execute the [DSC Board Check] again.**
   - **If the self-diagnosis complete, replace the DS image processing board.**
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

(11) Fiery IF Board Check

(a) Use

- To check each item of the Fiery IF board individually.

Diagnosis item	Reason of error	Relevant parts
Compress/exp check	Image bus failure	DS image processing board Fiery IF board

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [Fiery I/F Board Check] -> [Compress/exp check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the check result will be displayed. (OK/NG)
5. If [OK] is displayed, press the [OK] key.
6. If [NG] is displayed, execute the Self-diag. (Full).

(12) FAX Board Check

(a) Use

- To check each item of the FAX board individually.

Diagnosis item	Reason of error	Relevant parts
Line1	Connection failure Parts defect	Connection cable FAX board/1 (FAXB/1) FAX expansion board
Line2		Connection cable FAX board/2 (FAXB/2) FAX expansion board
Line3		Connection cable FAX board/3 (FAXB/3) FAX expansion board
Line4		Connection cable FAX board/4 (FAXB/4) FAX expansion board

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [FAX Board].
3. Select the diagnosed line.
4. Select [Signal Send Test], [Signal Receive Test], or [NCU Test].
   For the details of each item, refer to [Service Mode] -> [Test Mode] -> [Fax Test].
5. Select a test item.
6. Select the parameter you would like to test.
7. Press the Start key to start the check procedure.
8. If [OK] is displayed, press the [OK] key.
9. If [NG] is displayed, execute the Self-diag. (Full).

(13) MFP Board Check

(a) Use

- To check each item of the MFP board individually.

Diagnosis item	Reason of error	Relevant parts
Compress/exp check	ASIC image error	MFP board (MFPB)
O/P Image Bus Check		
Memory path check	Image memory error	
Ping Test*	LAN interface error	LAN cable MFP board (MFPB)

- ***: The item can be diagnosed with Self-diag. (Individual) only.**

(b) Procedure

[Compress/exp check] / [O/P Image Bus Check] / [Memory path check]

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [MFP Board Check].
3. Select the desired diagnosis key. (Two or more keys can be selected.)
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the check result will be displayed. (OK/NG)
6. If [OK] is displayed, press the [OK] key.
7. If [NG] is displayed, execute the Self-diag. (Full).

[Ping Test]

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [MFP Board Check] -> [Ping Test].
3. Select the input method according to the IP address of the destination.
   [Input IPv4 Address] / [Input IPv6 Address]
4. Input IP address of destination with the numeric keypad or the alphabet key.
5. Press the Start key to start the check procedure.
6. When the self diagnosis procedure is completed, the result will be displayed. (OK/NG)
7. If [OK] is displayed, press the [OK] key.
8. If [NG] is displayed, execute K.5.2.1 Troubleshooting when NG is displayed for Ping Test .

(14) PCIe Check

(a) Use

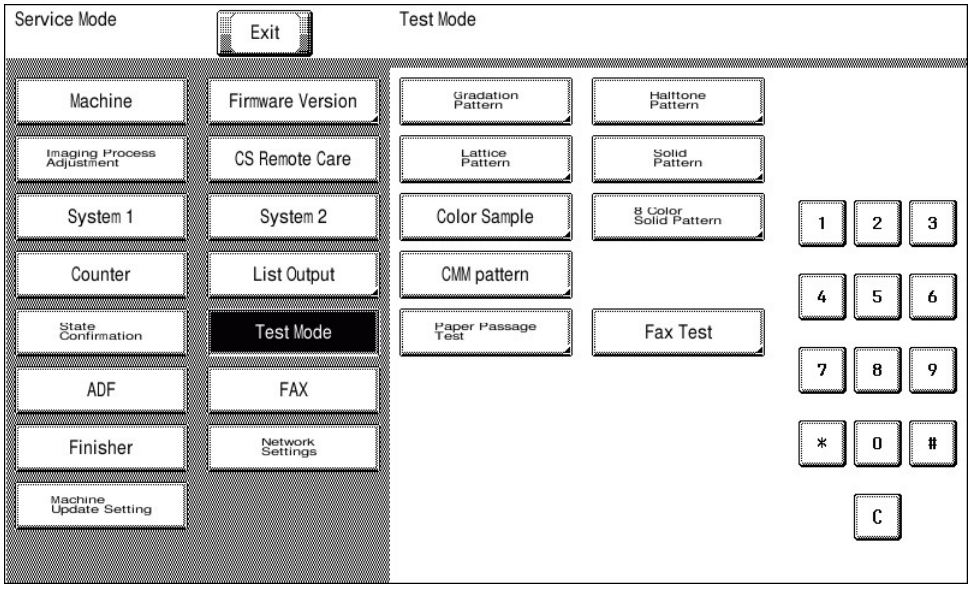
- To check each item of the PCIe device individually.

Diagnosis item	Reason of error	Relevant parts
PCIe device check	PCIe device error	MFP board (MFPB)

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diag. (Individual)] -> [PCIe Check] -> [PCIe device check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the check result will be displayed. (OK/NG)
5. If [OK] is displayed, press the [OK] key.
6. If [NG] is displayed, execute the Self-diag. (Full).

5.20 Test Mode



- To check the image on the printer side by letting the machine produce various types of test pattern. It also tests the printing operation in paper passage test, as well as the fax transmission.

- The machine searches through the paper sources in the order of tray 2, tray 3, tray 4, and tray 1 for paper of the maximum size for printing.

5.20.1 Procedure for test pattern output

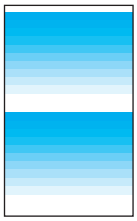
1. Touch [Test Mode] to display the test mode menu.
2. Touch the desired test pattern key.
3. Set up the desired functions and press the Start key.

5.20.2 Gradation Pattern

(1) Use

- To produce a gradation pattern.
- Used for checking gradation reproducibility.

(a) Test pattern



e.g.

- SINGLE
- HYPER
- Gradation
- Cyan

(2) Procedure

- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “600dpi” or 1200dpi.
- Select “12 Gradations”, 24 Gradations or 256 Gradations.
- Select the color mode. “Cyan”, Magenta, Yellow, Black (4PC), CMYK, 8Color, 4Color, Black (1PC)

NOTE

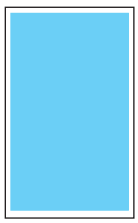
- **When 24 Gradations or 256 Gradations is selected, [8 Color] or [4 Color] is not selectable in color mode.**

5.20.3 Halftone Pattern

(1) Use

- To produce a solid halftone pattern.
- Used for checking uneven density and pitch noise.

(a) Test pattern



e.g.

- SINGLE
- HYPER
- Gradation
- Cyan
- Density: 128

(2) Procedure

- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
- Select the color mode. Cyan”, Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC), MIX

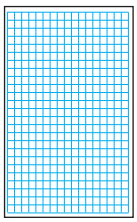
- Select a printable area from [Full Bleed] or [Front Half].
  NOTE
  - **[Front Half] is selectable only for one-side printing.**
- Type the density level. (0 to “255”)

5.20.4 Lattice Pattern

(1) Use

- To produce a lattice pattern.
- Used for checking fine line reproducibility and uneven density.
- A reverse pattern is also used to check for fine line reproducibility of white letters on a solid background.

(a) Test pattern



e.g.
- SINGLE
- FEET
- Cyan
- CD Width: 5
- FD Width: 5
- Density: 255
- Normal

(2) Procedure

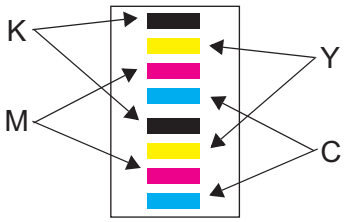
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select “FEET” or HYPER.
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
- Select the color mode. Cyan”, Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC)
- Enter CD width and FD width. (0 to 191 dots)
- Type the density level. (0 to “255”)
- Select “Normal” or Reverse.
- Select “600 dpi” or 1200 dpi.

5.20.5 Solid Pattern

(1) Use

- To produce each of the C, M, Y, and K solid patterns.
- Used for checking reproducibility of image density.

(a) Test pattern



e.g.
- SINGLE
- HYPER
- Gradation
- Density: 255

(2) Procedure

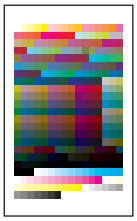
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Type the density level. (0 to “255”)

5.20.6 Color Sample

(1) Use

- To produce a color sample.
- Used for checking reproducibility of each of the different colors.

(a) Test pattern



e.g.

- SINGLE
- HYPER
- Gradation

(2) Procedure

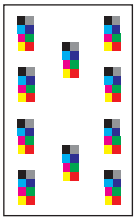
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- “HYPER” is automatically selected.
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Produce 12-gradation-level patches of C, M, Y, K, R, G, and B, and a patch of each of the 12 reference colors in the hue circle with lightness and saturation corrected.

5.20.7 8 Color Solid Pattern

(1) Use

- To produce an 8-color solid pattern.
- Used for checking color reproducibility and uneven density of each color.

(a) Test pattern



e.g.

- SINGLE
- HYPER
- Gradation
- Density: 255

(2) Procedure

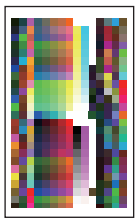
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Type the density level. (0 to “255”)

5.20.8 CMM pattern

(1) Use

- To produce a CMM (Color Management Module) pattern.
- Used to check color difference depending on the places where output is made.

(a) Test pattern



e.g.

- Error diffusion

- 270 Degree

(2) Procedure

- Copies is always “1”.
- Select "Error diffusion", Gradation or Resolution.
- Select an angle from among “0 degrees”, 90 degrees, 180 degrees, and 270 degrees.

5.20.9 Paper Passage Test

(1) Use

- To test the printing operation in paper passage test.
- Use to check the printing operation in paper passage test from each paper source.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Test Mode] -> [Paper Passage Test].
3. Select either [Yes] or [No] for the pattern print option.
4. Touch [Select Tray] and select the paper feed tray to be tested.
5. Touch [Paper Type] and select a paper type.
6. Press the Start key to start the paper passage test.
7. Pressing the Stop key will stop operation.

5.20.10 Fax Test-Signal Send Test

- It will be displayed only when optional FAX kit FK-514 is mounted.
- Specifiable for each line when there are multiple fax lines

(1) Use

- Image information signals, control signals and DTMF can be individually output.
- Signal sounds are monitored by the monitor speaker.

(2) Procedure

1. Call the Service Mode to the screen.
2. Select -> [Test Mode] -> [FAX Test] -> [Fax Line Test].
3. Select a line, and touch the [Signal Send Test].
4. Select a test item.
5. Select the parameter you would like to test.
6. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTICE

- Signal is output from pressing [Start] to pressing [Stop].
- To check Line 1, [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 2, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.

(a) V34 Main CH: Default setting

- 33600

(b) V34 Main CH: Setting range

- 2400 to 33600 (step: 2400)

(c) V8: Default setting

- CM

(d) V17: Default setting

- 14400bps

(e) V17: Setting item

- 14400bps
- 12000bps
- 9600bps
- 7200bps

(f) V29: Default setting

- 9600bps

(g) V29: Setting item

- 9600bps
- 7200bps

(h) V27ter: Default setting

- 4800bps

(i) V27ter: Setting item
- 4800bps
- 2400bps

(j) V21
- No parameters

(k) PB: Default setting
- 0

(l) PB: Setting item
- 0 to 9, *, #, A, B, C, D

(m) DP: Default setting
- 0

(n) DP: Setting range
- 0 to 9

(o) Special Tone: Default setting
- 1100Hz

(p) Special Tone: Setting item
- 1100Hz
- 1300Hz
- 1650Hz
- 2100Hz

(q) Optional Tone: Default setting
- 200Hz

(r) Optional Tone: Setting range
- 200 to 4000Hz (step: 100Hz)

(s) PB Tone (High): Default setting
- 1209Hz

(t) PB Tone (High): Setting item
- 1209Hz
- 1336Hz
- 1477Hz
- 1633Hz

(u) PB Tone (Low): Default setting
- 697Hz

(v) PB Tone (Low): Setting item
- 697Hz
- 770Hz
- 852Hz
- 941Hz

(w) Pseudo Ring
- No parameters

5.20.11 Fax Test-Signal Receive Test
- It will be displayed only when optional FAX kit FK-514 is mounted.
- Specifiable for each line when there are multiple fax lines

(1) Use
- Check a signaling tone by connecting the machine to the line to output a test signal of the fax board.
- Signal sounds are monitored by the monitor speaker.

(2) Procedure
1. Call the Service Mode to the screen.
2. Select -> [Test Mode] -> [FAX Test] -> [Fax Line Test].
3. Select a line, and touch the [Signal Receive Test].
4. Select a test item.
5. Select the parameter you would like to test.
6. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTICE
- Signal is output from pressing [Start] to pressing [Stop].
- To check Line 1, [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 2, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 3, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 3] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 4, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 4] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- The status of testing or results of tests are shown in the title line as follows

RCV	Waiting signals
OK/NG	Results of signal reception

- The V.34 signal does not appear at the signal receive test.

(a) V17: Default setting
- 14400bps

(b) V17: Setting item
- 14400bps
- 12000bps
- 9600bps
- 7200bps

(c) V29: Default setting
- 9600bps

(d) V29: Setting item
- 9600bps
- 7200bps

(e) V27ter: Default setting
- 4800 bps

(f) V27ter: Setting item
- 4800bps
- 2400bps

(g) V21
- No parameters

(h) PB: Default setting
- 0

(i) PB: Default setting
- 0 to 9, *, #, A, B, C, D

(j) Special Tone: Default setting
- 1100Hz

(k) Special Tone: Setting item
- 1100Hz
- 1300Hz
- 2100Hz

5.20.12 Fax Test-NCU TEST
- It will be displayed only when optional FAX kit FK-514 is mounted.
- Specifiable for each line when there are multiple fax lines

(1) Use
- To check the operation of NCU.

(2) Procedure
1. Call the Service Mode to the screen.
2. Select -> [Test Mode] -> [FAX Test] -> [Fax Line Test].
3. Select a line, and touch the [NCU Test].
4. Select a test item.
5. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTE
- **When CML / CTL / TEL relay test is selected and the Start key is pressed, ON is displayed in the parameter and relay is turned to ON. When [Stop] is pressed, relay is turned OFF.**

- **When the DC-LOOP detection test is selected and Start key is pressed, DT=0001 is shown in the title row in case of detecting the DC-LOOP. If not detected, DT=0000 is displayed.**

Contents of test	Device to be tested
CML Relay	IC201, IC202
CTL Relay	RL201
TEL Relay	RL501 *
DC-LOOP Detect	
Speaker	
Outside Ring Send	
Audio Response Send	

- *** RL501 mounts only the Japanese.**

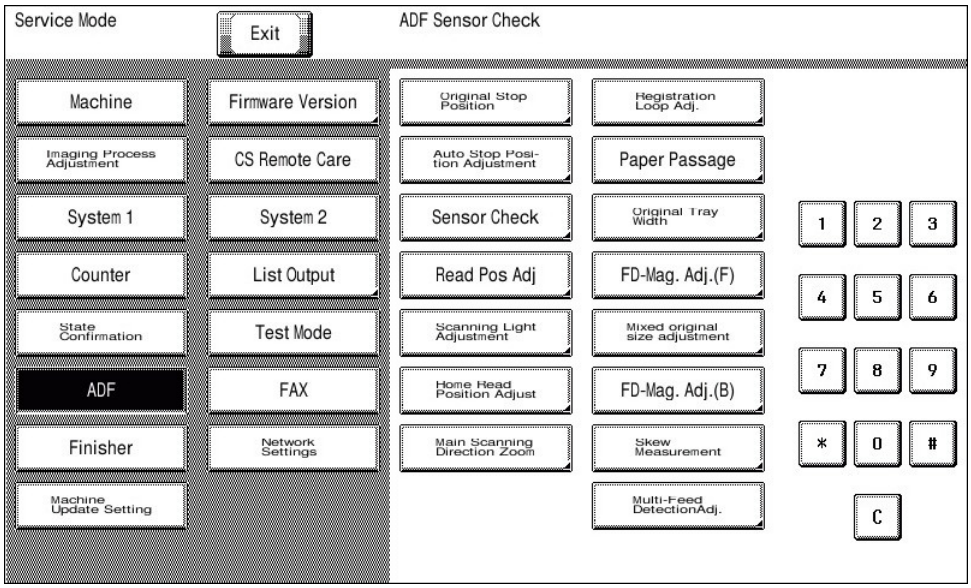
5.20.13 Fax Test-Dial Test

- Not used

5.20.14 Fax Test - Off-hook Test

- Not used

5.21 ADF



5.21.1 Original Stop Position

(1) Use

- To manually adjust the original stop position and the read position in each of the DF modes.
- When the result is Unable in the automatic adjustment of the original stop position.

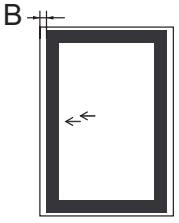
(2) Procedure

(a) Sub Scanning Direction 1-Side

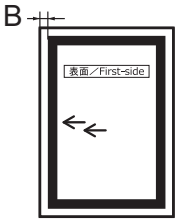
NOTE

- **Before performing this adjustment, the feed zoom adjustment needs to be complete.**
  I.5.21.8 Feed Zoom

- DF reading chart (for 1-sided)



- DF reading chart (for Duplex)



- The difference in the widths of B between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.0 mm to +4.0 mm (1 step: 0.1 mm)

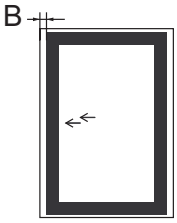
1. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. Check that the difference in the widths of B between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Sub Scanning Direction 1-Side].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of B is greater than the target, enter the [+] value.
   - If the difference in the widths of B is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Place the chart in the document feed tray.
11. Press the start key, and check the difference in the width B between the chart and the discharged copy sample.
12. Touch [END] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Sub Scanning Direction 2-Side

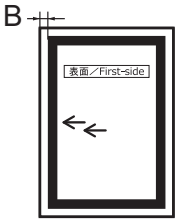
NOTE

- **Before performing this adjustment, the “feed zoom” adjustment and the “FD-Mag. Adj. (B)” adjustment need to be complete.**
  I.5.21.8 Feed Zoom
  FD-Mag. Adj. (B)

- DF reading chart (for 1-sided)



- DF reading chart (for Duplex)



- The difference in the widths of B between the chart and the copy sample should fall within the following target.

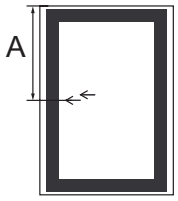
Target	0 ± 2.0 mm
Setting range	-4.0 mm to +4.0 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (Set the chart with its blank side facing upward).
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. Check that the difference in the widths of B between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Sub Scanning Direction 2-Side].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of B is greater than the target, enter the [+] value.
   - If the difference in the widths of B is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.

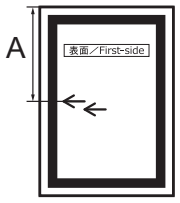
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Place the chart in the document feeding tray.
13. Press the start key, and check the difference in the width B between the chart and the discharged copy sample.
14. Touch [END] twice.
15. Touch [Exit] on the Service Mode screen.
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(c) Main Scanning (Front)

- DF reading chart (for 1-sided)



- DF reading chart (for Duplex)



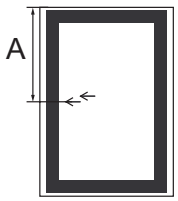
- The difference in the widths of A between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.4 mm to +4.4 mm (1 step: 0.1 mm)

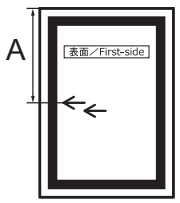
1. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. Check that the difference in the widths of A between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Main Scanning (Front)].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of A is greater than the target, enter the [+] value.
   - If the difference in the widths of A is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Place the chart in the document feeding tray.
11. Press the start key, and check the difference in the width A between the chart and the discharged copy sample.
12. Touch [END] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(d) Main Scanning (Back)

- DF reading chart (for 1-sided)



- DF reading chart (for Duplex)



- The difference in the widths of A between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.4 mm to +4.4 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (Set the chart with its blank side facing upward).
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. Check that the difference in the widths of A between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Main Scanning (Back)].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of A is greater than the target, enter the [+] value.
   - If the difference in the widths of A is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Place the chart in the document feeding tray.
13. Press the start key, and check the difference in the width A between the chart and the discharged copy sample.
14. Touch [END] twice.
15. Touch [Exit] on the Service Mode screen.
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.2 Registration Loop Adj.

(1) Use

- To adjust the length of the loop to be formed in paper before the registration rollers.
- When an original misfeed or skew occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Registration Loop Adj].
3. Select either [1-Side] or [Second Side] for the adjustment.
4. Touch clear and change the setting value using the 10-key pad. (Press the [+/-] key to change the +/- code.)
   The amount of loop increases by the amount of positive (+) value and decreases by the amount of negative (-) value.
5. Touch [END].
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Default setting

- 0

(4) Setting range

- -5 mm to +5 mm (in 1 mm increments)

5.21.3 Auto Stop Position Adjustment

(1) Use

- To automatically adjust the read position for the Sub Scanning Direction.
- To check skew feed.
- When DF has been replaced.
- When CIS module has been replaced.

NOTE

- **Before performing this adjustment, the "FD-Mag. Adj. (F)" adjustment and "FD-Mag. Adj. (B)" adjustment needs to be complete.**
  I.5.21.8 Feed Zoom
  I.5.21.12 FD-Mag. Adj. (B)

(2) Procedure

(a) Sub Scanning Direction 1-Side

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Sub Scanning Direction 1-Side].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  I.5.21.1 Original Stop Position

(b) Sub Scanning Direction 2-Side

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Sub Scanning Direction 2-Side].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  I.5.21.1 Original Stop Position

(c) Main Scanning (Front)

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Main Scanning (Front)].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  I.5.21.1 Original Stop Position

(d) Main Scanning (Back)

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Main Scanning (Back)].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  I.5.21.1 Original Stop Position

5.21.4 Paper Passage

(1) Use

- To check for paper passage through the DF in each of the DF modes.
- Used for checking the document path for any abnormal condition when a document misfeed occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Paper Passage].
3. Select a paper passage mode to be tested from [1-Sided No Detect], [1-Sided Mixed Org.] or [2-Sided].
4. Set the original in the feed tray.
5. The Start key changes from orange to blue.
6. Press the Start key. The operation starts.

NOTE

- **After starting the operation by pressing the Start key, if the Start key is pressed during the operation, the operation will be suspended.**
  Then, if the Start key is pressed again during the suspension, the operation will be resumed.
- **If the Stop key is pressed during the test operation, the test will be forced to end.**
- **If there is no Original set in the feed tray, the Start key will not work.**
- **All Originals set in the feed tray are passed through. Upon the completion of all Originals passed through, the paper through test ends.**

5.21.5 Sensor Check

(1) Use

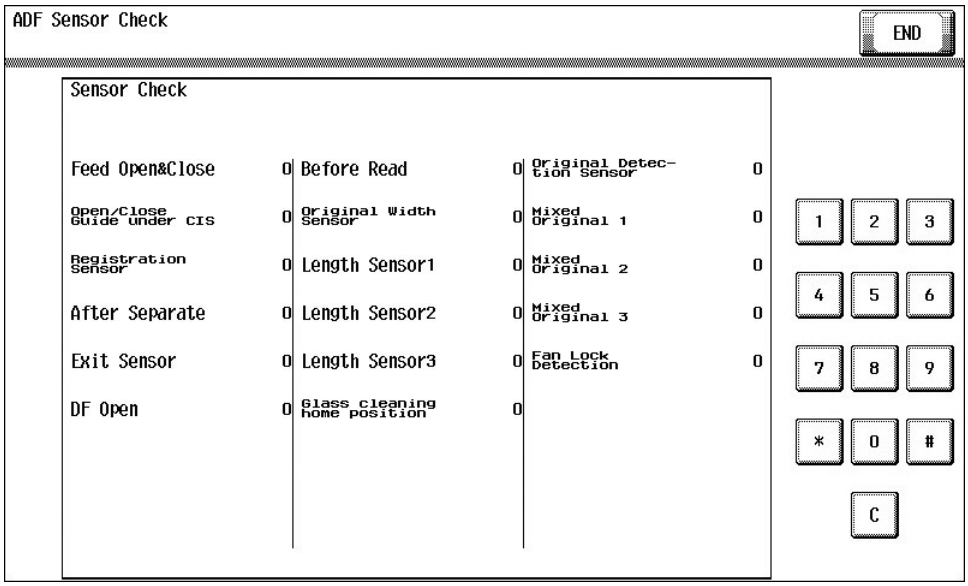
- To check sensors on the paper path.
- When a document misfeed occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Sensor Check].
3. Operate the sensor to check by using paper or the like, and check the screen display. (Paper detected: 1, No paper detected: 0)

(3) Sensor check screen (bizhub C368/C308/C258)

- This is only typical screen which may be different from what are shown on each individual main body.



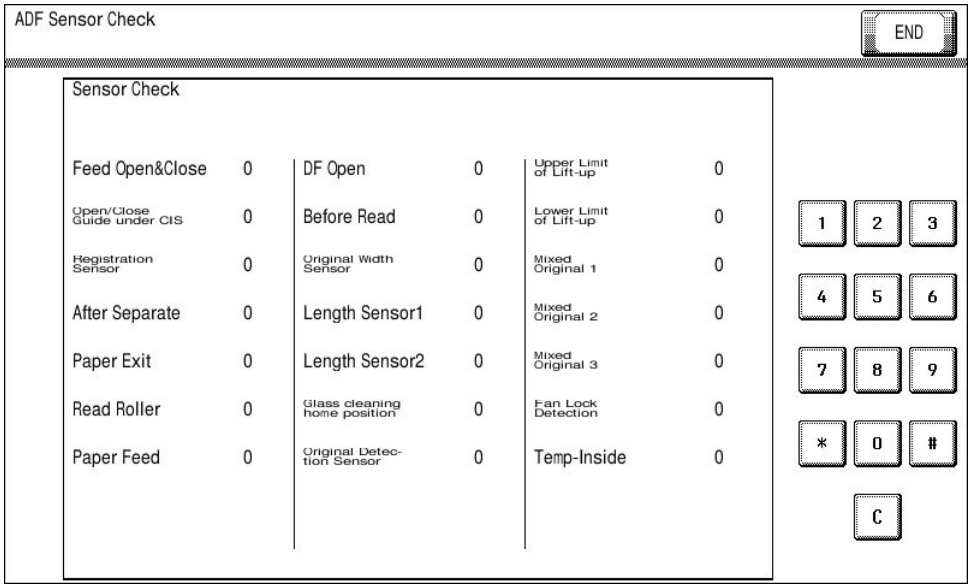
(4) Sensor check list

Symbol (DF-704/ DF-629)	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS14/PS13	Feed Open&Close	Upper door sensor	Open	Close
PS15/-	Open/Close Guide under CIS	CIS cover sensor *1	Open	Close
PS3/PS3	Registration Sensor	Registration sensor	Paper present	Paper not present
PS2 /PS2	After Separate	After separate sensor	Paper present	Paper not present
PS5/PS5	Exit Sensor	Document exit sensor	Paper present	Paper not present
RS201	DF Open	Original cover sensor	Open	Close
PS6/PS4	Before Read	Document reading sensor	Paper present	Paper not present
VR1 /VR1	Original Width Sensor	Document width sensor	Analog value	
PS8/PS6	Length Sensor1	Document length sensor/1	Paper present	Paper not present
PS9/PS7	Length Sensor2	Document length sensor/2	Blocked	Unblocked
-	Length Sensor3	-	-	-
PS13/PS12	Glass cleaning home position	Document reading glass cleaning sensor	At home	Not at home
PS1 /PS1	Original Detection Sensor	Document empty sensor	Paper present	Paper not present
PS10/PS8	Mixed Original 1	Mixed Original sensor/1	Paper present	Paper not present
PS11/PS9	Mixed Original 2	Mixed Original sensor/2	Paper present	Paper not present
PS12/PS10	Mixed Original 3	Mixed Original sensor/3	Paper present	Paper not present
FM1/FM1	Fan Lock Detection	DF cooling fan motor	Locked	Not locked

*1: DF-704 only

(5) Sensor check screen (bizhub C658/C558/C458)

- This is only typical screen which may be different from what are shown on each individual main body.



(6) Sensor check list

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS16	Feed Open&Close	Read open/close sensor	Open	Close
PS20	Open/Close Guide under CIS	CIS under guide open/close sensor	Open	Close
PS5	Registration Sensor	Registration sensor	Paper present	Paper not present
PS4	After Separate	After separate sensor	Paper present	Paper not present
PS7	Paper Exit	Exit sensor	Paper present	Paper not present
PS8	Read Roller	Read roller home sensor	Retracted	Not Retracted
PS21	Paper Feed	Document feed sensor	Paper present	Paper not present
RS201	DF Open	Original cover sensor	Open	Close
PS6	Before Read	Before read sensor	Paper present	Paper not present
VR1	Original Width Sensor	Restriction plate positional volume	Analog value	
PS10	Length Sensor1	Length sensor/1	Paper present	Paper not present
PS11	Length Sensor2	Length sensor/2	Blocked	Unblocked
PS18	Glass cleaning home position	Front side cleaning home sensor	At home	Not at home
PS1	Original Detection Sensor	Empty sensor	Paper present	Paper not present
PS2	Upper Limit of Lift-up	Lift up upper sensor	Upper limit	Not at upper limit
PS3	Lower Limit of Lift-up	Lift up lower sensor	Lower limit	Not at lower limit
PS13	Mixed Original 1	Consolidation sensor/1	Paper present	Paper not present
PS14	Mixed Original 2	Consolidation sensor/2	Paper present	Paper not present
PS15	Mixed Original 3	Consolidation sensor/3	Paper present	Paper not present
-	Fan Lock Detection	-	-	-
-	Temp-Inside	-	-	-

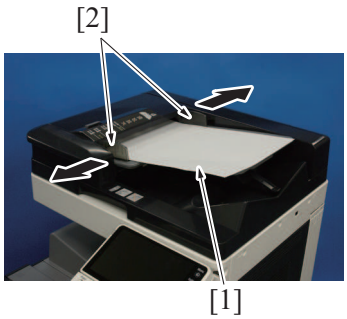
5.21.6 Original Tray Width

(1) Use

- To set the values of maximum (A3 position) and minimum (B6 position) widths on the restriction plate positional volume.
- When an original misfeed occurs.
- When an original size detection error occurs.
- When the DF control board has been replaced.
- When the document width sensor has been replaced. (bizhub C368/C308/C258)
- When the restriction plate positional volume has been replaced. (bizhub C658/C558/C458)

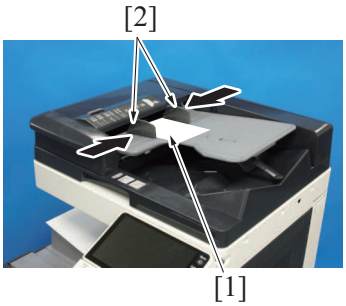
(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Original Tray Width].



3. Set the A3 paper [1] on the original feed tray, and widen the width across the edge guides [2] by sliding them to the “A3” position.

4. Touch [Max. Width].
5. Press the Start key.
6. OK is displayed when the adjustment has been completed.



7. Set the B6 paper [1] on the original feed tray, and narrow the width across the edge guides [1] by sliding them to the “B6” position.

8. Touch [Min. Width].
9. Press the Start key.
10. OK is displayed when the adjustment has been completed.
11. Touch [END].
12. Touch [Exit] on the Service Mode screen.
13. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is NG:

- **Possible causes includes failure or wrong wiring of the document width sensor and failure of the DFCB. (bizhub C368/C308/C258)**
- **Possible causes includes failure or wrong wiring of the restriction plate positional volume and failure of the DFCB. (bizhub C658/C558/C458)**

5.21.7 Read Pos Adj

(1) Use

- To adjust the original read position.
- When the scanner home sensor have been replaced.

(2) Read Pos Adj

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Read Pos Adj].
3. Touch [Read Pos Adj].
4. Touch [C].
5. Enter the value using the [+] / [-] keys.
   - Set the value to a positive number to move the stop position of the LED exposure unit to the right when viewed from the front.
   - Set the value to a negative number to move the stop position of the LED exposure unit to the left when viewed from the front.
6. Touch [END].
7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Default setting

- Intrinsic values (adjusted at the factory)

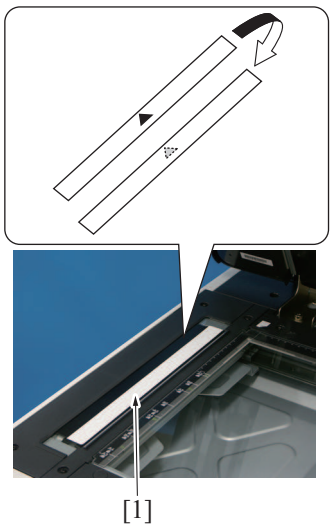
(c) Setting range

- -73 through +73

(3) Auto Adjust

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Read Pos Adj].
3. Touch [Auto Adjust].



4. Open the DF.
5. Place the DF reading chart [1] so that a triangular mark may become the original glass side (downward) and the pointed tip of the triangle points toward the black sheet on the left side.
6. Press the Start key.
   NOTE
   - **Be sure that the DF reading chart is in position.**
   - **Keep the document feeder open while making the adjustment.**
   - **When the edge deviation at DF reading after carrying out this adjustment becomes larger, conduct the " I.5.21.1 Original Stop Position".**
7. Make sure that the result is OK.
8. Touch [END].
9. Touch [Exit] on the Service Mode screen.
10. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE
If the result is [Unable]:
- **Check that the chart is in the correct place.**
- **Make the adjustment on the [Original Stop Position] screen.**
  I.5.21.1 Original Stop Position

5.21.8 Feed Zoom

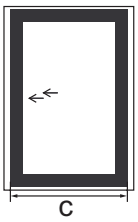
(1) Use

- To adjust the feed zoom in the front side feeding direction on the DF.
- When DF has been replaced.

(2) Procedure

(a) Orig. Feed Zoom Ad

- DF reading chart (for 1-sided)



- DF reading chart (for Duplex)



- The difference in the widths of C between the chart and the copy sample should fall within the following target.

Target	0 ± 1.0 mm
Setting range	-2.00% to +2.00% (1 step: 0.1%)

1. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. C width on the chart and one on the copy sample are measured and adjusted so that the difference of C width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Feed Zoom].
6. Touch [Orig. Feed Zoom Ad].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of C is greater than the target, enter the - value.

- If the difference in the widths of C is smaller than the target, enter the + value.

8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Press the start key, and check the difference in the width C between the chart and the discharged copy sample.
11. Touch [END] twice.
12. Touch [Exit] on the Service Mode screen.
13. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Auto Adjust

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Feed Zoom].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray (with the side having an arrow facing up).
5. Press the Start key.
6. Make sure that result is OK.
7. Touch [SET] and then [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.9 Scanning Light Adjustment

(1) Use

- To adjust the scanning light of DF.
- Used for adjusting the difference in the scanning lights between scanning from the original glass and scanning from the DF original glass.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Scanning Light Adjustment].
3. Select a color by pressing [Red], [Green], or [Blue].
4. Press the value using the [+] / [-] key.
   NOTE
   - **It is recommended that the scanning light adjustment should be made by the same steps for all the three colors of red, green, and blue.**
5. Touch [END].
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -4 to +4 (Step: 1)

5.21.10 Mixed original size adjustment

(1) Use

- To adjust paper length detection accuracy used during paper feed in DF mixed original mode.
- To set the threshold for each size detection based on the length detected when feeding standard sizes (A4S).
- When the DF control board has been replaced.

(2) Procedure

NOTE

- **Before performing this adjustment, the feed zoom adjustment needs to be complete.**
  Feed Zoom

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Mixed original Size adjustment].
3. Place the chart in the document feed tray.
4. Press the Start key.
5. Make sure that result is OK. Then, touch [SET].
6. Touch [END].
7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.11 Home Read Position Adjust

(1) Use

- When image failure occurs due to the dirty back side shading shaft on the DF, use this function to adjust the home position of the shading shaft and to change a shading reference plate.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Home Read Position Adjust].
3. Press the value using the [+] / [-] key.
4. Touch [END].
5. Touch [Exit] on the Service Mode screen.
6. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Default setting

- 0

(4) Setting range

- -4 to +4 (Step: 1)

5.21.12 FD-Mag. Adj. (B)

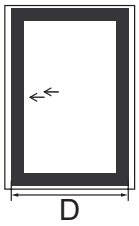
(1) Use

- To adjust the feed zoom in the back side feeding direction on the DF.
- When DF and CIS has been replaced.

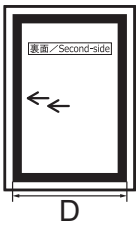
(2) Procedure

(a) Orig. Feed Zoom Ad

DF reading chart (for 1-sided)



DF reading chart (for Duplex)



- The difference in the widths of D between the chart and the copy sample should fall within the following target.

Target	0 ± 1.0 mm
Setting range	-2.00% to +2.00% (1 step: 0.1%)

1. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. D width on the chart and one on the copy sample are measured and adjusted so that the difference of D width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [FD-Mag. Adj. (B)].
6. Touch [Orig. Feed Zoom Ad].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of D is greater than the target, enter the - value.
   - If the difference in the widths of D is smaller than the target, enter the + value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Press the start key, and check the difference in the width D between the chart and the discharged copy sample.
13. Touch [END] twice.
14. Touch [Exit] on the Service Mode screen.
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Auto Adjust

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [FD-Mag. Adj. (B)].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.13 Main Scanning Direction Zoom

(1) Use

- To adjust the feed zoom in the back side main scanning direction on the DF.
- When DF and CIS has been replaced.

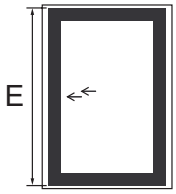
(2) Procedure

(a) Auto Adjust

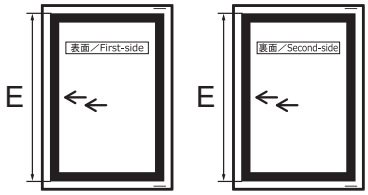
1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Main Scanning Direction Zoom].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Orig. Feed Zoom Ad

DF reading chart (for 1-sided)



DF reading chart (for Duplex)



- The difference in the widths of E between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-1.00% to +1.00% (1 step: 0.1%)

1. Place the chart in the document feed tray.
   - DF reading chart (for 1-sided): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
2. Make a full size copy of the chart.
3. E width on the chart and one on the copy sample are measured and adjusted so that the difference of E width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Main Scanning Direction Zoom].
6. Touch [Main scanning direction zoom adj].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of E is greater than the target, enter the - value.
   - If the difference in the widths of E is smaller than the target, enter the + value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Press the start key, and check the difference in the width E between the chart and the discharged copy sample.
13. Touch [END] twice.
14. Touch [Exit] on the Service Mode screen.
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.14 Skew Measurement

(1) Use

- Measure the DF skew, adjust accordingly.

(2) Procedure

(a) DFSkew (Front)

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Skew Measurement] -> [DFSkew (Front)].
3. Place the chart in the document feeding tray.
   - DF reading chart (for 1-sided): with the side having an arrow facing up.
   - DF reading chart (for Duplex): with the first side facing up.
4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.

6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   - bizhub C658/C558/C458: I.13.1.2 Adjusting front side skew feed on dual scan document feeder
   - DF-629: I.14.1.2 Adjusting front side skew feed on ADF
   - DF-704: I.15.1.2 Adjusting front side skew feed on ADF

(b) DFSkew (Back)

- *1: It will be displayed only when dual scan document feeder is mounted.

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Skew Measurement] -> [DFSkew (Back)].
3. Place the chart in the document feeding tray.
   - DF reading chart (for Duplex): with the blank side facing up.
   - DF reading chart (for Duplex): with the first side facing up.
4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.
6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   - bizhub C658/C558/C458: I.13.1.3 Adjusting back side skew feed on dual scan document feeder
   - DF-704: I.15.1.3 Adjusting back side skew feed on ADF

5.21.15 ADF automatic Adjustment

NOTE

- **It will be displayed when the firmware for MFP is Function version 3.0 or later and the firmware for ADF is ver.G00-30 or later.**
- **Use the DF reading chart (for Duplex).**
- **[2-Side] is displayed only when the dual scan document feeder is installed.**

(1) Skew Measurement

(a) Use

- Measure the DF skew, adjust accordingly.

  NOTE
  - **This function is the same as the setting below.**
    - **[Service Mode] -> [ADF] -> [Skew Measurement]**
  - **Be sure to perform [Sub Scanning] and then [Main Scanning] in this order if this is adjusted after [Skew Measurement].**
  - **The adjustment of [Sub Scanning] and [Main Scanning] uses the result of [Skew Measurement].**

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [ADF automatic Adjustment] -> [Skew Measurement].
3. Place the chart in the document feeding tray.
   - DF reading chart (for Duplex): with the first side facing up.
4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.
6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   - I.13.1.2 Adjusting front side skew feed on dual scan document feeder
   - I.13.1.3 Adjusting back side skew feed on dual scan document feeder

(2) Sub Scanning

(a) Use

- This adjustment is the same as performing [Auto Stop Position Adjustment] of the ADF sub scanning (1-Side and 2-Side) and [Auto Adjust] of [FD-Mag. Adj.] (1-Side and 2-Side) at the same time.

  NOTE
  - **This function is the same as the setting below.**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Sub Scanning Direction 1-Side]**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Sub Scanning Direction 2-Side]**
    - **[Service Mode] -> [ADF] -> [FD-Mag. Adj. (F)] -> [Auto Adjust]**
    - **[Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)] -> [Auto Adjust]**
  - **Be sure to perform [Sub Scanning] and then [Main Scanning] in this order if this is adjusted after [Skew Measurement].**
  - **The adjustment of [Sub Scanning] and [Main Scanning] uses the result of [Skew Measurement].**

(b) Procedure

1. After measuring skew in [ADF] -> [ADF automatic Adjustment] -> [Skew Measurement], touch [Sub Scanning].
2. Place the chart in the document feeding tray.
   - DF reading chart (for Duplex): with the first side facing up.
3. Press the start key.
   - The measurement results are displayed on the panel.
4. Repeat procedures 2 to 3 five times.
5. Touch [Apply].
6. Exit the Service Mode.

7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Main Scanning

(a) Use

- This adjustment is the same as performing [I.5.21.3 (2) (c) Main Scanning (Front) / I.5.21.3 (2) (d) Main Scanning (Back)] of the ADF main scanning (1-Side and 2-Side) and [Auto Adjust] of [Main Scanning Direction Zoom] (1-Side and 2-Side) at the same time.

(b) Procedure

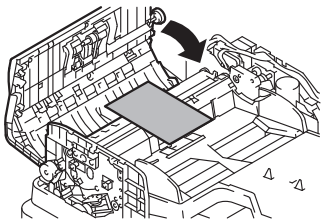
1. After measuring skew in [ADF] -> [ADF automatic Adjustment] -> [Sub Scanning], touch [Main Scanning].
2. Place the chart in the document feeding tray.
   - DF reading chart (for Duplex): with the first side facing up.
3. Press the start key.
   - The measurement results are displayed on the panel.
4. Repeat procedures 2 to 3 five times.
5. Touch [Apply].
6. Exit the Service Mode.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.16 Multi-Feed DetectionAdj

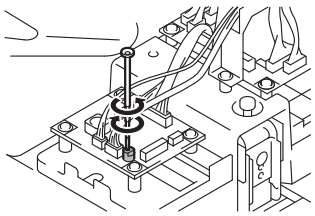
(1) Use

- To display the sensor value used for Multi feed detection sensor adjustment.
- Used after the optional Double feed detection Kit UK-501 is replaced.

(2) Procedure



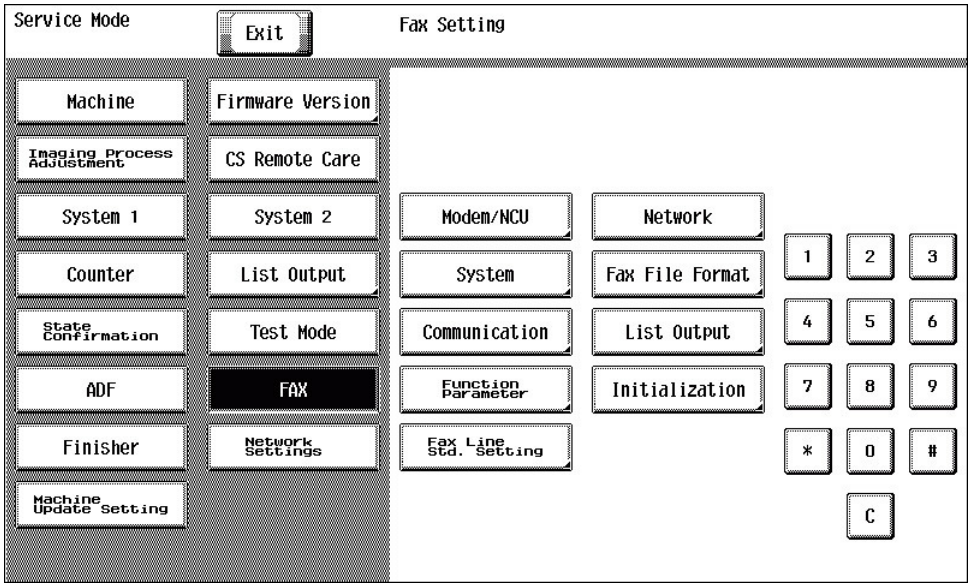
1. Open the top door of the reverse dual scan document feeder.
2. Set the supplied adjustment sheet on the detection area of the multi feed detection sensor, then close the top door.
3. Press the Menu key to close the Paper Jam screen.
4. Touch [ADF] -> [Multi-Feed DetectionAdj.].
5. Press the start key.
   - The measurement results are displayed on the panel.
   - Check whether the Check Value falls between 3700 and 3800.
6. If the check result is out of the range, perform the following adjustment.
7. Remove the rear cover of DF.
   G.7.2.2 Rear cover (dual scan document feeder)



8. Adjust the Check Value by turning the adjustment screw on the sensor control board, so that the value falls within 3,700 to 3,800.
   - Clockwise: The value will decrease.
   - Counterclockwise: The value will increase.

   NOTE
   - **Be sure not to touch any elements other than the adjustment screw on the sensor control board.**

5.22 FAX



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 1) is set to “Set”.

5.22.1 Modem/NCU

(1) V34:1/2 : RX Max. Bit Speed

(a) Use

- To set the max. bit speed for reception in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2400 to 33600 bps (steps: 2400 bps)

(2) V34:1/2 : TX Max. Bit Speed

(a) Use

- To set the max. bit speed for transmission in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(3) V34:1/2 : Control CH Speed

(a) Use

- A bit speed of the control channel.
- The negotiation of 2400/1200 is performed in the V.34 start-up procedure.

(b) Default setting

- 1200 bps

(c) Setting item

- 1200 bps
- 2400 bps

(4) V34:1/2 : Max. SYMB Speed

(a) Use

- Maximum modulation speed (baud rate) of V.34
  - 3429 SYMB: 3429 33.6 k to 4.8 k
  - 3200 SYMB: 3200 31.2 k to 2.4 k
  - 3000 SYMB: 3000 28.8 k to 2.4 k
  - 2800 SYMB: 2800
  - 2400 SYMB: 2400
- The modulation speed of both sending and receiving change by change of setting.
- The upper limit value of V.34 maximum bit speed is determined.
- Normally you do not need to change the value. In case that a V.34 error frequently occurs, you can attempt to set up 3000 SYMB and decrease the symbol rate, for instance.

(b) Default setting
- 3429 SYMB

(c) Setting item
- 2400 SYMB
- 2800 SYMB
- 3000 SYMB
- 3200 SYMB
- 3429 SYMB

(5) V34:2/2: V34 Points

(a) Use
- Select the optimal Eye Pattern in accordance with the line state obtained from V.34 transmission training.

(b) Default setting
- Auto

(c) Setting item
- 16-Point
- 4-Point

(6) V17 Send Max Speed: TX Max. Speed

(a) Use
- To set the max. speed for transmission.

(b) Default setting
- V17-14400bps

(c) Setting item
- V17-14400 bps
- V17-12000bps
- V17-9600bps
- V17-7200bps
- V29-9600bps
- V29-7200bps
- V27-4800bps
- V27-2400bps

(7) V17 Send Max Speed: RX Max. Speed

(a) Use
- To set the max. speed for reception.

(b) Default setting
- V17-14400bps

(c) Setting item
- V17-14400 bps
- V29-9600bps
- V27-4800bps

(8) TxATT: PIX TxATT

(a) Use
- To set the output level of PIX TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure
- The setting value are different depending on the country.

(9) TxATT: TONE/Procedure Signal TxATT

(a) Use
- To set the output level of TONE/Procedure Signal TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure
- The setting value are different depending on the country.

(10) TxATT: CED/ANSam TxATT

(a) Use
- To set the output level of CED/ANSam TxATT.

- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(11) TxATT: DTMF TxATT

(a) Use

- To set the output level of DTMF TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(12) Level: CD/SED ON Level

(a) Use

- To set reception signal sensitivity level.
- SED is not used.

(b) Default setting

- -48 dBm

(c) Setting range

- -48 to -33 dBm (steps: 5 dBm)

(13) Level: DTMF H-L Level Difference

(a) Use

- To set DTMF H-L level difference.

(b) Default setting

- 2.0 dB

(c) Setting range

- 1.0 to 4.0 dB (step: 0.5 dB)

(14) Cable EQL

(a) Use

- To correct the delay characteristics of the communication line.

(b) Default setting

- 0 Km

(c) Setting item

- 0 Km
- 1.8 Km
- 3.6 Km
- 7.2 Km

5.22.2 Network

(1) Network Setting 1: Receive Signal Detection Mode

(a) Use

- To set whether to detect the receive signal by the number of times or by time.
- Sets to “Time” when ringer can not be detected by the number.

(b) Default setting

- No. of Times

(c) Setting item

- No. of Times
- Time

(2) Network Setting 1: BUSY TONE Detection

(a) Use

- To set whether to use the Busy Tone detection or not.

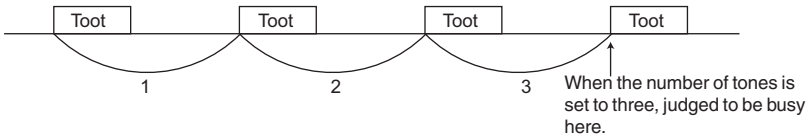
(b) Default setting

- ON (Japan, US)
- OFF (EU)

(c) Setting item
- ON
- OFF

(3) Network Setting 1: No. of Times of Busy Tone Detection

(a) Use
- To set the number of times of Busy Tone detection.



(b) Default setting
- 2 (Japan, US)
- 3 (EU)

(c) Setting range
- 0 to 15 count (step: 1 count)

NOTE
- **0 time shows no detection is done.**

(4) Network Setting 2: 1300 Hz Detection

(a) Use
- To set whether to use the 1300 Hz detection or not.
- Set this function to “ON” if the facsimile network (F-net) is to be used.

(b) Default setting
- OFF

(c) Setting item
- ON
- OFF

(5) Network Setting 2: Dial Tone Detection

(a) Use
- To set whether to use the Dial Tone detection or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(6) Network Setting 2: DC-LOOP Check

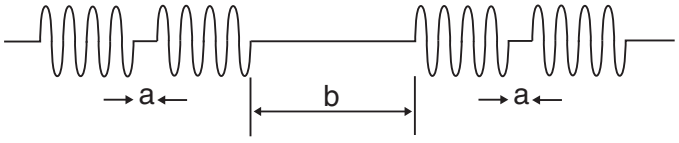
(a) Use
- Checks the DC loop current before dialing.
- When the current is zero, an error occurs. (T.80)
- You can change the setting to be compliant to standards in other countries. In Japan, set this parameter to OFF.

(b) Default setting
- OFF

(c) Setting item
- ON
- OFF

(7) Network Setting 2: min. RING OFF Time

(a) Use
- Minimum time to recognize ringer interval.



a	To avoid judging “a” as a ring-off time.	b	Ring-off time

(b) Default setting
- 200ms (Japan)
- 0ms (US, EU)

(c) Setting range
- 0 to 1000 ms (step: 100 ms)

(8) Network Setting 2: Response Waiting Time

(a) Use
- To set the response waiting time.

Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting
- 55 s

(c) Setting range
- 35 to 115 s (steps: 1 s)

(9) Network Setting 2: Pause Time

(a) Use
- The pause time for one pause key (pause between digits)

(b) Default setting
- 1 s

(c) Setting range
- 1 to 7 s (steps: 1 s)

5.22.3 System

(1) Display Setting: Closed area Rx

(a) Use
- To set whether or not to use the menu display for closed reception by using F-code for junk fax messages.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(2) Display Setting: Re-Transmission

(a) Use
- To set whether to use the re-transmission function or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

NOTE
- **This setting is "OFF" when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**

(3) Display Setting: Compulsory Memory RX

(a) Use
- To set whether to use the compulsory memory reception function or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

NOTE
- **When turned "ON", the function permits selection of ON or OFF setting for the compulsory memory reception function that allows a document when received not to be printed automatically and, instead, to be printed through manual operation.**

(4) Display Setting: Reject Calls

- Not used.

(5) Display Setting: Relay

(a) Use

- To set whether to use the relay function or not.

(b) Default setting

- ON (Japan)
- OFF (US, EU)

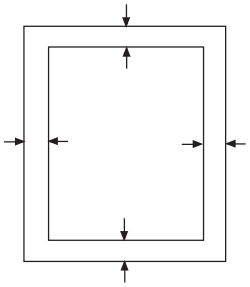
(c) Setting item

- ON
- OFF

(6) Scan Setting: Frame Erasure HP

(a) Use

- To set the frame erasure size during reading.
- The four edges of the original are erased by the same width.



- Erases the outer lines to prevent black lines from appearing. Effective in the book transmission.

(b) Default setting

- 10 mm

(c) Setting item

- 5 mm
- 10 mm
- 15 mm

(7) System Function: Fax Board Watchdog

(a) Use

- To set whether to enable watchdog by the fax board CPU or not.

ON	Reset when hung up.
OFF	Keeps being hung up.

(b) Default setting

- ON

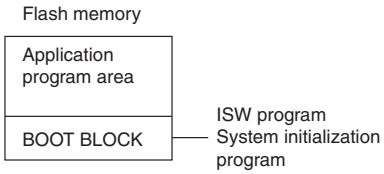
(c) Setting item

- ON
- OFF

(8) System Function: Fax BOOT Rewrite on ISW

(a) Use

- Required when a BOOT BLOCK program is upgraded or a hardware is changed.



(b) Default setting

- OFF

(c) Setting item
- ON
- OFF

(9) System Function: Error Code Display Time

(a) Use
- To set the communication error code display time.

(b) Default setting
- 20 s

(c) Setting item
- 10 to 250 s (step: 10 s)
- HOLD

(10) Communication Setting: Auto Rotation Send (LT)

(a) Use
- To set whether to rotate the Letter size original automatically or not for transmission.

ON	Transmits in the A4 width.
OFF	Transmits in the A3 width.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(11) Communication Setting: Auto Rotation Send (A4T)

(a) Use
- To set whether to rotate the A4 size original automatically or not for transmission.

ON	Transmits in the A4 width.
OFF	Transmits in the A3 width.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(12) Communication Setting: Error Page Resending

(a) Use
- To set whether to retransmit, after a communication error occurs, the document starting with the error page or all pages.

Error Page	Retransmit the document starting with the error page
All Page	Retransmit the document all pages

(b) Default setting
- Error Page

(c) Setting item
- Error Page
- All Page

(13) Communication Setting: Number of Redials (Error Page)

(a) Use
- To set the number of redials for the error page.
- Counted as a busy redial when the error page redial is busy.

(b) Default setting
- The default setting is different depending on the country.

(c) Setting range
- 0 to 7 (step: 1)

5.22.4 Fax File Format

(1) Use

The following data can be initialized.

- All of the scan/fax documents stored in the box are erased.
- All of the boxes produced automatically by the F code are erased.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX].
3. Touch [Fax File Format].
4. Press the Start key.
5. The Fax File Format is executed.

5.22.5 Communication

(1) Protocol: V8 / V34 Protocol

(a) Use

- To set whether to use the V.8/V.34 protocol or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(2) Protocol: V17 EP TONE

(a) Use

- Whether the EP tone (Echo Protect: 2100Hz) is added to the top of the training signal.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(3) Protocol: V29 EP TONE

(a) Use

- Whether the EP tone (Echo Protect: 2100Hz) is added to the top of the training signal.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(4) Protocol: V17 Selection Mode "-"

(a) Use

- V.34 is not used when a dash (-) is added at the top of dial number.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(5) Protocol: ANSam Send Time

(a) Use

- To set the transmission time for the V.8 protocol signal ANSam.
- Usually not need to be changed.

(b) Default setting

- 4.0 s

(c) Setting range

- 1.0 to 5.5 s (step: 0.5 s)

(6) Int'l Comm. Function: Foreign Communication Function

(a) Use

- To set whether or not to use the mode that employs the number of DIS waiting times.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(7) Int'l Comm. Function: No. of DIS Waiting Times at Foreign Communication

(a) Use

- To set the number of DIS waiting times.

(b) Default setting

- 1

(c) Setting item

- 1
- 2

(8) Int'l Comm. Function: V34 Speed

(a) Use

- To set the V.34 international communication mode speed.

(b) Default setting

- 28800 bps

(c) Setting range

- 16800 to 33600 bps (step: 2400 bps)

(9) Int'l Comm. Function: V17 Speed

(a) Use

- To set the V.17 international communication mode speed.

(b) Default setting

- 7200 bps

(c) Setting range

- 7200 to 14400 bps (step: 2400 bps)

(10) Int'l Comm. Function: V29 Speed

(a) Use

- To set the V.29 international communication mode speed.

(b) Default setting

- 4800 bps

(c) Setting range

- 2400 to 9600 bps (step: 2400 bps)

(11) TIMER 1: T1

(a) Use

T1 timer (T.30 standard)	Calling	Designate by the response waiting timer
	Called	Starts after DIS is output. The waiting time until DCS is received.
Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting

- 35 s

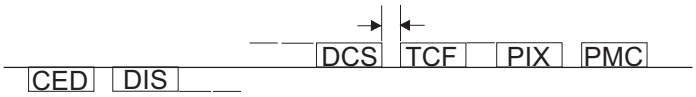
(c) Setting range

- 30 to 90 s (step: 5 s)

(12) TIMER 1: DCS-TCF DELAY

(a) Use

- To set the delay time between DCS and TCF.



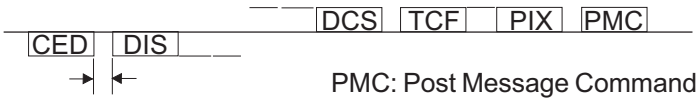
PMC: Post Message Command

(b) Default setting
- 80 ms

(c) Setting range
- 50 to 150 ms (step: 10 ms)

(13) TIMER 1: CED-DIS DELAY

(a) Use
- To set the delay time between CED and DIS.



PMC: Post Message Command

(b) Default setting
- 80 ms

(c) Setting range
- 50 to 150 ms (step: 10 ms)

(14) TIMER 1: PIX-PMC DELAY

(a) Use
- To set the delay time between PIX and PMC.



PMC: Post Message Command

(b) Default setting
- 80 ms

(c) Setting range
- 50 to 150 ms (step: 10 ms)

(15) TIMER 2: EOL-EOL

(a) Use
- To set the transmission time between EOLs.



(b) Default setting
- 13.0 s

(c) Setting range
- 4.0 to 25.5 s (step: 0.5 s)

(16) TIMER 2: CFR-PIXWAIT

(a) Use
- Sets the waiting time from CFR is sent to the image signals are received.
- Radio fax on boats occasionally requires more than 6 sec.

(b) Default setting
- 6.0 s

(c) Setting range
- 6.0 to 25.5 s (step: 0.5 s)

(17) TIMER 2: EOM-PIXWAIT

(a) Use
- Waiting time to receive PIX before sending DIS when EOM is used.
- Some fax machines sends PIX without returning to Phase B in spite of EDM.

(b) Default setting
- 5.5 s

(c) Setting range
- 5.5 to 25.5 s (step: 0.5 s)

(18) TIMER 2: JM WAIT

(a) Use
- Time to continue outputting CM until receiving JM.

(b) Default setting
- 9.0 s

(c) Setting range
- 6.0 to 25.5 s (step: 0.5 s)

(19) Others: ECM Function

(a) Use
- Set whether or not to cancel reception ECM (error correction mode).

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(20) Others: Frame Size at ECM TX

(a) Use
- To set the frame size at ECM transmission.

(b) Default setting
- 256

(c) Setting item
- 64
- 256

(21) Others: Coding Ability

(a) Use
- To set the coding ability.
- Effective to both sending and reception.

(b) Default setting
- MH/MR/MMR/JBIG

(c) Setting item
- MH
- MH/MR
- MH/MR/MMR
- MH/MR/MMR/JBIG

5.22.6 List Output

(1) Report Addition Information

(a) Use
- To set whether or not to add the diagnosis code or dial number to the communication journal.

Diagnosis Code	The diagnosis code is printed on the communication journal.

Dial Number	The dial number is printed on the communication journal.

(b) Default setting
- OFF

(c) Setting item
- Diagnosis Code
- Dial Number
- OFF

(2) TX Result Report

(a) Use
- To set whether or not to add image to the transmission result report.
- Even if set to "With image" images are not attached at the time of the quick memory transmission and the manual transmission.

(b) Default setting
- With image

(c) Setting item
- With image
- Without image

(3) Protocol Trace Auto Output

(a) Use
- To set the timing for the protocol trace auto output.

(b) Default setting
- OFF

(c) Setting item
- Always
- Error
- OFF

5.22.7 Function Parameter

(1) Use
- Function parameters can be set through addressing.

(2) Procedure
1. Call the Service Mode to the screen.
2. Touch [FAX].
3. Touch [Function Parameter].
4. Select the [Address] and then, enter the address using [A] to [F] or keypad.
   - A Cursor is movable if ◀ or ▶ is pushed.
5. Next, select [Data] and enter a value using binary numbers with keypad.
6. When the address and the value are correct, touch [Apply].
7. After the settings have been completed, touch [END].

(3) Address parameter list

NOTE
- **When changing a value in this address parameter list, be sure to comply with the phone line standards of other countries.**
- **Depending on values that have been changed, compliance with the phone line standards of other countries may not be obtained.**
  - **FAX setting (Address parameter list: for line 1)**

5.22.8 Initialization

(1) Use
- The following data can be initialized.

Fax Function Parameter	The function set condition is initialized into the Factory Default condition.
Communication Journal Data	All of the Communication Journal is erased.

NOTICE
- For the formats of the Abbreviated Registration Data, the Program Registration Data, The Group Registration Data, and the F-code Box Data, see " I.5.22.4 Fax File Format".

(2) Procedure
1. Turn the main power switch ON.
2. Wait until the warm-up cycle is completed.
   NOTE
   - **Wait until an alarm message, such as "Preparing fax/scan", disappears.**

- **Execution of "Initialization" before the warm-up cycle is completed may not be successful.**

3. Call the Service Mode to the screen.
4. Touch [FAX].
5. Touch [Initialization].
6. Select data you want to initialize.
   - Supplement: Two or more selections are possible for data.
7. Touch [Yes].
8. When a verification message is displayed, touch [Yes].
9. The data selected is initialized.

5.22.9 FAX Line Std. Setting

(1) Use

- Used to confirm fax settings.

NOTE

- **If the following settings are changed, the settings from [Service Mode] -> [Fax Settings] -> [Network] and [System] are also changed.**
  FAX Line Std. Setting 1: Receive Signal Detection Mode, BUSY TONE Detection, No. of Times of Busy Tone Detection
  FAX Line Std. Setting 2: Dial Tone Detection, Pause Time, Response Waiting Time
  FAX Line Std. Setting 3: Error Page Resending, Number of Redial
- **If the following settings are changed, the settings from [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] is also changed.**
  FAX Line Std. Setting 1:Number of RX Call Rings, Receive Time Interval Setting
  FAX Line Std. Setting 4: Number of Redials, Redial Interval, Line Monitor Sound Volume (Send), Line Monitor Sound Volume (Receive)

(2) FAX Line Std. Setting-V17 RX Error

(a) Use

- This configures whether or not to lower the reception speed when reattempting to receive data after a receive error occurs.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX] -> [FAX Line Std. Setting] -> [FAX Line Std. Setting 3].
3. Select either [ON] or [OFF] for [V17 RX Error].

NOTE

- **When this is set to [ON], the device will use V17 to receive data the next time after a receive error occurs.**

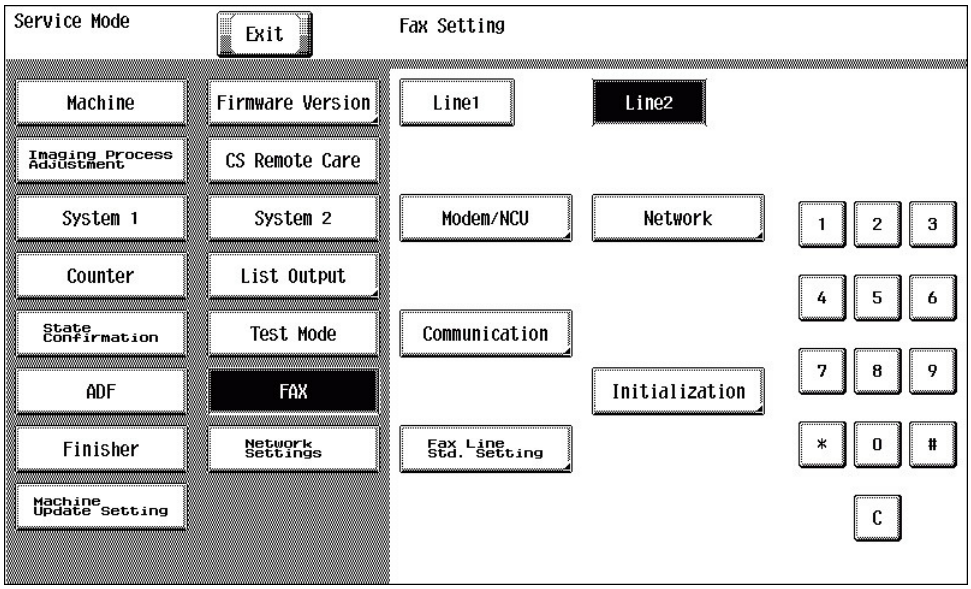
(c) Default setting

- ON

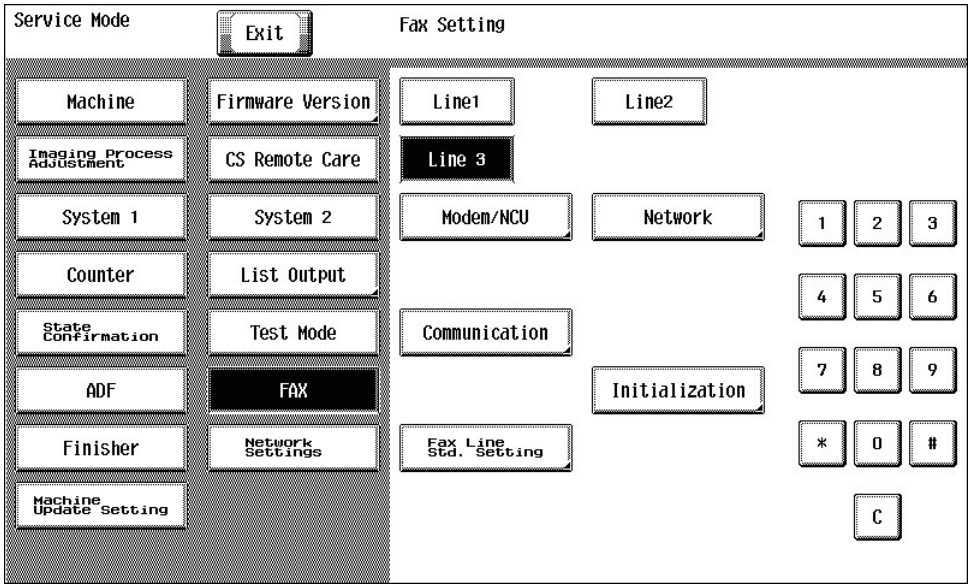
(d) Setting item

- ON
- OFF

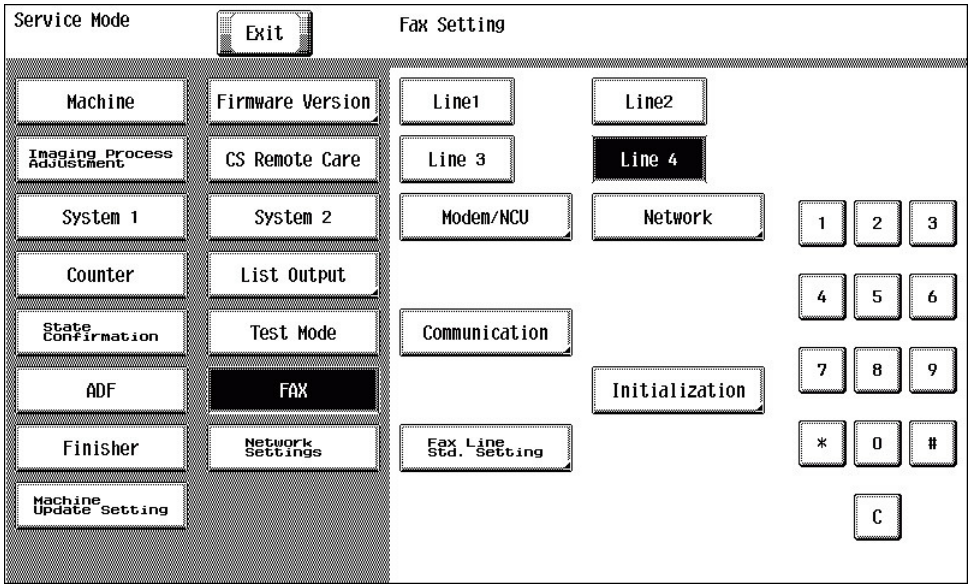
5.23 FAX setting (Line2, Line 3, Line 4)



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 2) is set to “Set”.



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 3) is set to “Set”.



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 4) is set to “Set”.

5.23.1 Modem/NCU

(1) V34:1/2 : RX Max. Bit Speed

(a) Use

- To set the max. bit speed for reception in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(2) V34:1/2 : TX Max. Bit Speed

(a) Use

- To set the max. bit speed for transmission in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(3) V34:1/2 : Control CH Speed

(a) Use

- A bit speed of the control channel.

- The negotiation of 2400/1200 is performed in the V.34 start-up procedure.

(b) Default setting

- 1200 bps

(c) Setting item

- 1200 bps
- 2400 bps

(4) V34:1/2 : Max. SYMB Speed

(a) Use

- Maximum modulation speed (baud rate) of V.34
  - 3429 SYMB: 3429 33.6 k to 4.8 k
  - 3200 SYMB: 3200 31.2 k to 2.4 k
  - 3000 SYMB: 3000 28.8 k to 2.4 k
  - 2800 SYMB: 2800
  - 2400 SYMB: 2400
- The modulation speed of both sending and receiving change by change of setting.
- The upper limit value of V.34 maximum bit speed is determined.
- Normally you do not need to change the value. In case that a V.34 error frequently occurs, you can attempt to set up 3000 SYMB and decrease the symbol rate, for instance.

(b) Default setting

- 3429 SYMB

(c) Setting item

- 2400 SYMB
- 2800 SYMB
- 3000 SYMB
- 3200 SYMB
- 3429 SYMB

(5) V34:2/2: V34 Points

(a) Use

- Select the optimal Eye Pattern in accordance with the line state obtained from V.34 transmission training.

(b) Default setting

- Auto

(c) Setting item

- 16-Point
- 4-Point

(6) V17 Send Max Speed: TX Max. Speed

(a) Use

- To set the max. speed for transmission.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V17-12000bps
- V17-9600bps
- V17-7200bps
- V29-9600bps
- V29-7200bps
- V27-4800bps
- V27-2400bps

(7) V17 Send Max Speed: RX Max. Speed

(a) Use

- To set the max. speed for reception.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V29-9600bps
- V27-4800bps

(8) TxATT: PIX TxATT

(a) Use

- To set the output level of PIX TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(9) TxATT: TONE/Procedure Signal TxATT

(a) Use

- To set the output level of TONE/Procedure Signal TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(10) TxATT: CED/ANSam TxATT

(a) Use

- To set the output level of CED/ANSam TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(11) TxATT: DTMF TxATT

(a) Use

- To set the output level of DTMF TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(12) Level: CD/SED ON Level

(a) Use

- To set reception signal sensitivity level.
- SED is not used.

(b) Default setting

- -48 dBm

(c) Setting range

- -48 to -33 dBm (steps: 5 dBm)

(13) Level: DTMF H-L Level Difference

(a) Use

- To set DTMF H-L level difference.

(b) Default setting

- 2.0 dB

(c) Setting range

- 1.0 to 4.0 dB (step: 0.5 dB)

(14) Cable EQL

(a) Use

- To correct the delay characteristics of the communication line.

(b) Default setting

- 0 Km

(c) Setting item

- 0 Km
- 1.8 Km
- 3.6 Km
- 7.2 Km

5.23.2 Network

(1) Network Setting 1: Receive Signal Detection Mode

(a) Use
- To set whether to detect the receive signal by the number of times or by time.
- Sets to “Time” when ringer can not be detected by the number.

(b) Default setting
- No. of Times

(c) Setting item
- No. of Times
- Time

(2) Network Setting 1: BUSY TONE Detection

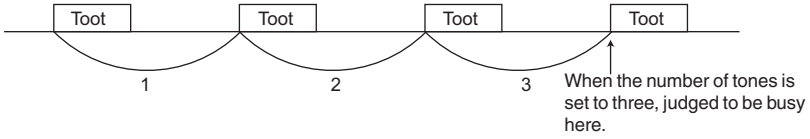
(a) Use
- To set whether to use the Busy Tone detection or not.

(b) Default setting
- OFF

(c) Setting item
- ON
- OFF

(3) Network Setting 1: No. of Times of Busy Tone Detection

(a) Use
- To set the number of times of Busy Tone detection.



(b) Default setting
- 0 times

(c) Setting range
- 0 to 15 count (step: 1 count)

NOTE
- **0 time shows no detection is done.**

(4) Network Setting 2: 1300 Hz Detection

(a) Use
- To set whether to use the 1300 Hz detection or not.
- Set this function to “ON” if the facsimile network (F-net) is to be used.

(b) Default setting
- OFF

(c) Setting item
- ON
- OFF

(5) Network Setting 2: Dial Tone Detection

(a) Use
- To set whether to use the Dial Tone detection or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(6) Network Setting 2: DC-LOOP Check

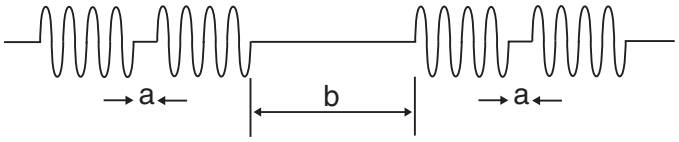
(a) Use
- Checks the DC loop current before dialing.
- When the current is zero, an error occurs. (T.80)
- You can change the setting to be compliant to standards in other countries. In Japan, set this parameter to OFF.

(b) Default setting
- OFF

(c) Setting item
- ON
- OFF

(7) Network Setting 2: min. RING OFF Time

(a) Use
- Minimum time to recognize ringer interval.



a	To avoid judging “a” as a ring-off time.	b	Ring-off time

(b) Default setting
- 0 ms

(c) Setting range
- 0 to 1000 ms (step: 100 ms)

(8) Network Setting 2: Response Waiting Time

(a) Use
- To set the response waiting time.

Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting
- 55 s

(c) Setting range
- 35 to 115 s (steps: 1 s)

(9) Network Setting 2: Pause Time

(a) Use
- The pause time for one pause key (pause between digits)

(b) Default setting
- 1 s

(c) Setting range
- 1 to 7 s (steps: 1 s)

5.23.3 Communication

(1) Protocol: V8 / V34 Protocol

(a) Use
- To set whether to use the V.8/V.34 protocol or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(2) Int’l Comm. Function: Foreign Communication Function

(a) Use
- To set whether or not to use the mode that employs the number of DIS waiting times.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(3) Int'l Comm. Function: No. of DIS Waiting Times at Foreign Communication

(a) Use
- To set the number of DIS waiting times.

(b) Default setting
- 1

(c) Setting item
- 1
- 2

(4) Int'l Comm. Function: V34 Speed

(a) Use
- To set the V.34 international communication mode speed.

(b) Default setting
- 28800 bps

(c) Setting range
- 16800 to 33600 bps (step: 2400 bps)

(5) Int'l Comm. Function: V17 Speed

(a) Use
- To set the V.17 international communication mode speed.

(b) Default setting
- 7200 bps

(c) Setting range
- 7200 to 14400 bps (step: 2400 bps)

(6) Int'l Comm. Function: V29 Speed

(a) Use
- To set the V.29 international communication mode speed.

(b) Default setting
- 4800 bps

(c) Setting range
- 2400 to 9600 bps (step: 2400 bps)

(7) Others: ECM Function

(a) Use
- Set whether or not to cancel reception ECM (error correction mode).

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(8) Others: Frame Size at ECM TX

(a) Use
- To set the frame size at ECM transmission.

(b) Default setting
- 256

(c) Setting item
- 64
- 256

(9) Others: Coding Ability

(a) Use
- To set the coding ability.
- Effective to both sending and reception.

(b) Default setting
- MH/MR/MMR/JBIG

(c) Setting item
- MH
- MH/MR
- MH/MR/MMR
- MH/MR/MMR/JBIG

5.23.4 Initialize

(1) Use
- The following data can be initialized.

Fax Function Parameter	The function set condition is initialized into the Factory Default condition.

NOTICE
- For the formats of the Abbreviated Registration Data, the Program Registration Data, The Group Registration Data, and the F-code Box Data, see "Fax File Format".

(2) Procedure
1. Turn the main power switch ON.
2. Wait until the warm-up cycle is completed.
   NOTE
   - **Wait until an alarm message, such as "Preparing fax/scan", disappears.**
   - **Execution of "Initialization" before the warm-up cycle is completed may not be successful.**
3. Call the Service Mode to the screen.
4. Touch [FAX].
5. Select a Line.
6. Touch [Initialization].
7. Touch [Fax Function Parameter].
8. Touch [Yes].
9. When a verification message is displayed, touch [Yes].
10. The data selected is initialized.

5.23.5 FAX Line Std. Setting

(1) Use
- Used to confirm fax settings.
  NOTE
  - **When the below settings are changed by this setting, the [Service Mode] -> [FAX] -> [Line 2, Line 3, Line 4] -> [Network] or [Service Mode] -> [FAX] -> [Line1] -> [System] settings are also changed.**
    FAX Line Std. Setting 1: Receive Signal Detection Mode, BUSY TONE Detection, No. of Times of Busy Tone Detection
    FAX Line Std. Setting 2: Dial Tone Detection, Pause Time, Response Waiting Time
    FAX Line Std. Setting 3: Error Page Resending, Number of Redial
  - **If the following settings are changed, the settings from [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] is also changed.**
    FAX Line Std. Setting 1:Number of RX Call Rings, Receive Time Interval Setting
    FAX Line Std. Setting 4: Number of Redials, Redial Interval, Line Monitor Sound Volume (Send), Line Monitor Sound Volume (Receive)

(2) FAX Line Std. Setting-V17 RX Error

(a) Use
- This configures whether or not to lower the reception speed when reattempting to receive data after a receive error occurs.

(b) Procedure
1. Call the Service Mode to the screen.
2. Select [FAX] -> [Line 2/ Line 3/ Line 4] -> [FAX Line Std. Setting] -> [FAX Line Std. Setting 3]
3. Select either [ON] or [OFF] for [V17 RX Error].
   NOTE
   - **When this is set to [ON], the device will use V17 to receive data the next time after a receive error occurs.**

(c) Default setting
- ON

(d) Setting item
- ON
- OFF

5.24 FAX setting (Address parameter list: for line 1, line 2, line 3 and line 4)

5.24.1 0b000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0000	Redial interval	7		Utility Mode (0-3)	0x03	0x03	0x03	X0	00
		6							
		5							
		4							
		3	Redial interval (min, HEX, 0 - 15)						
		2							
		1							
		0							
0b0001	No. of busy redials	7		Utility Mode (0-2)	0x03	0x01	0x03	X0	01
		6							
		5							
		4							
		3	No. of busy redials (No, HEX, 0 - 15)						
		2							
		1							
		0							
0b0002	No. of error redials	7		Utility Mode Special Setting (0-2)	0x03	0x01	0x03	X0	02
		6							
		5							
		4							
		3	No. of error redials (No, HEX, 0 - 15)						
		2							
		1							
		0							
0b0003	Setting related to FAX memory	7		Utility Mode (0-2) Utility Mode Special Setting (0-2, 4)	0x08	0x08	0x08	X0	03
		6	V34 mode at the time of error page redial 0: Inhibited 1: Enabled						
		5							
		4	Resend from the first page at the time of error page redial 0: Retransmitted from error page 1: Retransmitted from initial page						
		3	Call acceptance operation with toner empty 0: Refused 1: Permitted						
		2							
		1							
		0							
0b0004	FAX communication HP	7		Utility Mode (3-5) Utility Mode Special Setting (2, 6, 7)	0x05	0x05	0x05	X0	04
		6							
		5	Quick memory transmission 0: OFF 1: ON						
		4	File deleted after polled transmission 0: Yes 1: No						
		3	Reception mode 0: Auto 1: Manual						
		2	V.34 0: OFF 1: ON						
		1	International transmission 0: OFF						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: ON						
		0	ECM transmission 0: OFF 1: ON						
0b0005	Forward TX Setting	7		Utility Mode (0, 1, 6)	0x00	0x00	0x00	X0	05
		6	Two-sided recording of FAX 0: Possible 1: Impossible						
		5							
		4							
		3	Default transfer FAX setting 00: Not specified 01: Line 1 10: Line 2						
		2							
		1	Forward TX Setting 00: No forwarding 01: Forwarding + Always (print) 10: Forwarding + Only when not delivered (print)						
		0							
0b0006	FAX reception automatic output setting	7	Two-sided recording	Utility Mode (0, 1, 2, 4, 6, 7)	0x01	0x01	0x01	X0	06
		6							
		5	Inched recording paper selection						
		4	Fax Output Setting (only for color MFP) 0: Batch Print 1: Page Print NOTE In the case of B&W MFP, only “Batch Print” can be supported. Therefore, always set the value to “0”.						
		3	Face-up output						
		2	Page division recording						
		1	Output tray HP 00:Tray 1 01:Tray 2 10:Tray 3 11:Tray 4						
		0							
0b0007	FAX reception automatic output setting 2	7	STOP is effected for printing during reception	Utility Mode (2-5) Utility Mode Special Setting (6, 7)	0xd4	0xf4	0xd4	X0	07
		6	STOP is effected for printing after reception						
		5	Inched paper priority						
		4	Paper tray fixing 000:Tray 1 001:Tray 2 010:Tray 3 011:Tray 4 100: LCT 101: Auto						
		3							
		2							
		1	LG is used.						
		0	LT is used.						
0b0008	Setting of recording paper for reception	7	Selection without A5R 0: A4->B5 1: B5->A4 Only when all of the following conditions are met: A. Destination is “Japan” or “Europe”. B. Fax reception print is set as follows: [“Split print ON” or “Split print OFF”] and [Paper tray/paper size is auto] C. “Letter/Ledger over A4/A3 OFF”	Utility Mode (0, 1)	0x00	0x00	0x00	X0	08
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1	Paper select mode 00: APS 01: Recording paper designation mode 1 10: Recording paper designation mode 2						
		0							
0b0009	Setting of recording paper size for reception	7		Utility Mode	0x0f	0x1f	0x0f	X0	09
		6							
		5							
		4	01000: A3 01001: B4 01111: A4 10001: 8.5 x 14 11000: 11 x 17 11111: 8.5 x 11						
		3							
		2							
		1							
		0							
0b000a	Target reduction rate when A4/LTR is used	7	Target reduction rate when A4/LTR is used (HEX, %)	-	0x5a	0x5a	0x5a	X0	0A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000b	Other target reduction rate	7	Other target reduction rate (HEX, %)	-	0x5d	0x5d	0x5d	X0	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000c	BOOT rewrite on FAX ISW	7		Utility Mode Special Setting (0)	0x00	0x00	0x00	X0	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0	Boot area rewrite 0: No 1: Yes						
0b000d	Reduction rate used in APS	7	Received image reduction rate at APS (HEX, %)	-	0x5d	0x5d	0x5d	X0	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000e	Minimum reduction rate	7	Received image reduction rate at APS (A3/B4 width) (HEX, %)	Utility Mode	0x60	0x60	0x60	X0	0E
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0b000f	Incomplete TX hold	7	Debug mode 0: OFF 1: ON (3min)	Utility Mode (0-3)	0x00	0x00	0x00	X0	0F
		6							
		5							
		4							
		3	File holding time 0000: 12 hours 0001: 24 hours 0010: 48 hours 0011: 72 hours						
		2							
		1							
		0							

5.24.2 0b001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0010	Inter-station timer	7	HEX (unit: second)(00 - ffh)(00 means 03)	-	0x03	0x03	0x03	X0	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b0012 - 0b0015	Reserved area	7		-	0xff	0xff	0xff	X0	12 - 15
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b0016	PC-FAX RX	7	TSI routing function 0: OFF 1: ON	Utility Mode (0-5)	0x10	0x10	0x10	X0	16
		6	At operation with PC-FAX Rx code unspecified 0: PC Reception 1: Print						
		5	PC-FAX Rx print 0: No 1: Yes						
		4							
		3	PC-FAX reception mode 000: OFF 001: ON + Received at fixed box 010: Dialin + Received at fixed box 011: ON + Received at specified box 100: Dialin + Reception at specified box						
		2							
		1							
		0	Password check 0: OFF 1: ON						
0b0017 - 0b001f	PC-FAX reception password	7	ASCII 20 digits	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X0	17 – 1F
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							

5.24.3 0b002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0020 - 0b002a	PC-FAX reception password	7	ASCII 20 digits	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X0	20 - 2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b002b	FAX reception automatic output setting 3	7		Utility Mode (0-3)	0x01	0x01	0x01	X0	2B
		6							
		5							
		4							
		3	Output No. of copies Setting range:0 - (15)						
		2							
		1							
		0							
0b002c	Setting for 2 lines	7	Line 2 transmission setting 00: Transmission/Reception 01: Reception only 10: Transmission only	Utility Mode (0)	0x00	0x00	0x00	X0	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b002d	PC-FAX Setting	7		Utility Mode (0-1)	0x00	0x00	0x00	X0	2D
		6							
		5							
		4							
		3							
		2							
		1	PC-FAX transmission line specification 00: Not specified 01: Line 1 10: Line 2 11: Reserved						
		0							

5.24.4 0b003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0032	I-Fax encoding system capability (default for auto transmission capability)	7		Utility Mode (0)	0x04	0x04	0x04	X0	32
		6							
		5							
		4							
		3							
		2	000: (Setting prohibited) 001: MH 010: MR/MH 100: MMR/MR/MH						
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0039	Communication function	7	Interception of 1-address transmission in broadcasting transmission 0: Permitted 1: Prohibited	Utility Mode (0-3)	0x44	0x44	0x44	X0	39
		6	ITI printing, unit ID preference function 0: Not preferred 1: Preferred						
		5	Dial number duplication check during broadcasting transmission 0: Checked 1: Not checked						
		4	F code transmission function 0: No 1: Yes						
		3	Abandoning error pages during transmission 0: Not abandoned 1: Abandoned						
		2	Incomplete TX hold function 0: Yes 1: No						
		1	Relay reception function 0: Yes 1: No						
		0	Confidential reception function 0: Yes 1: No						
0b003a - 0b003f	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	3A - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.5 0b004#, 0b005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0040 - 0b005f	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	40 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.6 0b006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0060 - 0b0067	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	60 - 67
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0b0068	Reception refuse	7		Utility Mode (0)	0x00	0x00	0x00	X0	68
		6							
		5							
		4							
		3							
		2							
		1							
		0	Call acceptance rejected - Number display 0: Disconnected line 1: No response						
0b0069	Recording paper priority selection	7		Utility Mode				X0	69
		6							
		5							
		4							
		3							
		2							
		1	00: Automatic selection 01: Fixed size 10: Priority						
		0							
0b006a	Box number error operation	7		Utility Mode	0x00	0x00	0x00	X0	6A
		6							
		5							
		4	Print or not print the images received when the TSI transfer terminates normally. 0:OFF 1:ON						
		3	Operation with no routing registration or no registered BOX upon the TSI routing turned ON 0: Print output 1: Saved in forced memory reception BOX						
		2	Reception of unregistered box sub No. 00: Print 01: Main line 10: Sub line						
		1							
		0							
0b006c	Reserved area	7		Utility Mode	0x00	0x00	0x00	X0	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.7 0e000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0000	Error line processing/ judgment	7	RTP transmission	-	0x01	0x01	0x82	X1	00
		6							
		5	Error line recirculation						
		4	Addition of error sign						
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	Judgment of No. of sequential error lines						
		1	Error line rate judgment						
		0	Judgment of No. of error lines						
0e0001	No. of error lines-very good	7 6 5 4 3 2 1 0	No. of very good judgment lines (HEX) No. of error linesVeryGoodErrorNum, MCF is transmitted.	-	0x10	0x10	0x10	X1	01
0e0002	No. of error lines-good	7 6 5 4 3 2 1 0	No. of good judgment error lines (HEX) VeryGoodErrorNum<No. of error linesGoodErrorNum, RTP is transmitted	-	0x40	0x40	0x80	X1	02
0e0003	No. of error lines-bad	7 6 5 4 3 2 1 0	No. of bad judgment error lines (HEX) GoodErrorNum<No. of error lines BadErrorNum, RTN is transmitted. No. of error lines>BadErrorNum, it is considered to be error line over.	-	0x80	0x80	0xff	X1	03
0e0004	Rate of error lines-very good	7 6 5 4 3 2 1 0	Rate of very good judgment error lines (HEX, %) Rate of error linesVeryGoodErrorPercent, MCF is transmitted.	-	0x05	0x05	0x05	X1	04
0e0005	Rate of error lines-good	7 6 5 4 3 2 1 0	Rate of good judgment error lines (HEX, %) VeryGoodErrorPercent<Rate of error linesGoodErrorPercent, RTP is transmitted. Rate of error lines>GoodErrorPercent, RTN is transmitted.	-	0x0a	0x0a	0x0a	X1	05
0e0006	No. of continuous error lines-bad	7 6 5 4 3 2 1 0	No. of bad judgment sequential error lines (HEX) Normal No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x03	0x03	0x03	X1	06
0e0007	No. of continuous error lines-bad	7 6 5	No. of bad judgment sequential error lines (HEX) Fine	-	0x06	0x06	0x06	X1	07

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4 3 2 1 0	No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.						
0e0008	No. of continuous error lines-bad	7 6 5 4 3 2 1 0	No. of bad judgment sequential error lines (HEX) 300dpi No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x09	0x09	0x09	X1	08
0e0009	No. of continuous error lines-bad	7 6 5 4 3 2 1 0	No. of bad judgment sequential error lines (HEX) Super fine No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x0c	0x0c	0x0c	X1	09
0e000a	EP tone addition	7 6 5 4 3		Utility Mode Special Setting (0,2)	0x06	0x06	0x06	X1	0A
		2	V.17						
		1							
		0	V.29						
0e000b	CED detection transmission frequency	7 6 5 4 3 2		-	0x00	0x00	0x00	X1	0B
		1	CED detection 0: Detect 1: Not detect						
		0	CED transmission frequency 0: 2100Hz						
0e000c	TSI/CSI/CIG parameter	7	TSI transmission 0: No 1: Always	-	0xe0	0xe0	0xe0	X1	0C
		6	CSI transmission 0: No 1: Always						
		5	CIG transmission 0: No 1: Always						
		4 3 2 1							
		0	Character ID is put on CSI.						
0e000d	G3 Mode Error	7	Ph-C8 min. limit timer at Non-ECM 0: No 1: Yes	Utility Mode Special Setting (6)	0x00	0x00	0x44	X1	0D
		6	Selection of “-”at dial top						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			0: OFF 1: ON						
		5	RTN reception 0: step down 1: Line disconnect						
		4	Remote reception 0: ID received 1: No limit						
		3	DIS retransmission interval in manual reception 0: 4.5 sec. 1: 3.0 sec.						
		2	DCN transmission at T200						
		1	DIS length at reception limited to 4byte 0: No limit 1: Limit						
		0	DCN transmitted at stop of ph.C						
0e000e	Step up/down	7	Strict TCF check 0: Normal 1: Strict check	-	0x00	0x00	0x00	X1	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0	The PC/BC of the PostMsg is checked while in the ECM reception. 0: Yes 1: No						
0e000f	Delay timer between DCS-TCF	7	DCS - TCF delay timer Unit: (10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	0F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.8 0e001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0010	Delay timer between PIXPMC	7	PIX - PMC delay timer (Unit: 10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0011	Delay timer between CED-DIS	7	CED - DIS delay timer Unit: (10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	11
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e0012	T1 timer for calling	7	T1 timer for transmission (Unit: 1 sec, HEX)	Utility Mode Special Setting	0x23	0x23	0x23	X1	12
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0013	T1 timer for called	7	T1 timer for reception (Unit: 1 sec, HEX)	Utility Mode Special Setting	0x23	0x23	0x23	X1	13
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0014	ph.C reception limited time	7	Max. reception time per page (Unit: min, HEX) 1 to 255 min.	-	0x0f	0x0f	0x0f	X1	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0015	Timer between EOLs	7	EOL - EOL timer (Unit: 100 ms, HEX)	Utility Mode Special Setting	0x82	0x82	0x82	X1	15
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0016	Timer between frames	7	Timer between frames (Unit: 1 sec, HEX)	-	0x23	0x23	0x23	X1	16
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0017	ANSam signal transmission time	7	ANSam signal transmission time (Unit: 100 ms, HEX)	Utility Mode Special Setting	0x28	0x28	0x28	X1	17
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0018	Ci signal transmission time	7	Ci signal transmission time (Unit: 100 ms, HEX)	-	0x05	0x05	0x05	X1	18
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0019	High-speed signal transmission waiting delay timer	7	High-speed signal transmission waiting delay timer (Unit: 10 ms, HEX) (Between CFRPIX/MPS-PIX/ CTR-PIX)	-	0x37	0x37	0x37	X1	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e001a	ph.C top dummy data transmitting time	7	ph.C top dummy data transmission time (Unit: 100 ms, HEX) (Dummy data for non-ECM /Preamble at ECM)	-	0x04	0x04	0x04	X1	1A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e001b	RTC Counter	7		-	0x01	0x01	0x01	X1	1B
		6							
		5							
		4							
		3							
		2	The EOL counter judged to be RTC 000: EOL*2 001: EOL*3 010: EOL*4 011: EOL*5 100: EOL*6						
		1							
		0							
0e001c	Closed area communication	7		-	0x00	0x00	0x00	X1	1C
		6							
		5							
		4							
		3							
		2	Polling TX						
		1	Polling RX						
		0							
0e001d - 0e001f	Machine password [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X1	1D - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.9 0e002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0020 - 0e002f	Machine password [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X1	20 - 2F
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							

5.24.10 0e003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0030	Machine password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	0x20	0x20	0x20	X1	30
0e0031 - 0e003f	CSRC password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminators)	-	ALL 0x20	ALL 0x20	ALL 0x20	X1	31 - 3F

5.24.11 0e004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0040 - 0e0044	CSRC password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminators)	-	ALL 0x20	ALL 0x20	ALL 0x20	X1	40 - 44
0e0045	Watch dog	7 6 5 4 3 2 1		Utility Mode Special Setting (0)	0x01	0x01	0x01	X1	45
		0	Watch dog 0: OFF 1: ON						
0e0046	T2 timer after CFR	7 6 5 4 3 2 1 0	T2 timer value after CFR x100 ms (HEX)	Utility Mode Special Setting	0x3c	0x3c	0x3c	X1	46

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0047	T2 timer after EOM	7	T2 timer after EOM x100ms (HEX)	Utility Mode Special Setting	0x37	0x37	0x37	X1	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0048	JIM waiting timer	7	JM waiting timer value x100ms (HEX)	Utility Mode Special Setting	0x5a	0x5a	0x5a	X1	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0049	Destination	7	0: US 1: Canada 2: Japan 3: Australia 4: New Zealand 5: Europe 6: Germany 7: UK 8: France 9: Switzerland 0A: Netherlands 0B: Belgium 0C: Australia 0D: Norway 0E: Sweden 0F: Finland 10: Ireland 11: Denmark 12: Italy 13: Spain 14: Portugal 15: Poland 16: South Africa 17: Taiwan 18: Saudi Arabia 19: China 1A: Malaysia 1B: Singapore 1C: Korea 1D: Hong Kong 1E: Generic (OT) 1F: Argentina 20: Brazil 21: Vietnam 22: Philippines 23: Russia	Service Mode	0x02	0x00	0x05	X1	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e004a	Function when DIS signal is created	7		-	0x01	0x01	0x01	X1	4A
		6							
		5							
		4							
		3							
		2							
		1	Change-over of the silent interval between ANSam and DIS (For revision T.30) 0: Silent interval of 450 ms 1: 75 ms						
		0	V8 capability, if available, of DIS to transmit with V.21						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			0: V.8 bit ON 1: V.8 bit OFF						
0e004b	Signal check at the time of F code communication	7		-	0x00	0x00	0x00	X1	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0	Check of PWD and SID received signal in F code communication 0: Signal checked 1: PWD and SID not distinguished						
0e004c	No. of CI signal transmission in manual transmission	7	CI signal repetitive transmission frequency when no ANSam received after CI transmission (times, HEX)	-	0x03	0x03	0x03	X1	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e004d	Tone detection time (PB)	7	PB OFF time integration 0 to 15 (x10ms) (50ms if 0)	-	0x55	0x55	0x55	X1	4D
		6							
		5							
		4							
		3	PB ON time integration 0 to 15 (x10ms) (50ms if 0)						
		2							
		1							
		0							
0e004e	Time for modem response waiting timeout	7	Waiting event from modem/Response waiting timeout time (x10sec, HEX) (0 counted as 90 sec.)	-	0x00	0x00	0x00	X1	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e004f	Continuous CRP reception frequency resulting in an error	7	Sequential CRP reception frequency resulting in error (x1 time, HEX) (0 counted as 3 times)	-	0x00	0x00	0x00	X1	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.12 0e005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0050	1300Hz line seizure parameter detection time	7	1300Hz tone detection time for no-ringing reception (x100ms, HEX)	-	0x17	0x17	0x17	X1	50
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0051	1300 Hz tone detection frequency pattern	7		-	0x00	0x00	0x00	X1	51
		6							
		5							
		4							
		3							
		2							
		1							
		0	1300 Hz tone detection frequency pattern 00: 1300 Hz ±30 Hz 01: 1300 Hz ±10Hz						
0e0052	German specifications	7	Custom Mode (clears the FP overwrite of the error line relationship for EU destinations)	-	0x00	0x00	0x0f	X1	52
		6							
		5							
		4							
		3	ERR transmission (DTS sequence)						
		2	DCN reception error ignored						
		1	Line disconnected within 6 sec. after CD OFF in ph.C						
		0	Line disconnected upon reception of DIS to DTC						
0e0053	Retransmission intervals of DIS (Auto reception)	7	DIS re-transmission interval in automatic reception (x0.1 sec.)	-	0x1e	0x1e	0x1e	X1	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0054	TTI for transmission	7		-	0x03	0x03	0x03	X1	54
		6							
		5							
		4							
		3							
		2							
		1	TTI in transmission TTI added 00: OFF 01: (OFF) 10: INSIDE 11: OUTSIDE						
		0							
0e0055	Image reduction parameter	7		-	0x00	0x00	0x00	X1	55
		6							
		5							
		4							
		3							
		2							
		1							
		0	Reduction parameter in main scanning direction 0: Thick line kept 1: Thick line not kept						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0056	Main body polling transmission command wait timer	7	Timer for waiting a transmission command (+FDT) from the main body during turnaround of polling transmission (x100ms, HEX) (0 is defaulted to 8 sec.)	-	0x08	0x08	0x08	X1	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0057	Guaranteed time to switch post message command receive modes	7	Guaranteed time to switch post message command receive modes (1-ms increments, HEX) *Translated to 50 ms when the value is "0".	-	0x00	0x00	0x00	X1	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0058	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X1	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0059	V.8 time out (transmission)	7	V.8 sequence timeout time (transmission)	-	ALL 0x00	ALL 0x00	ALL 0x00	X1	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e005A	V.8 time out (reception)	7	V.8 sequence timeout time (reception)	-	ALL 0x00	ALL 0x00	ALL 0x00	X1	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e005B	Delay timer between TCF and CFR	7	Delay timer between TCF and CFR (unit: 10 ms, HEX)	-	ALL 0x00	ALL 0x00	ALL 0x00	X1	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e005C	TCF instantaneous interruption allowable time	7	TCF instantaneous interruption allowable time (Disconnection confirmation time) (unit: 10 ms, HEX)	-	ALL 0x00	ALL 0x00	ALL 0x00	X1	5C
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e005D -	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X1	5D -
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.13 12000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
120000	TTI/RTI setting	7		Utility Mode (0, 1, 4)	0x03	0x03	0x03	X2	80
		6	SW for prohibiting the printing of the TTI address 0: Printing of the address allowed 1: Printing of the address not allowed						
		5	RTI addition 00:OFF 01: (OFF) 10: INSIDE 11: OUTSIDE						
		4							
		3	TTI denominator display 0: Total 1: Individual						
		2	Inhibition of TTI setting menu INSIDE display 0: No 1: Yes						
		1							
		0							
120001	Report setting 1	7		Utility Mode (2-5) Utility Mode Special Setting (6)	6c	6c	6c	X2	81
		6	Addition of image 0: No 1: Yes						
		5	Automatic output of reserved report 0: No 1: Yes						
		4	TX result report 00: Not output 01: Output only at errors 10: Always output 11: (Normal output)						
		3							
		2	Automatic output of sequential communication report 0: No 1: ON						
		1							
		0							
120002	Report setting 2	7	The FAX CSRC communication log is printed on the Activity Report 0: No 1: Yes	Utility Mode (0-2) Utility Mode Special Setting (0,1)	0x04	0x04	0x04	X2	82
		6							
		5							
		4							
		3	Automatic daily output of journal 0: No 1: Yes						
		2	Automatic output of journal 100 communication						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			0: No 1: Yes						
		1	Automatic output or error trace list 0: No 1: Yes						
		0	Automatic output of trace list 0: No 1: Yes						
120003	Output time of daily automatic output of journal (hour: grade of 10)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	83
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120004	Output time of daily automatic output of journal (hour: grade of 1)	7	Designation of 24 hours ASCII four digit	-	0x39	0x39	0x39	X2	84
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120005	Output time of daily automatic output of journal (minute: grade of 10)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	85
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120006	Output time of daily automatic output of journal (minute: grade of 1)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	86
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120007	Output settings	7	Setting of daily difference for daily mode set for automatic output 0: Daily difference not limited 1: Daily difference limited	Utility Mode (3-5) Utility Mode Special Setting (0)	0x00	0x00	0x00	X2	87
		6							
		5	Transmission result report selection screen 0: Not displayed 1: Displayed						
		4	Broadcast result report output method 0: All destinations 1: 1Each destination						
		3							
		2	Output order of journal transmission result reservation report 0: From old one 1: From new one						
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
120008	Invisible mode	7		-	0x00	0x00	0x00	X2	88
		6							
		5							
		4							
		3							
		2	Display of PCFAX TX [PC] in Note of report 0: No 1: Yes						
		1							
		0	Details of remote station display during program direct registered calls and abbreviated dialing 0: Display of registered name 1: Display of number						
120009	Reserved area	7		-	0x00	0x00	0x00	X2	89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
12000b	F code report setting	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	X2	8B
		6							
		5							
		4							
		3	Relay request report output 0: No 1: Yes						
		2	Relay TX result report output 0: No 1: Yes						
		1	Bulletin polling transmission report output 0: No 1: Yes						
		0	Confidential reception report output 0: No 1: Yes						
12000c	Internet Fax report Setting	7		Utility Mode	0x61	0x61	0x61	X2	8C
		6	Network Fax RX Error Report 0: OFF 1: ON						
		5	Internet Broadcast Fax Result Report 0: OFF 1: ON						
		4							
		3	E-Mail Message Body printing 0: ON 1: OFF						
		2	TX Error Report printing 0: ON 1: OFF						
		1	MDN Message printing 0: ON 1: OFF						
		0	DSN Message printing 0: ON 1: OFF						
12000d	FAX report setting	7		Utility Mode	0x00	0x00	0x00	X2	8D
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1	PC-Fax Error report output 0: No 1: Yes						
		0	Relay print 0: No 1: Yes						
12000e - 12000f	Reserved area	7		-	0x00	0x00	0x00	X2	8E - 8F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.14 13000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130000	Reserved area	7		-	-	-	-	XE	00
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130001	FAX scan HP2	7	Frame erasure HP 01: 5 mm 10: 10 mm 11: 15 mm	-	0x41	0x41	0x41	XE	01
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130002	FAX scan HP3	7		-	0x04	0x04	0x04	XE	02
		6							
		5							
		4							
		3							
		2	Original reading mode 00: Normal 01: Mixed size 10: DF irregular						
		1							
		0	Page transfer read mode 0: Scans from the left 1: Scans from the right						
130003	Reserved area	7		-	-	-	-	XE	03
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
130004	Reserved area	7		-	-	-	-	XE	04
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130005	Reserved area	7		-	-	-	-	XE	05
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130006	Reserved area	7		-	-	-	-	XE	06
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130007	HP for FAX main screen	7	FAX main screen selection 0000: Program 0001: Group 0010: Abbreviation 0011: Keypad 0100: i-Fax	-	0x09	0x09	0x09	XE	07
		6							
		5							
		4							
		3	Automatic screen switching at the time of reception 0: ON 1:OFF						
		2							
		1							
		0							
130008	Rotation setting HP	7		-	0x03	0x03	0x03	XE	08
		6							
		5							
		4							
		3							
		2							
		1	Letter 0: No 1: Yes						
		0	A4 0: No 1: Yes						
130009	Reserved area	7		-	-	-	-	XE	09
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
13000a	Not used	7		-	-	-	-	XE	0A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000b	Error display time	7	10 - 250 seconds 0: Error display HOLD	-	0x14	0x14	0x14	XE	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000c	Reserved area	7		-	-	-	-	XE	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000d	Reserved area	7		-	-	-	-	XE	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000e - 13000f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	0E - 0F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.15 13001#, 13002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130010 - 13002f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	10 - 2F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.16 13003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130030 - 130034	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	30 - 34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130035	Utility Mode display setting	7	Relay display 0: Yes 1: No	Utility Mode Special Setting	0x00	0x0b	0x0b	XE	35
		6							
		5	Incomplete TX hold display 0: Yes 1: No						
		4	Compulsory memory reception display 0: Yes 1: No						
		3	Caller No./Name display 0: Yes 1: No						
		2	Closed communication display 0: Yes 1: No						
		1	Remote reception display 0: Yes 1: No						
		0	DialIn display 0: Yes 1: No						
130036	Utility Mode display setting 2	7		-	0x05	0x0f	0x07	XE	36
		6							
		5							
		4							
		3	OFF display of Header Position 0: Yes 1: No						
		2							
		1	Receive reject display 0: Yes 1: No						
		0							
130037	Not used	7		-	-	-	-	XE	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130038	Destination default screen setting	7	0x00: Group 0x01: FAX 0x02: E-mail 0x03: BOX 0x04: I-Fax 0x05: IP address FAX 0x06: SMB 0x07: FTP 0x08: WebDAV	-	0x00	0x00	0x00	XE	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130039 - 13003f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	39 - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.17 13004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130040	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130041	Destination input error prevention setting	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	41
		6							
		5							
		4							
		3							
		2							
		1							
		0	Destination input error prevention display setting 0: OFF 1: ON						
130042 - 130044	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	42 - 44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130045 - 13004f	DialIn additional No. (FAX)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	45 - 4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.18 13005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130050	DialIn additional No. (FAX)	7	ASCII 11 digits + NULL	-	0x00	0x00	0x00	XE	50
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
130051 - 13005c	DialIn additional No. (PC-FAX)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	51 - 5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13005d - 13005f	DialIn additional No. (telephone)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	5D - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.19 13006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130060 - 130068	DialIn additional No. (telephone)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	60 - 68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130069	Upper limit for signal transmission level setting	7	(-dBm) Switched according to destination of FAX	-	0x0a	0x0a	0x08	XE	69
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006a	Lower limit for call termination frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x00	0x00	0x00	XE	6A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006b	Upper limit for call termination frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	6B
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
13006c	Dial method setting	7		-	0x00	0x22	0x11	XE	6C
		6							
		5							
		4							
		3							
		2							
		1	Dial method setting (Switched according to destination of FAX) 00: PB, 10pps, 20pps 01: PB 10: PB, 10pps 11: PB, 10pps, 16pps						
		0							
13006d	Upper limit for redial frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x07	0x01	0x07	XE	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006e	Upper limit for redial interval setting range	7	(Minutes) Switched according to destination of FAX	-	0x01	0x01	0x01	XE	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006f	Lower limit for redial interval setting range	7	(Minutes) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.20 13007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130070	Telephone-related function setting menu display (1)	7		-	0x7f	0x00	0x00	XE	70
		6	Remote reception 0: OFF 1: ON						
		5	Dial-in 0: OFF 1: ON						
		4	Number display 0: OFF 1: ON						
		3	Pseudo RBT form 0: OFF 1: ON						
		2	Pseudo RBT transmission level 0: OFF						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: ON						
		1	Connection to answering machine 0: OFF 1: ON						
		0	TEL/FAX switching 0: OFF 1: ON						
130071	Number display related function setting	7		-	0x00	0x00	0x00	XE	71
		6							
		5							
		4							
		3							
		2							
		1	Name displayed Type of display at fax reception 00: No display 01: Display of number 10: Display of name						
		0							
130072	Setting of lower limit for DTMF transmission level setting range	7	(-dBm) Switched according to destination of FAX	-	0x0e	0x0f	0x09	XE	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130073	Setting of upper limit for DTMF transmission level setting range	7	(-dBm) Switched according to destination of FAX	-	0x0a	0x0a	0x05	XE	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130074	Setting of lower limit for DTMF H-L level difference setting range	7	(dB) Switched according to destination of FAX	-	0x01	0x01	0x01	XE	74
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130075	Setting of upper limit for DTMF H-L level difference setting range	7	(dB) Switched according to destination of FAX	-	0x04	0x04	0x04	XE	75
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130076	For transmission	7		-	0x00	0x00	0x00	XE	76
		6							
		5							
		4							
		3							
		2	Restrict Plural Fax Destination 0: OFF						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: ON						
		1	Destination Check Display Function 0: OFF 1: ON						
		0	Screen display during transmission 0 :OFF 1: ON						
130077	Lower limit setting of the signal send-out level setting range	7	(-dBm) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	77
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130078 - 13007b	Character-to-search default for FAX main screen	7	bit0 :[Main] 0: OFF, 1: ON bit10 :[ABC] 0: OFF, 1: ON bit11 :[DEF] 0: OFF, 1: ON bit12 :[GHI] 0: OFF, 1: ON bit13 :[JKL] 0: OFF, 1: ON bit14 :[MNO] 0: OFF, 1: ON bit15 :[PQRS] 0: OFF, 1: ON bit16 :[TUV] 0: OFF, 1: ON bit17 :[WXYZ] 0: OFF, 1: ON bit18 :[etc] 0: OFF, 1: ON	-	0x01	0x01	0x01	XE	78 - 7B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13007c	Not used	7		-				XE	7C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13007d	Initial program display page	7	1 - 27 page (HEX: 0x01 - 0x1b), 0: Temporary distribution	-	0x01	0x01	0x01	XE	7D
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.21 13008#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130080 - 130083	Destination type display setting	7	0: Do not display 1: Display	-	0x00 0x00 0x00 0x01	0x00 0x00 0x00 0x01	0x00 0x00 0x00 0x01	XE	80-83
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
130084	No. of destination display characters setting	7	0x0e: 14 characters 0x18: 24 characters	-	0x0e	0x0e	0x0e	XE	84
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.22 98000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
980000	Lower limit of receive time interval setting	7	(Seconds)	-	0x00	0x00	0x00	XE	-
		6							
		5							
		4							
		3							
		2							
		1							
		0							
980001	Upper limit of receive time interval setting	7	(Seconds)	-	0x2d	0x2d	0x2d	XE	-
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25 FAX setting (Address parameter list: for line 1)

5.25.1 0e009#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0090	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XB	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e0091	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XB	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0092	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XB	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
		0							
0e0093	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	03
		6							
		5	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		4							
		3							
		2							
		1	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
		0							
0e0094	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point 00: Auto 01: 16-point 10: 4-point						
		0							
0e0095	TEL/FAX switching (For Japan models only)	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							
		1							
		0							
0e0096	Ring Back Tone parameter (For Japan models only)	7	RBT form 000: No 001: Japan 010: US 011: UK	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XB	06
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			100: Germany 101 to 111: Others						
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							
		0							
0e0097	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XB	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e0098	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XB	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e0099	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XB	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e009a	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XB	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e009b	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XB	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e009c	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XB	0C
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e009d	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XB	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e009e	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XB	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.2 0e00a#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00a0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XB	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00a1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XB	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00a2	(Inhibit of) V34 off Rx-Function ON/OFF	7	V34 off function for manual reception 0: Enable 1: Disable	-	0x00	0x02	0x02	XB	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Disabled						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disabled						
0e00a3	JBIG parameter	7		-	0x01	0x01	0x01	XB	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e00a4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XB	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00a8	(Inhibit of) JBIG off Rx-Function ON/OFF	7		-	0x00	0x00	0x00	XB	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0:OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e00a9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XB	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00aa	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XB	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1: 155 ±65 Hz 2: 375 ±125 Hz 3: 400 ±90 Hz 4: 400 ±100 Hz 5: 420 ±90 Hz 6: 425 ±75 Hz 7: 425 ±95 Hz					
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			8: 425 ±125 Hz 9: 430 ±90 Hz 10: 435 ±85 Hz 11: 440 ±90 Hz 12: 445 ±125 Hz 13: 450 ±50 Hz 14: 450 ±70 Hz 15: 450 ±100 Hz 16: 450 ±120 Hz 17: 460 ±140 Hz 18: 465 ±205 Hz 19: 475 ±175 Hz 20: 480 ±90 Hz 21: 480 ±190 Hz 22: 1155 ±25 Hz						
0e00ab	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XB	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ac	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XB	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ad	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ae	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00af	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XB	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.3 0e00b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00b0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XB	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b1	1st dial tone detection frequency pattern	7		-	0x08	0x35	0x13	XB	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1: 155 ±65 Hz 2: 375 ±125 Hz 3: 400 ±90 Hz 4: 400 ±100 Hz 5: 420 ±90 Hz 6: 425 ±75 Hz 7: 425 ±95 Hz 8: 425 ±125 Hz 9: 430 ±90 Hz 10: 435 ±85 Hz 11: 440 ±90 Hz 12: 445 ±125 Hz 13: 450 ±50 Hz 14: 450 ±70 Hz 15: 450 ±100 Hz 16: 450 ±120 Hz 17: 460 ±140 Hz 18: 465 ±205 Hz 19: 475 ±175 Hz 20: 480 ±90 Hz 21: 480 ±190 Hz 22: 1155 ±25 Hz					
		3							
		2							
		1							
		0							
0e00b2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XB	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	24
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e00b5	1st dial tone OFF time min. value	7 6 5 4 3 2 1 0	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	25
0e00b6	1st dial tone waiting time	7 6 5 4 3 2 1 0	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XB	26
0e00b7	1st dial tone instantaneous break detection time	7 6 5 4 3 2 1 0	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XB	27
0e00b8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XB	28
		6	Tone type 0: Single 1: Dual						
		5							
		4 3 2 1 0	2nd dial tone detection pattern 1: 155 ±65 Hz 2: 375 ±125 Hz 3: 400 ±90 Hz 4: 400 ±100 Hz 5: 420 ±90 Hz 6: 425 ±75 Hz 7: 425 ±95 Hz 8: 425 ±125 Hz 9: 430 ±90 Hz 10: 435 ±85 Hz 11: 440 ±90 Hz 12: 445 ±125 Hz 13: 450 ±50 Hz 14: 450 ±70 Hz 15: 450 ±100 Hz 16: 450 ±120 Hz 17: 460 ±140 Hz 18: 465 ±205 Hz 19: 475 ±175 Hz 20: 480 ±90 Hz 21: 480 ±190 Hz 22: 1155 ±25 Hz					
0e00b9	2nd dial tone detection time	7 6 5 4 3 2 1 0	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XB	29

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00ba	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XB	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XB	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bd	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XB	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00be	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XB	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bf	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XB	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1: 155 ±65 Hz 2: 375 ±125 Hz 3: 400 ±90 Hz 4: 400 ±100 Hz 5: 420 ±90 Hz 6: 425 ±75 Hz 7: 425 ±95 Hz 8: 425 ±125 Hz 9: 430 ±90 Hz 10: 435 ±85 Hz 11: 440 ±90 Hz 12: 445 ±125 Hz 13: 450 ±50 Hz						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			14: 450 ±70 Hz 15: 450 ±100 Hz 16: 450 ±120 Hz 17: 460 ±140 Hz 18: 465 ±205 Hz 19: 475 ±175 Hz 20: 480 ±90 Hz 21: 480 ±190 Hz 22: 1155 ±25 Hz						

5.25.4 0e00c#

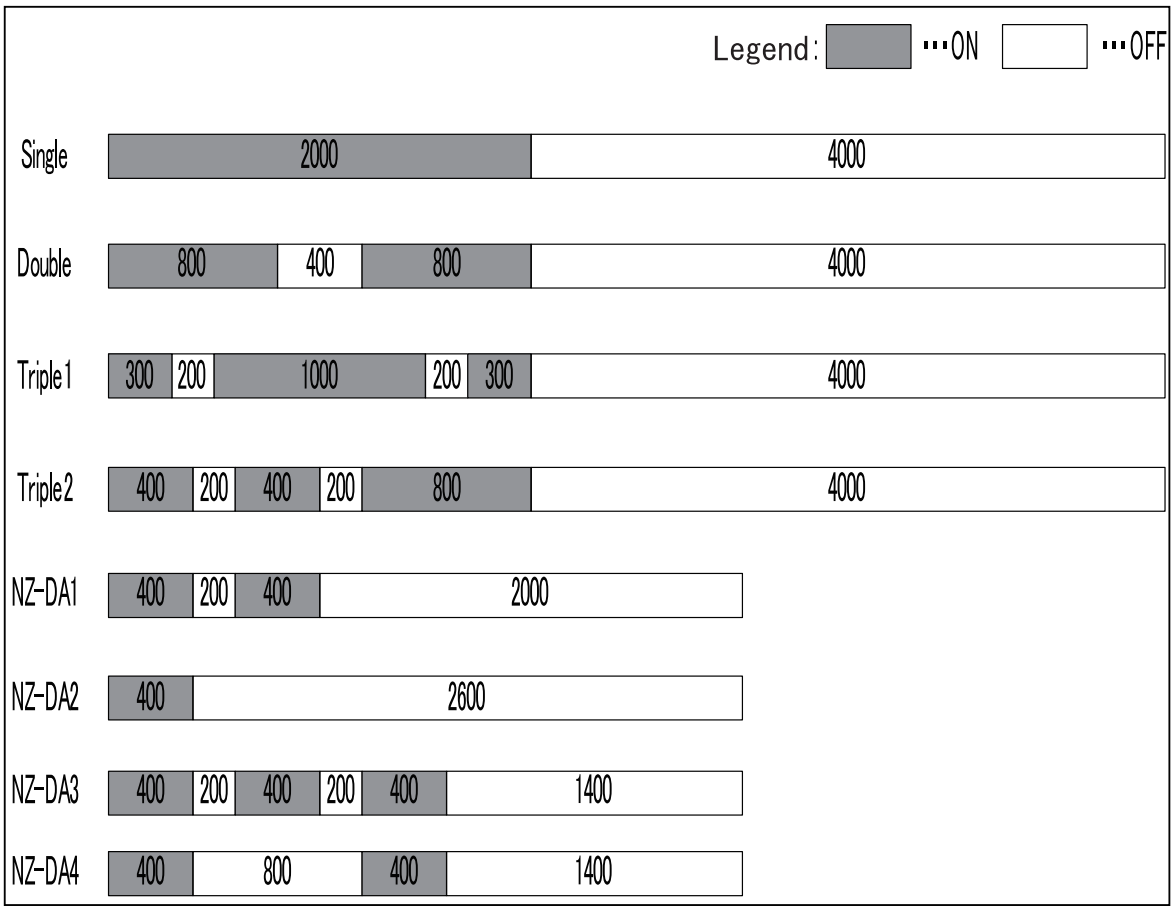
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00c0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XB	30
		6	Tone type 0:Single 1:Dual						
		5							
		4	Busy dial tone detection pattern 1: 155 ±65 Hz 2: 375 ±125 Hz 3: 400 ±90 Hz 4: 400 ±100 Hz 5: 420 ±90 Hz 6: 425 ±75 Hz 7: 425 ±95 Hz 8: 425 ±125 Hz 9: 430 ±90 Hz 10: 435 ±85 Hz 11: 440 ±90 Hz 12: 445 ±125 Hz 13: 450 ±50 Hz 14: 450 ±70 Hz 15: 450 ±100 Hz 16: 450 ±120 Hz 17: 460 ±140 Hz 18: 465 ±205 Hz 19: 475 ±175 Hz 20: 480 ±90 Hz 21: 480 ±190 Hz 22: 1155 ±25 Hz					
		3							
		2							
		1							
		0							
0e00c1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XB	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XB	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XB	33
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e00c4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XB	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XB	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Normal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e00c6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XB	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XB	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	38
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e00c9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XB	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ca	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XB	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XB	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XB	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ce	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cf	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3F
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							

- *1: DRPD standard time



5.25.5 0e00d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00d0	DRPD max. adjustment value for max. OFF time	7	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XB	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d1	DRPD min. adjustment value for max. OFF time	7	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XB	41
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d2	DRPD single ring stop detection time	7	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	42
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e00d3	DRPD double ring stop detection time	7	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	43
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XB	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XB	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XB	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XB	49
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e00da	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00db	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00dc	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00dd	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00de	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00df	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.6 0e00e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00e0	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XB	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e1	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XB	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e2	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XB	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e3	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XB	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e4	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XB	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e5	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XB	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e6	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XB	56
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e00e7	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XB	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e8	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XB	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e9	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XB	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ea	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XB	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00eb	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XB	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ec	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XB	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ed	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XB	5D
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e00ee	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XB	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ef	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XB	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.7 0e00f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00f0	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XB	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f1	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XB	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f2	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XB	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
		0							
0e00f3	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XB	63
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e00f4	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XB	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e00f5	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XB	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f6	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XB	66
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f7	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XB	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f8	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XB	68
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00f9	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XB	69
		6							
		5							
		4	Answer mode 0:OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e00fa-0e00fb	Remote reception password	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XB	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00fc	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XB	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00fd	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XB	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00fe	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ff	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XB	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.8 0e010#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0100	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0101	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XB	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0102	Caller ID signal waiting time	7	ID waiting time after Caller ID/DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XB	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0103	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XB	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0104	Normal/number display automatic line distinction function	7	Automatic judgment function 0:OFF 1: ON	-	0x83	0x00	0x00	XB	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0105	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XB	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0106-0e010f	Numeric ID [20]	7	ASCII [20]	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XB	76
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5	When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)						
		4							
		3							
		2							
		1							
		0							

5.25.9 0e011#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0110-0e0119	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XB	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e011a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XB	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e011b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XB	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e011c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XB	8C
		6	Auto transmission not available 0: Enable 1: Disable Manual RX						
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Inhibit						
0e011d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XB	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e011e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XB	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e011f	Limit of long size reception	7		-	0x00	0x00	0x00	XB	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.25.10 0e012#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0120	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XB	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0121	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XB	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0122	Voice response output level adjustment	7		-	0x62	0x62	0x62	XB	92
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0123	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XB	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0124 - 0e0129	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XB	94 - 99
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.11 0f000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0000	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	X2	00
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0001	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	X2	01
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0002	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	X2	02
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0003	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	X2	03
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0004	Reception coding method ability	7		-	0x1f	0x1f	0x1f	X2	04
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0005	Received document width ability	7		-	0x0e	0x0e	0x0e	X2	05
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0006	Received document length ability	7		-	0x46	0x46	0x46	X2	06
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0007	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	X2	07
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0008	Reception speed ability [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	08
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0009	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	X2	09
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f000a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	X2	0A
		6							
		5	V.34-336						
		4	V.34-312						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f000b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000f	Reception ECM ability	7		-	0x01	0x01	0x01	X2	0F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0:OFF 1: ON						

5.25.12 0f001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0010	Reception protocol ability	7		-	0x39	0x39	0x39	X2	10
		6							
		5	FAX-CSRC						
		4	V.8/V.34						
		3	DIAG						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0	G3S						
0f0011	Reception option frame ability	7		-	0x07	0x07	0x07	X2	11
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0012 - 0f001f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	12 - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.13 10000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100000	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	X2	40
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100001	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	X2	41
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100002	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	X2	42
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100003	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	X2	43
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	600 dpi						
100004	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	X2	44
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100005	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	X2	45
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100006	Transmission document length instruction	7		-	0x46	0x46	0x46	X2	46
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100007	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	X2	47
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100008	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	48
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100009	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	X2	49
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10000a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	X2	4A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	V.34-240						
		0	V.34-216						
10000b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000f	Transmission ECM instruction	7		-	0x01	0x01	0x01	X2	4F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.25.14 10001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100010	Transmission protocol instruction	7		-	0x11	0x11	0x11	X2	50
		6							
		5	FAX-CSRC						
		4	V.8/V.34						
		3	DIAG						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0	G3S						
100011	Transmission option frame instruction	7		-	0x00	0x00	0x00	X2	51
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100012 - 10001f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	52 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26 FAX setting (Address parameter list: for line 2)

5.26.1 0e01a#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01a0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XC	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e01a1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XC	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e01a2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XC	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
		0							
0e01a3	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	03
		6							
		5	Cable EQL transmission selection 00: OFF						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	01: Send only 10: Receive only 11: Send and receive						
		3							
		2							
		1	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
		0							
0e01a4	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point 00: Auto 01: 16-point 10: 4-point						
		0							
0e01a5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							
		1							
		0							
0e01a6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XC	06
		6							
		5							
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							
		0							
0e01a7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XC	07
		6	Overseas communication 0: No						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e01a8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XC	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e01a9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XC	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e01aa	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XC	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e01ab	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XC	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ac	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XC	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ad	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XC	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1 0	0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
0e01ae	V34 primary channel fallback	7 6 5 4 3 2 1 0	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XC	0E

5.26.2 0e01b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01b0	V34 off Rx-V34 off time after error	7 6 5 4 3 2 1 0	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XC	10
0e01b1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7 6 5 4 3 2 1 0	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XC	11
0e01b2	(Inhibit of) V34 off Rx-Function ON/ OFF	7 6 5 4 3 2		-	0x00	0x02	0x02	XC	12
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Inhibit						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disable						
0e01b3	JBIG parameter	7 6 5 4 3 2		-	0x01	0x01	0x01	XC	13
		1	Use of following FP JBIG option LO size at reduction						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e01b4	JBIG LO size	7 6 5 4 3 2 1 0	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XC	14
0e01b8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7 6 5 4 3 2		-	0x00	0x00	0x00	XC	18
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e01b9	JBIG off Rx-JBIG off time after error	7 6 5 4 3 2 1 0	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XC	19
0e01ba	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XC	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4 3 2 1 0	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e01bb	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XC	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01bc	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XC	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01bd	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01be	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01bf	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XC	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.3 0e01c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01c0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XC	20
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e01c1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XC	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e01c2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XC	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	25
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01c6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XC	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XC	27
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XC	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e01c9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XC	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ca	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XC	2A
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01cb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XC	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cd	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XC	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ce	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XC	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cf	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XC	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						

5.26.4 0e01d#

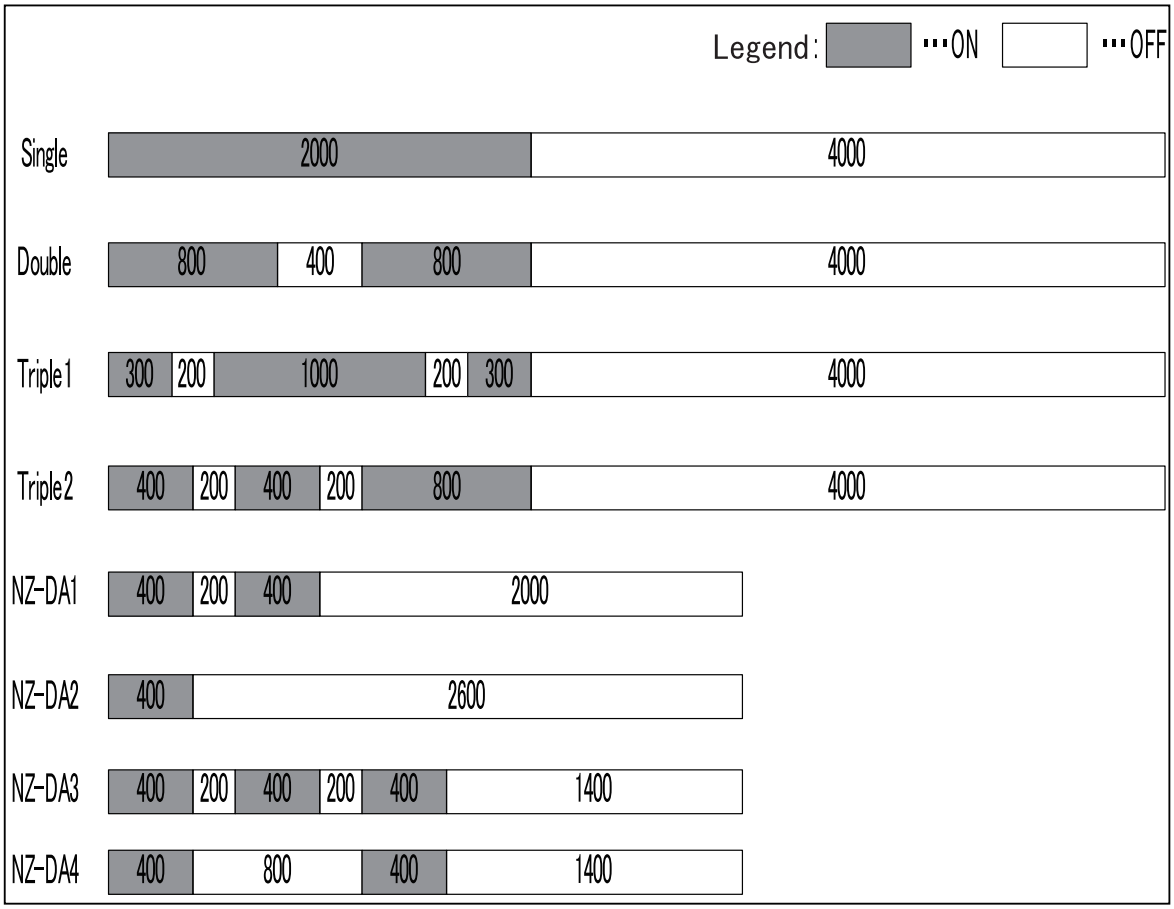
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01d0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XC	30
		6	Tone type 0: Single 1: Dual						
		5							
		4	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e01d1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XC	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XC	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XC	33
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e01d4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XC	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XC	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e01d6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XC	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XC	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	38
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01d9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XC	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01da	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XC	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01db	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XC	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01dc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XC	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01dd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01de	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01df	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3F
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.26.5 0e01e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01e0	DRPD max. adjustment value for max. OFF time	7	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XC	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e1	DRPD min. adjustment value for max. OFF time	7	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XC	41
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01e2	DRPD single ring stop detection time	7	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	42
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e3	DRPD double ring stop detection time	7	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	43
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XC	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XC	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XC	48
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e01e9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XC	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ea	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01eb	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ec	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ed	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ee	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ef	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4F
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							

5.26.6 0e01f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01f0	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XC	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f1	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XC	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f2	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XC	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f3	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XC	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f4	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XC	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f5	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XC	55
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01f6	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XC	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f7	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XC	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f8	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XC	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f9	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XC	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fa	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XC	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fb	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XC	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fc	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XC	5C
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e01fd	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XC	5D
		6							
		5							
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e01fe	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XC	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ff	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XC	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.7 0e020#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0200	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XC	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0201	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XC	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0202	Dial Mode RING DET mode	7		Utility Mode (0,1)	0x12	0x10	0x10	XC	62
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5 4	RING detection mode 01: No. of times 10: Time	Utility Mode Special Setting (4,5)					
		3 2	Pulse format 00: General 01: SW 10: NO						
		1 0	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
0e0203	1st/2nd DT detection parameter	7 6 5 4		-	0x00	0x00	0x00	XC	63
		3	At 2nd DT detection DP dialing only						
		2 1							
		0	1st DT2 type						
0e0204	Tone detection	7 6		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XC	64
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0205	No. of busy tone detection times	7 6 5 4 3 2 1 0	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XC	65
0e0206	No. of RING detection times	7 6 5 4 3 2 1 0	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XC	66
0e0207	RING detection time	7 6 5	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XC	67

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e0208	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XC	68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0209	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XC	69
		6							
		5							
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e020a-0e020b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XC	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XC	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XC	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e020f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XC	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.8 0e021#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0210	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0211	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XC	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0212	Caller ID signal waiting time	7	ID waiting time after Caller ID/DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XC	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0213	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XC	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0214	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XC	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e0215	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XC	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0216 - 0e021f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XC	76
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.9 0e022#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0220 - 0e0229	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XC	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e022a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XC	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e022b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XC	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e022c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XC	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Disable						
0e022d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XC	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e022e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XC	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e022f	Limit of long size reception	7		-	0x00	0x00	0x00	XC	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.26.10 0e023#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0230	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The	-	0x64	0x64	0x64	XC	90
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))						
		3							
		2							
		1							
		0							
0e0231	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XC	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0232	Voice response output level adjustment	7		-	0x62	0x62	0x62	XC	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0233	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XC	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0234 - 0e023C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XC	94 – 12C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e023D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XC	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
0e023E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XC	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e023F	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XC	12F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.11 0f002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0020	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	X2	20
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0021	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	X2	21
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0022	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	X2	22
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0023	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	X2	23
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0024	Reception coding method ability	7		-	0x1f	0x1f	0x1f	X2	24
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0025	Received document width ability	7		-	0x0e	0x0e	0x0e	X2	25
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0026	Received document length ability	7		-	0x46	0x46	0x46	X2	26
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0027	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	X2	27
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0028	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	X2	28
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0029	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	X2	29
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	V.34-48						
		0	V.34-24						
0f002a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	X2	2A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f002b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002f	Reception ECM ability	7		-	0x01	0x01	0x01	X2	2F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.26.12 0f003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0030	Reception protocol ability	7		-	0x11	0x11	0x11	X2	30
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
0f0031	Reception option frame ability	7		-	0x07	0x07	0x07	X2	31
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0032 - 0f003f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	32 - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.13 10002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100020	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	X2	60
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100021	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	X2	61
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100022	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	X2	62
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100023	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	X2	63
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100024	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	X2	64
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100025	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	X2	65
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100026	Transmission document length instruction	7		-	0x46	0x46	0x46	X2	66
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100027	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	X2	67
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100028	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	68
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100029	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	X2	69
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	V.34-48						
		0	V.34-24						
10002a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	X2	6A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10002b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002f	Transmission ECM instruction	7		-	0x01	0x01	0x01	X2	6F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.26.14 10003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100030	Transmission protocol instruction	7		-	0x11	0x11	0x11	X2	70
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
100031	Transmission option frame instruction	7		-	0x00	0x00	0x00	X2	71
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100032 - 10003f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	72 - 7F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27 FAX setting (Address parameter list: for line 3)

5.27.1 0e02b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02b0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XF	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e02b1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XF	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e02b2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XF	02
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1 0	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
0e02b3	Cable equalizer	7 6		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	03
		5 4	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		3 2							
		1 0	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
0e02b4	V34 Points	7 6 5 4 3 2		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	04
		1 0	V34 Point 00: Auto 01: 16-point 10: 4-point						
0e02b5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2 1 0							
0e02b6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7 6 5	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XF	06
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX)						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	0 to -15 dBm						
		1							
		0							
0e02b7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XF	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e02b8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XF	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e02b9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XF	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e02ba	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XF	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e02bb	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XF	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02bc	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XF	0C
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e02bd	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XF	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e02be	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XF	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.2 0e02c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02c0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XF	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XF	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c2	(Inhibit of) V34 off Rx-Function ON/ OFF	7		-	0x00	0x02	0x02	XF	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Disabled						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disabled						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02c3	JBIG parameter	7		-	0x01	0x01	0x01	XF	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e02c4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XF	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XF	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e02c9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XF	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ca	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XF	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz					
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e02cb	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XF	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cc	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XF	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cd	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ce	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cf	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XF	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.3 0e02d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02d0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XF	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XF	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e02d2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XF	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	24
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e02d5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	25
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XF	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XF	27
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XF	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e02d9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XF	29
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e02da	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XF	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02db	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02dc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XF	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02dc	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XF	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02de	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XF	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02df	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XF	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						

5.27.4 0e02e#

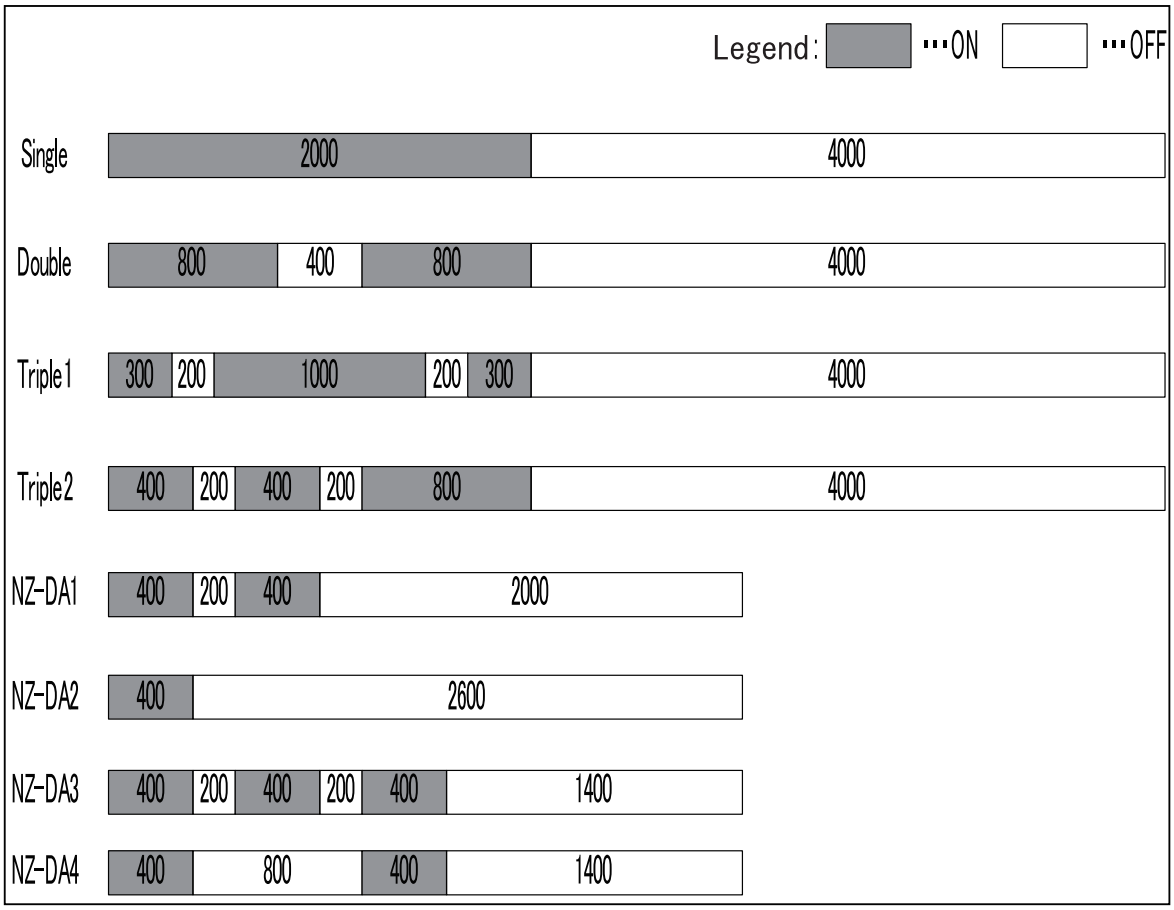
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02e0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XF	30
		6	Tone type 0: Single 1: Dual						
		5							
		4	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e02e1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XF	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XF	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02e3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XF	33
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XF	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XF	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e02e6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XF	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XF	37
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e02e8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XF	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ea	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XF	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02eb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XF	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ec	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XF	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ed	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ee	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3E
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e02ef	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.27.5 0e02f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02f0	DRPD max. adjustment value for max. OFF time	7	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XF	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02f1	DRPD min. adjustment value for max. OFF time	7	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XF	41
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f2	DRPD single ring stop detection time	7	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	42
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f3	DRPD double ring stop detection time	7	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	43
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XF	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XF	47
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e02f8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XF	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XF	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fa	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fb	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fc	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fd	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fe	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4E
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e02ff	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.6 0e030#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0300	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XF	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0301	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XF	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0302	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XF	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0303	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XF	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0304	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XF	54
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e0305	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XF	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0306	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XF	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0307	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XF	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0308	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XF	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0309	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XF	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030a	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XF	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030b	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XF	5B
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e030c	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XF	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030d	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XF	5D
		6							
		5							
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e030e	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XF	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030f	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XF	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.7 0e031#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0310	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XF	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0311	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XF	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0312	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XF	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
		0							
0e0313	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XF	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e0314	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XF	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0315	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XF	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0 e0316	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XF	66
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0317	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XF	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0318	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XF	68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0319	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XF	69
		6							
		5							
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e031a-0 e031b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XF	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XF	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XF	6D
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e031e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XF	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.8 0e032#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0320	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0321	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XF	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0322	Caller ID signal waiting time	7	ID waiting time after Caller ID/DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XF	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0323	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XF	73
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0324	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XF	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0325	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XF	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0326 - 0e032f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XF	76
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.9 0e033#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0330 - 0e0339	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XF	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e033a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XF	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e033b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XF	8B

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e033c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XF	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Disable						
0e033d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XF	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e033e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XF	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e033f	Limit of long size reception	7		-	0x00	0x00	0x00	XF	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			0: Limit 1: Unlimited						

5.27.10 0e034#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0340	Max. size of long original received (In the case of 400 dpi or less)	7 6 5 4 3 2 1 0	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XF	90
0e0341	Max. size of long original received (In the case of 600 dpi)	7 6 5 4 3 2 1 0	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XF	91
0e0342	Voice response output level adjustment	7 6 5 4 3 2 1 0	Voice response volume (HEX) 0000: min - 1111: max	-	0x62	0x62	0x62	XF	92
0e0343	Monitor speaker (Received signal sound)	7 6 5 4 3 2 1 0	Speaker volume (HEX) (0-8)	Utility Mode (0-4)	0x04	0x04	0x04	XF	93
0e0344 - 0e034C	Reserved area	7 6 5 4 3 2 1 0		-	ALL 0x00	ALL 0x00	ALL 0x00	XF	94 – 12C
0e034D	Timer for adjusting PhaseB retransmission interval (V.17)	7 6 5 4	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s PhaseB re-transmission interval at manual sending	-	0x00	0x00	0x00	XF	12D

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e034E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XF	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e034F	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XF	12F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.11 0f004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0040	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	XH	00
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0041	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	XH	01
		6							
		5							
		4							
		3							
		2	(1200 dpi)						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	800 dpi						
		0	600 dpi						
0f0042	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	XH	02
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0043	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	XH	03
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0044	Reception coding method ability	7		-	0x1f	0x1f	0x1f	XH	04
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0045	Received document width ability	7		-	0x0e	0x0e	0x0e	XH	05
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0046	Received document length ability	7		-	0x46	0x46	0x46	XH	06
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0047	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	XH	07
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0048	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	XH	08
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0049	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	XH	09
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f004a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	XH	0A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f004b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004f	Reception ECM ability	7		-	0x01	0x01	0x01	XH	0F
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.27.12 0f005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0050	Reception protocol ability	7		-	0x11	0x11	0x11	XH	10
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
0f0051	Reception option frame ability	7		-	0x07	0x07	0x07	XH	11
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0052 - 0f005f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	12 - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.13 10004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100040	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	XH	40
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100041	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	XH	41
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100042	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	XH	42
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100043	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	XH	43
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100044	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	XH	44
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100045	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	XH	45
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100046	Transmission document length instruction	7		-	0x46	0x46	0x46	XH	46
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100047	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	XH	47
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100048	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	XH	48
		6	V.17-120						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100049	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	XH	49
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10004a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	XH	4A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10004b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
10004f	Transmission ECM instruction	7		-	0x01	0x01	0x01	XH	4F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.27.14 10005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100050	Transmission protocol instruction	7		-	0x11	0x11	0x11	XH	50
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
100051	Transmission option frame instruction	7		-	0x00	0x00	0x00	XH	51
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100052 - 10005f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	52 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28 FAX setting (Address parameter list: for line 4)

5.28.1 0e03c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03c0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XG	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e03c1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XG	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e03c2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XG	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
		0							
0e03c3	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	03
		6							
		5	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		4							
		3							
		2							
		1	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
		0							
0e03c4	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point 00: Auto 01: 16-point 10: 4-point						
		0							
0e03c5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							
		1							
		0							
0e03c6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XG	06
		6							
		5							
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							
		0							
0e03c7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XG	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e03c8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XG	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e03c9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XG	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e03ca	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XG	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03cb	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XG	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03cc	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XG	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03cd	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XG	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e03ce	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XG	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.2 0e03d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03d0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XG	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03d1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XG	11
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e03d2	(Inhibit of) V34 off Rx-Function ON/ OFF	7		-	0x00	0x02	0x02	XG	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Inhibit						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disable						
0e03d3	JBIG parameter	7		-	0x01	0x01	0x01	XG	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e03d4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XG	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03d8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XG	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e03d9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XG	19
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e03da	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XG	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e03db	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XG	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03dc	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XG	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03dd	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03de	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	1E
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e03df	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XG	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.3 0e03e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03e0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XG	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XG	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e03e2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XG	22
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e03e3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	25
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XG	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XG	27
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XG	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e03e9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XG	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ea	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XG	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03eb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ec	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XG	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ed	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XG	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ee	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XG	2E
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e03ef	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XG	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							

5.28.4 0e03f#

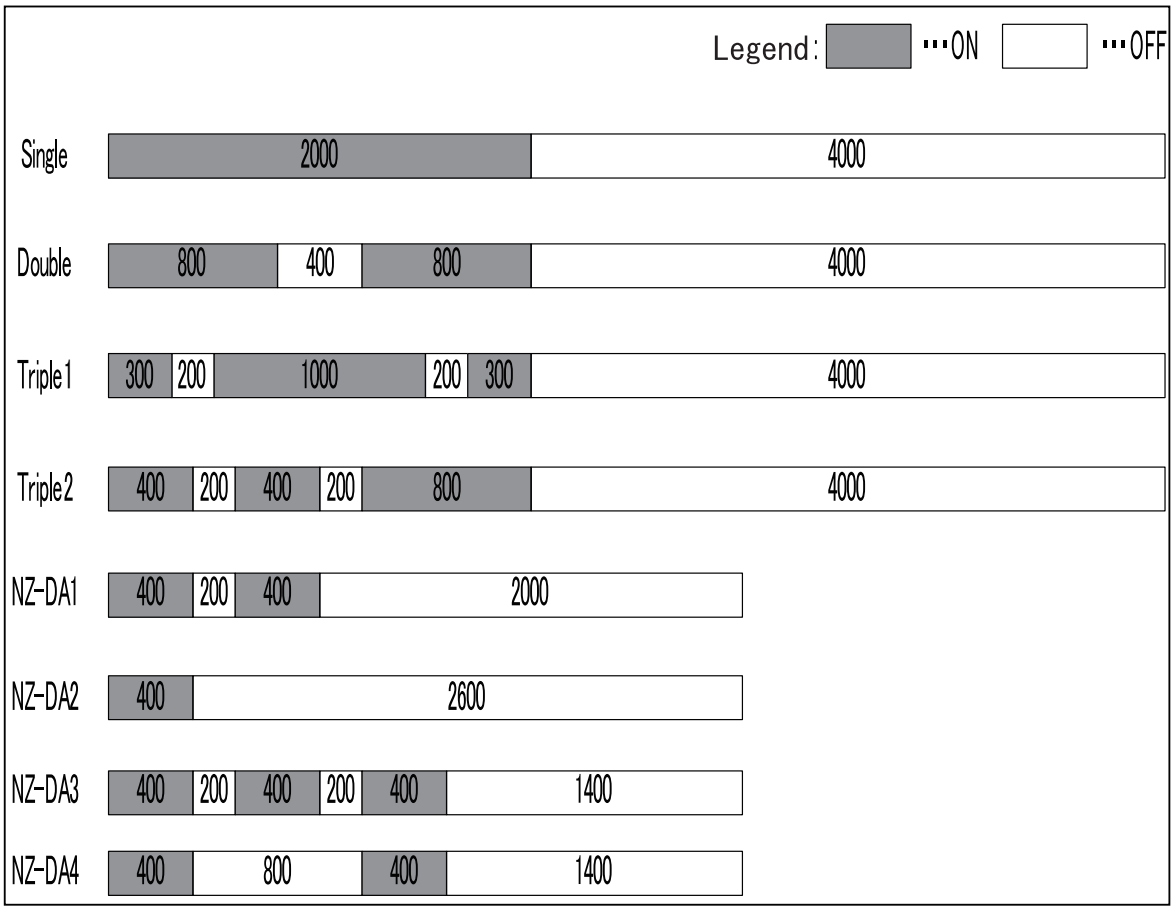
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03f0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XG	30
		6	Tone type 0: Single 1: Dual						
		5							
		4	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			22:400±75Hz 23:550±100Hz						
0e03f1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XG	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XG	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XG	33
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XG	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XG	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet						
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			*Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
0e03f6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XG	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XG	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03f9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XG	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fa	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XG	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XG	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XG	3C
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e03fd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fe	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ff	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.28.5 0e040#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0400	DRPD max. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XG	40
0e0401	DRPD min. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XG	41
0e0402	DRPD single ring stop detection time	7 6 5 4 3 2 1 0	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	42
0e0403	DRPD double ring stop detection time	7 6	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	43

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e0404	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0405	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0406	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XG	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0407	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XG	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0408	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XG	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0409	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XG	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e040a	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040b	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040c	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040d	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040e	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040f	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.6 0e041#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0410	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XG	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0411	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XG	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0412	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XG	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0413	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XG	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0414	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XG	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0415	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XG	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0416	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XG	56
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e0417	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XG	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0418	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XG	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0419	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XG	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041a	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XG	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041b	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XG	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041c	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XG	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041d	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XG	5D
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e041e	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XG	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041f	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XG	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.7 0e042#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0420	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XG	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0421	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XG	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0422	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XG	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps						
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			10: 20pps 11: 16pps						
0e0423	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XG	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e0424	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XG	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0425	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XG	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0426	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XG	66
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0427	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XG	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0428	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XG	68
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e0429	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XG	69
		6							
		5							
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e042a-0e042b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XG	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XG	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XG	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XG	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.8 0e043#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0430	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0431	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XG	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0432	Caller ID signal waiting time	7	ID waiting time after Caller ID/DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XG	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0433	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XG	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0434	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XG	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0435	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XG	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0436 - 0e043f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XG	76
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.9 0e044#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0440 - 0e0449	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XG	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e044a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XG	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e044b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XG	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e044c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XG	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
			1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Disable						
0e044d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XG	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e044e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XG	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e044f	Limit of long size reception	7		-	0x00	0x00	0x00	XG	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.28.10 0e045#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0450	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XG	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0 e0451	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XG	91
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e0452	Voice response output level adjustment	7		-	0x62	0x62	0x62	XG	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0453	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XG	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0454 - 0e045C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XG	94 – 12C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e045D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XG	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e045E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XG	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1 0	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
0e045F	Reserved area	7 6 5 4 3 2 1 0		-	ALL 0x00	ALL 0x00	ALL 0x00	XG	12F

5.28.11 0f006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0060	Reception main scan line resolution ability [0]	7 6 5 4 3 2 1 0	400 dpi 300 dpi 200 dpi 16 pels/mm 8 pels/mm 	-	0xaa	0xaa	0xaa	XH	20
0f0061	Reception main scan line resolution ability [1]	7 6 5 4 3 2 1 0	 (1200 dpi) 800 dpi 600 dpi	-	0x01	0x01	0x01	XH	21
0f0062	Reception sub scanning resolution ability [0]	7 6 5 4 3 2 1 0	400 dpi 300 dpi 200 dpi 100 dpi 15.4 l/mm 7.7 l/mm 3.85 l/mm	-	0xbb	0xbb	0xbb	XH	22
0f0063	Reception sub scanning resolution ability [1]	7 6 5 4 3 2 1 0	 (1200 dpi) 800 dpi 600 dpi	-	0x01	0x01	0x01	XH	23
0f0064	Reception coding method ability	7 6 5 4	 (JPEG) JBIG	-	0x1f	0x1f	0x1f	XH	24

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0065	Received document width ability	7		-	0x0e	0x0e	0x0e	XH	25
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0066	Received document length ability	7		-	0x46	0x46	0x46	XH	26
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0067	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	XH	27
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0068	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	XH	28
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0069	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	XH	29
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f006a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	XH	2A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f006b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2B
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0f006c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006f	Reception ECM ability	7		-	0x01	0x01	0x01	XH	2F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.28.12 0f007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0070	Reception protocol ability	7		-	0x11	0x11	0x11	XH	30
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0071	Reception option frame ability	7		-	0x07	0x07	0x07	XH	31
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0072 - 0f007f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	32 - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.13 10006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100060	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	XH	60
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100061	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	XH	61
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100062	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	XH	62
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100063	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	XH	63
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100064	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	XH	64
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100065	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	XH	65
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100066	Transmission document length instruction	7		-	0x46	0x46	0x46	XH	66
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100067	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	XH	67
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100068	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	XH	68
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100069	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	XH	69
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10006a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	XH	6A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						

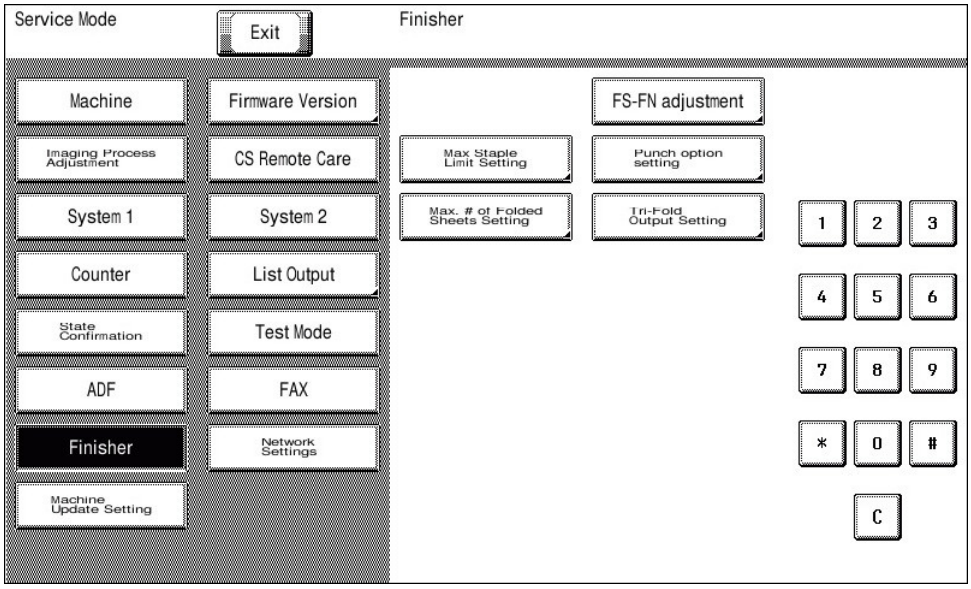
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	V.34-240						
		0	V.34-216						
10006b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006f	Transmission ECM instruction	7		-	0x01	0x01	0x01	XH	6F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.28.14 10007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100070	Transmission protocol instruction	7		-	0x11	0x11	0x11	XH	70
		6							
		5							
		4	V.8/V.34						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0	G3S						
100071	Transmission option frame instruction	7		-	0x00	0x00	0x00	XH	71
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100072 - 10007f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	72 - 7F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.29 Finisher

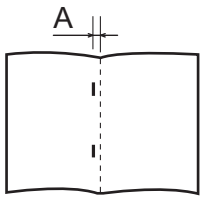


5.29.1 FS-FN adjustment - Center Staple Position (FS-534SD/FS-536SD/FS-537SD)

(1) Use

- Adjust the stapling position for each paper size when printing with the center staple function.
- To adjust the center staple position by making the staple position match the folding position.

(2) Setting range



- Width A should fall within the following target.

Target	0 ± 1.0 mm

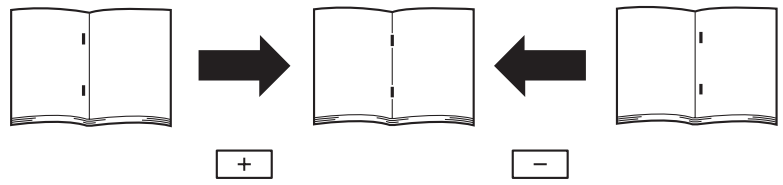
Setting range	-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

NOTE

- **After [Half-Fold Position] adjustment, make this [Center Staple Position] adjustment.**

1. Place five sheets of originals on the DF.
2. Make a set of copy in the saddle stitching mode.
3. Check the amount of horizontal deviation (width A) between the staple and the half fold positions on the set of copy.
4. If width A is out of the target, make the following adjustment.
5. Call the Service Mode to the screen.
6. Touch [Finisher] -> [FS-FN adjustment] -> [Center Staple Position].
7. Touch the paper size where staple position is adjusted.
8. Look at the copy and adjust the staple position with the [+] / [-] key.



NOTE

- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

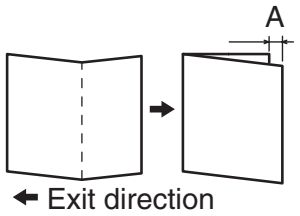
9. Touch [Test Copy].
10. Select the tray loading paper for the test copy.
11. Touch [3].
12. Touch [Fold & Staple], and press the start key.
13. Check the staple positions deviate.
14. Touch [END] to return to the adjustment screen.
15. Touch [OK] twice.
16. Touch [Exit] on the Service Mode screen.

5.29.2 FS-FN adjustment - Half-Fold Position (FA-534SD/FS-536SD/FS-537SD)

(1) Use

- Use this adjustment to adjust the half-fold position in half-fold printing.

(2) Setting range

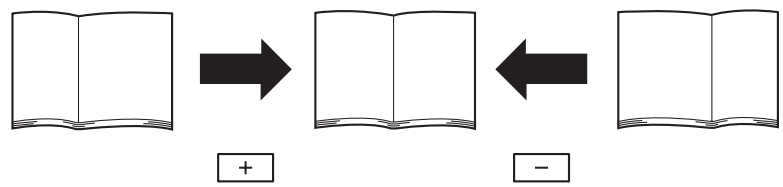


- Width A should fall within the following target.

Target	A = Less than 1.0 mm
Setting range	-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

1. Place two sheets of originals on the ADF.
2. Make a copy in the folding mode.
3. Fold the copies along the crease.
4. Measure the amount of width A.
5. If width A is out of the target, make the following adjustment.
6. Call the Service Mode to the screen.
7. Touch [Finisher] -> [FS-FN adjustment] -> [Half-Fold Position].
8. Touch the paper size where half-fold position is adjusted.
9. Look at the copy and adjust the half-fold position with the [+] / [-] key.



NOTE

- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

10. Touch [Test Copy].

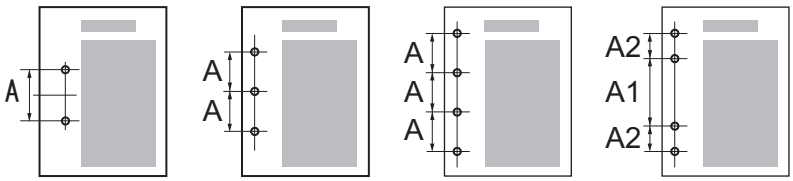
11. Select the tray loading paper for the test copy.
12. Touch [3].
13. Touch [Half-Fold], and press the start key.
14. Check the crease positions deviate.
15. Touch [END] to return to the adjustment screen.
16. Touch [OK] twice.
17. Touch [Exit] on the Service Mode screen.

5.29.3 FS-FN adjustment - Punch Centering Fine Adj (PK-523)

(1) Use

- Adjusts the vertical position of the punch holes.

(2) Setting range



- The positions of the punch holes relative to the center in the paper feeding direction should fall within the following target.

Target	2-4 hole	• The distance A between holes: 80 mm * • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (2 hole)	• The distance A between holes: 70 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (3 hole)	• The distance A between holes:108 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	SWE4 hole	• The distance A1 between holes: 70 mm* • The distance A2 between holes: 21 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
Setting range	-5.0 mm to +5.0 mm (1 step: 0.1 mm)	

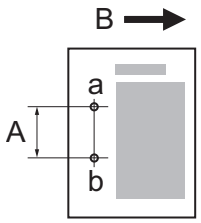
- ***: It is not possible to adjust the A value of the distance between holes.**

(3) Procedure

NOTE

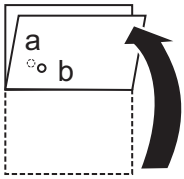
- **Following describe an exemplary case in which the number of punch holes is two. Perform the same adjustment procedure for other numbers of holes.**

1. Make a 1sided copy sample in the punch mode. Face the printed surface upward.

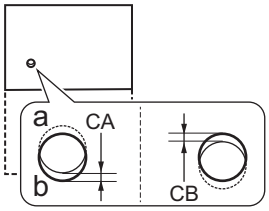


[A] The distance between holes
[B] Paper feeding direction
[a] Upper punch hole
[b] Lower punch hole

2. Fold the paper in half along the center in the paper feeding direction.

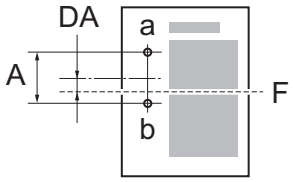


3. Measure the deviation amount [C] between punch holes [a] and [b].



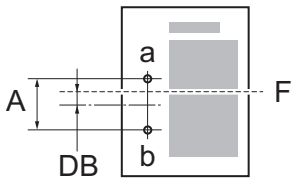
4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 3 mm ÷ 2 = -1.5 mm (hole positions deviate upward)

   Ex.1



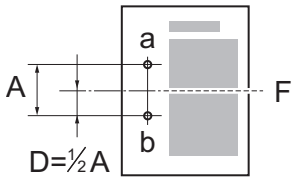
5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 3 mm ÷ 2 = +1.5 mm (hole positions deviate downward)

   Ex.2

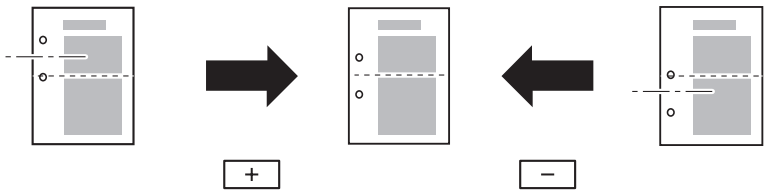


6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±1.0 mm or less).
   - Ex.3: Punch hole deviation amount [D] = Measured value [C] 0 mm ÷ 2 = 0 mm (punch hole deviation amount falls within the target)

   Ex.3



7. Call the Service Mode to the screen.
8. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Centering Fine Adj].
9. Touch the paper size where punch centering is adjusted.
10. Look at the copy and adjust the punch centering with the [+] / [-] key.
    - To move the hole position downward: Enter the value of [+]
    - To move the hole position upward: Enter the value of [-]



NOTE
- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

11. Touch [Test Copy].
12. Select the tray loading paper for the test copy.
13. Touch [3].
14. Select the number of punch holes in the “Punch” list, and then press the start key.
15. Check the punch hole positions.
16. Touch [END] to return to the adjustment screen.
17. Touch [OK] twice.
18. Touch [Exit] on the Service Mode screen.

5.29.4 FS-FN adjustment - Punch F. Sensor Intensity Adj. (PK-523)

(1) Use

- Adjusts the sensitivity (light intensity) of the PK punch front sensor of the punch kit.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch F. Sensor Intensity Adj.].
3. Touch Start key.
4. Confirm that the result is OK.

   NOTE
   - **When NG appears, check whether the punch kit is properly installed.**

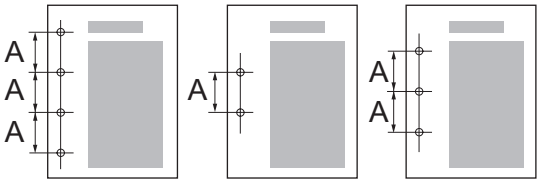
5. Touch [OK] twice.
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.29.5 FS-FN adjustment - Punch vertical position (Z-fold) (ZU-609/PK-523)

(1) Use

- To adjust the position of the punch hole in the vertical direction when ZU-609 is in use.

(2) Setting range



- The positions of the punch holes relative to the center in the paper feeding direction should fall within the following target.

Target	2-4 hole	• The distance A between holes: 80 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (2 hole)	• The distance A between holes:70 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (3 hole)	• The distance A between holes:108 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
Setting range	-5.0 mm to +5.0 mm (1step: 0.1 mm)	

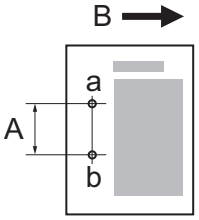
- *** It is not possible to adjust the A value of the distance between holes.**

(3) Procedure

NOTE

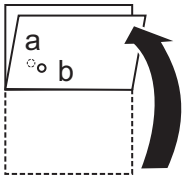
- **Following describe an exemplary case in which the number of punch holes is two. Perform the same adjustment procedure for other numbers of holes.**

1. Make a 1 sided copy sample in the punch mode (when PK-523 is mounted, select Z-fold + punch mode). Face the printed surface upward.

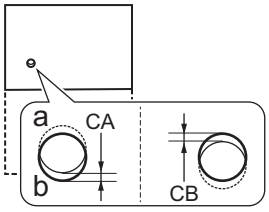


[A] The distance between holes
[B] Paper feeding direction
[a] Upper punch hole
[b] Lower punch hole

2. Fold the paper in half along the center in the paper feeding direction.

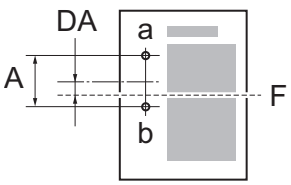


3. Measure the deviation amount [C] between punch holes [a] and [b].



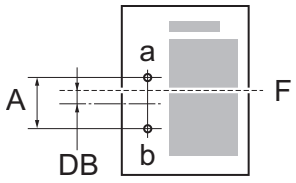
4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 7 mm÷2 = - 3.5mm (hole positions deviate upward)

Ex.1



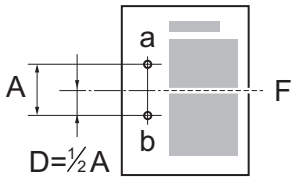
5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 7 mm÷2 = +3.5mm (hole positions deviate downward)

Ex.2

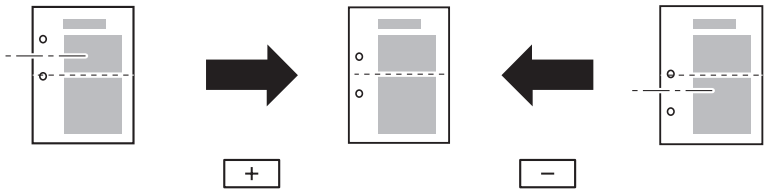


6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±3.0 mm or less).
   - Ex.3: Punch hole deviation amount [D] = Measured value [C] 0mm÷2 = 0 (punch hole deviation amount falls within the target)

Ex.3



7. Call the Service Mode to the screen.
8. Touch [Finisher] -> [FS-FN adjustment] -> [Punch vertical position (Z-fold)].
9. Make the setting using [+] or [-].
   - To move the hole position downward: Enter the value of [+]
   - To move the hole position upward: Enter the value of [-]



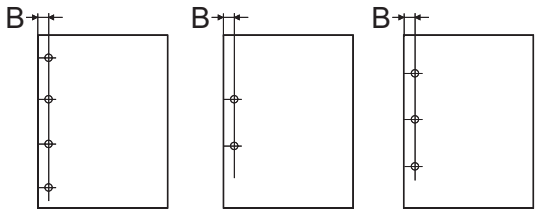
10. Touch [Test Copy].
11. Select the tray loading paper for the test copy.
12. Touch [3].
13. Touch [Z-Fold].
14. Select the number of punch holes in the “Punch” list, and then press the start key.
15. Check the punch hole positions.
16. Touch [END] to return to the adjustment screen.
17. Touch [OK] twice.
18. Touch [Exit] on the Service Mode screen.

5.29.6 FS-FN adjustment - Punch horizontal position (Z-fold) (ZU-609/PK-523)

(1) Use

- To adjust the position of the punch hole in the horizontal direction when ZU-609 is in use.

(2) Setting range



- Width B should fall within the following target.

Target	2 - 4 hole	B = 11.0 mm ± 3.0 mm
	2 - 3 hole	B = 9.5 mm ± 3.0 mm
	4 hole	B = 10.5 mm ± 3.0 mm
Setting range	-5.0 mm to +5.0 mm (Step = 0.1 mm)	

(3) Procedure

1. Make a copy sample in the punch mode.
2. Check to see if the width from the paper end to the center of the punch hole in the copy sample falls within the target. Complete the adjustment, if the measured value falls within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [Punch horizontal position (Z-fold)].
5. Make the setting using [+] or [-].

- To make width B greater: Enter the value of [+]
- To make width B smaller: Enter the value of [-]

6. Touch [Test Copy].
7. Select the tray loading paper for the test copy.
8. Touch [3].
9. Touch [Z-Fold].
10. Select the number of punch holes in the “Punch” list, and then press the start key.
11. Check the punch hole positions.
12. Touch [END] to return to the adjustment screen.
13. Touch [OK] twice.
14. Touch [Exit] on the Service Mode screen.
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.29.7 FS-FN adjustment - Resist loop size (Z-fold) (ZU-609)

(1) Use

- Adjust the size of the punch resist loop that is applied when ZU-609 operates.
- Used when tilted punched hole position or wrinkled paper occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Resist loop size (Z-fold)].
3. Touch the paper type where resist loop size is adjusted.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Z-Fold].
9. Select the number of punch holes in the “Punch” list, and then press the start key.
10. Check the punch hole positions.
11. Touch [END] to return to the adjustment screen.
12. Touch [OK] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
15. Make copies in the punch mode again and check that the punch hole positions have been adjusted properly.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

5.29.8 FS-FN adjustment - Punch Registration Loop Adj (PK-523)

(1) Use

- To correct the tilt of paper (change the loop amount) before punching operation. (paper conveyed from MFP).
- To address problems such as misaligned punch holes, wrinkled paper, and jam at the punch registration section.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Registration Loop Adj].
3. Touch the paper type where punch regist loop size is adjusted.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [OK] twice.
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

5.29.9 FS-FN adjustment - Punch Resist Loop Size (PI) (PI-507/PK-523)

(1) Use

- To correct the tilt of paper (change the loop amount) before punching operation. (paper conveyed from post inserter).
- To address problems such as misaligned punch holes, wrinkled paper, and jam at the punch registration section.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Regist Loop Size (PI)].
3. Touch [Upper] or [Lower].
4. Select a type of paper where adjustment is made.
5. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
6. Touch [OK] twice.

7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

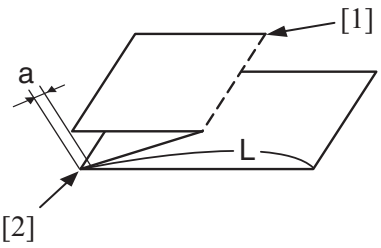
5.29.10 FS-FN adjustment - 1st Z-Fold Position/2nd Z-Fold Position (ZU-609)

(1) Use

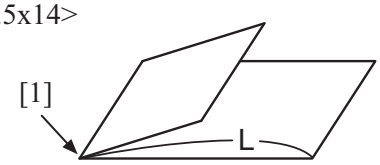
- To adjust the positions of the 1st Z-fold and 2nd Z-fold for the Z-fold mode.

(2) Setting range

<11x17, A3,B4,8K>



<8.5x14>



[1]	Position of the first fold	[2]	Position of the second fold
[L]	Length of the first fold	[a]	Length of the second fold

- Widths “a” and “L” should fall within the following target.

Target	11 x 17	• Length a: 4.0 mm ± 2.0 mm • Length L: 215 mm +0/-7.0 mm
	A3	• Length a: 4.0 mm ± 2.0 mm • Length L: 209 mm +0/-7.0 mm
	B4	• Length a: 4.0 mm ± 2.0 mm • Length L: 181 mm +0/-7.0 mm
	8.5 x 14*	• Length L: 278 mm +0/-7.0 mm
	8K	• Length a: 4.0 mm ± 2.0 mm • Length L: 194 mm +0/-7.0 mm
Setting range	-12.8 mm to +12.7 mm (Step = 0.1 mm)	

- *: 8.5 x 14 is available for only an half fold.

(3) Procedure

1. Make copies in the Z-fold mode.
2. Check whether the Z-fold widths "a" and “L” of ejected copy samples are within the target. Complete the adjustment, if the measured values fall within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [1st Z-Fold Position] or [2nd Z-Fold Position].
5. Select [ALL] and make the setting using [+] or [-].
   - To increase the length of the 1st fold (L) or 2nd fold (a), enter a negative value with [+] key.
   - To decrease the length of the 1st fold (L) or 2nd fold (a), enter a positive value with [-] key.

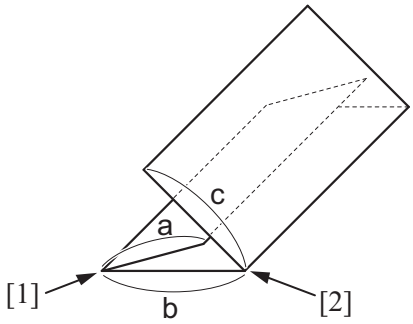
   NOTE
   - **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**
   - **Width “a” should not be 2 mm or less.**
6. Touch [Test Copy].
7. Select the tray loading paper for the test copy.
8. Touch [3].
9. Touch [Z-Fold], and press the start key.
10. Check the displacement of "width a" and "width L" on the fed out copies.
11. Touch [END] to return to the adjustment screen.
12. Touch [OK] twice.
13. Touch [Exit] on the Service Mode screen.

5.29.11 FS-FN adjustment - 1st Tri-Fold Adjustment/2nd Tri-Fold Adjustment (FS-534SD/FS-536SD/FS-537SD)

(1) Use

- To adjust the positions of the 1st Tri-fold and 2nd Tri-fold for the Tri-fold printing.

(2) Setting range



[1] Position of the first tri-fold	[2] Position of the second tri-fold

- Check whether the tri-fold widths "a" and "b" of the ejected paper are within the target.

Target	A4S	Length a: 95 mm ± 2 mm Length b: 102 mm ± 2 mm
	8.5 x 11S	Length a: 89.4 mm ± 2 mm Length b: 96.0 mm ± 2 mm
	16KS	Length a: 88 mm ± 2 mm Length b: 92 mm ± 2 mm
Setting range		-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

- Make copies in the tri-fold mode.
- Check whether the tri-fold widths "a" and "b" of ejected copy samples are within the target. Complete the adjustment, if the measured values fall within the target.

(a) If the width "a" is out of the target:

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [1st Tri-Fold Adjustment].
3. Select a paper size where the tri-fold position needs adjustment.
4. While checking the copy samples, touch [+] or [-] to adjust the tri-fold position.
   - To increase the width a, enter a positive value with [+].
   - To decrease the width a, enter a negative value with [-].
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Tri-Fold], and press the start key.
9. Check displacement of the fold position on the fed out copies.
10. Touch [END] to return to the adjustment screen.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

(b) If the width "b" is out of the target:

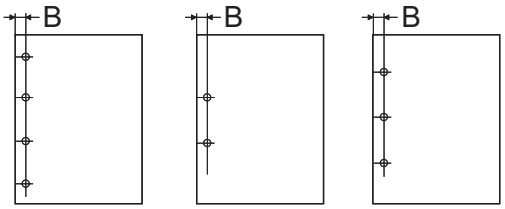
1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [2nd Tri-Fold Adjustment].
3. Select a paper size where the tri-fold position needs adjustment.
4. While checking the copy samples, touch [+] or [-] to adjust the tri-fold position.
   - To increase the width b, enter a positive value with [+].
   - To decrease the width b, enter a negative value with [-].
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Tri-Fold], and press the start key.
9. Check displacement of the fold position on the fed out copies.
10. Touch [END] to return to the adjustment screen.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

5.29.12 FS-FN adjustment - Punch Edge Adj (PK-520/PK-523)

(1) Use

- To change the horizontal position of the punch holes.

(2) Setting range

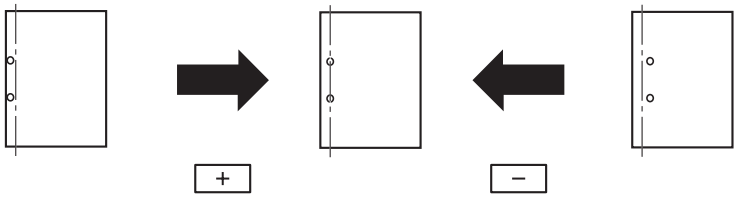


- Width B should fall within the following target.

Target	9.5 mm ± 1.0 mm (2-3 hole), 11.0 mm ± 1.0 mm (2-4 hole), 10.5 mm ± 1.0 mm (SWE4 hole)
Setting range	-5.0 mm to +5.0 mm (1 step: 0.1 mm)

(3) Procedure

1. Make a copy sample in the punch mode.
2. Make an adjustment so that the width B is within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Edge Adj].
5. Touch the paper type where punch horizontal position is adjusted.
6. Look at the copy and adjust the punch horizontal position with the [+] / [-] key.
   - To make width B greater: Enter the value of [+]
   - To make width B smaller: Enter the value of [-]



7. Touch [Test Copy].
8. Select the tray loading paper for the test copy.
9. Touch [3].
10. Select the number of punch holes in the “Punch” list, and then press the start key.
11. Check the punch hole positions.
12. Touch [END] to return to the adjustment screen.
13. Touch [OK] twice.
14. Touch [Exit] on the Service Mode screen.

5.29.13 FS-FN adjustment - Punch Regist Loop Size (PK-519/PK-520)

(1) Use

- Adjusts the punch loop size used for paper exited from the main body.
- Used when tilted punched hole position, wrinkled paper, or jam at punch registration section occurs.

(2) Setting range

- -4.0 to +4.0 mm

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Regist Loop Size].
3. Select a paper type where the punch hole position needs adjustment.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [OK].
6. Touch [Exit] on the Service Mode screen.

5.29.14 FS-FN adjustment - PI Size Detection (PI-507)

(1) Use

- To specify paper sizes that the post inserter detects.
- To set a paper size with which size detection is made when a paper having a similar size is placed on the feeder.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [PI Size Detection].
3. Touch [Mode 1].
4. Select a desired paper size with which size detection is made.
5. Make the same setting in [Mode 2] to [Mode 6].
6. Touch [OK] twice.
7. Touch [Exit] on the Service Mode screen.

5.29.15 FS-FN adjustment - Post Inserter Adjustment (PI-507)

(1) Use

- To make automatic post inserter size detection adjustments separately in each of the upper and lower trays.
- Make this adjustment when the post inserter cannot make proper size detection.
- Make this adjustment after performing PI displacement adjustment.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Post Inserter Adjustment].
3. Touch [Upper Tray].
4. Place A4S paper on the upper tray and touch [A4].
5. Touch Start key.
6. Confirm that the result is OK.
7. Touch [Lower Tray].
8. Place A4S paper on the lower tray and touch [A4].
9. Touch Start key.
10. Confirm that the result is OK.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

5.29.16 FS-FN adjustment - Finisher Components Test Mode (FS-533/FS-534/FS-534SD/FS-536/FS-536SD/FS-537/FS-537SD)

(1) Use

- Use this adjustment to check finisher's operation.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Finisher Components Test Mode].
3. Select a mode.
4. Press the Start key to start finisher operation.
5. Press the Stop key to stop ongoing finisher operation.

(3) Finisher components list (FS-537/FS-537SD/PK-523/PI-507/ZU-609)

Mode	
Finisher Components Test Mode 1	Paper Transport Motor
	Paper Entrance Motor
	Paper Exit Motor
	Paper Alignment Plate Motor/F
	Main Tray Up/Down Motor
	Paper Alignment Plate Motor/R
	Side Stopper Guide Motor
	Paper Exit Belt Motor
	Exit Roller Retraction Motor
	Paper Discharge Control Motor
	Side Stapler Movement Motor
	Pre-Discharge Drive Motor
	Paddle Motor
	exit divert
Finisher Components Test Mode 2	FD Stopper Drive Motor
	paddle arm motor
	pusher motor
	sub tray exit motor
	bero motor
	ZU feed motor
	JS exit feed guide
	sd ent feed motor
	SD belt tray feed motor
	zu chopper
	ZU Guide Motor
	ZU Press Motor
	M302/Oscillating Drive M: HP Search
	M302/Oscillating Drive M: Edge Sensor Control
Finisher Components Test Mode 3	M301/Punch Drive M: HP Search
	M301/Punch Drive M: Execute Punch (2-Hole)

Mode	
	M301/Punch Drive M: Execute Punch (3- or 4-Hole)
	M203 (PI divert M) Paper Line velocity
	MC201 (upper paper feed clutch) ON
	MC202 (lower paper feed clutch) ON
	M201 (Upper rise descent M) Down (HP Search)
	M201 (Upper rise descent M) Up
	M202 (Lower rise descent M) Down (HP Search)
	M202 (Lower rise descent M) Up
	SD201 (upper row move solenoid) ON
	SD202 (the lower move solenoid) ON
	MC203 (registration transportation clutch) ON
	SD Paper Transport Motor
Finisher Components Test Mode 4	Folding Roller Motor
	Leading Edge Gripper Solenoid
	Leading Edge Stopper Motor
	CD Alignment Plate Motor
	Folding Knife Motor
	Chip Box Change Motor
	Tail Edge Holding Plate Motor
	SD Paddle Motor
	Tri-folding Knife Motor

(4) Finisher components list (FS-536/FS-536SD/PK-520)

Mode	
Finisher Components Test Mode 1	Paper Transport Motor
	Paper Entrance Motor
	Paper Exit Motor
	Paper Alignment Plate Motor/F
	Main Tray Up/Down Motor
	Paper Alignment Plate Motor/R
	Side Stopper Guide Motor
	Paper Exit Belt Motor
	Exit Roller Retraction Motor
	Tail Edge Holding Plate Motor
	Side Stapler Movement Motor
	Pre-Discharge Drive Motor
	Punch Drive Motor
	Paddle Motor
Finisher Components Test Mode 2	Switch Output Tray Motor
	SD Paper Transport Motor
	Folding Roller Motor
	Leading Edge Gripper Solenoid
	Leading Edge Stopper Motor
	CD Alignment Plate Motor
	Folding Knife Motor
	Chip Box Change Motor
	Paper Discharge Control Motor
	SD Paddle Motor
	Tri-folding Knife Motor

(5) Finisher components list (FS-534/FS-534SD/PK-520)

Mode	
Finisher Components Test Mode 1	Paper Transport Motor
	Paper Entrance Motor
	Paper Exit Motor
	Paper Alignment Plate Motor/F
	Main Tray Up/Down Motor

Mode	
	Paper Alignment Plate Motor/R
	Side Stopper Guide Motor
	Paper Exit Belt Motor
	Exit Roller Retraction Motor
	Paper Discharge Control Motor
	Side Stapler Movement Motor
	Pre-Discharge Drive Motor
	Punch Drive Motor
	Paddle Motor
Finisher Components Test Mode 2	Switch Output Tray Motor
	SD Paper Transport Motor
	Folding Roller Motor
	Leading Edge Gripper Solenoid
	Leading Edge Stopper Motor
	CD Alignment Plate Motor
	Folding Knife Motor
	Chip Box Change Motor
	Trail Edge Holding Plate Motor
	SD Paddle Motor
	Tri-folding Knife Motor

(6) Finisher components list (FS-533)

Mode
Stapler Movement
Alignment Plate F/R Movement
Tray up/down Operation
Exit Roller Retraction
Conveyance Drive
Paper Surface Detect Solenoid
Paddle 1 Rotation Solenoid Drive
Punch Drive Motor
Batch Solenoid Driver

5.29.17 FS-FN adjustment - Alignment plate Position (FS-533)

(1) Use

- When FS-533 is installed, use this feature to fine adjust the aligning plate that aligns ejected paper.

(2) Default setting

- 0.0 mm

(3) Setting range

- -10.0 mm to +10.0 mm (1 step: 0.1 mm)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Alignment Plate Position].
3. Select the [Alignment Plate Position (Back)] or [Alignment Plate Position (Side)].
4. Set and adjust a value with the [+] / [-] key.
5. Touch [OK].
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.29.18 FS-FN adjustment - Paper Alignment Guides W. Adj. (FS-534/FS-534SD/FS-536/FS-536SD/FS-537/FS-537SD)

(1) Use

- To fine adjust the horizontal width of the aligning plate.
- Use this feature to fine adjust the aligning plate that aligns ejected paper.

(2) Default setting

- 0.0 mm

(3) Setting range

- -10.0 mm to +10.0 mm (1 step: 0.1 mm)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Paper Alignment Guides W. Adj.].
3. Select a mode you want to adjust.
4. Set and adjust a value with the [+] / [-] key.
5. Touch [OK].
6. Touch [Exit] on the Service Mode screen.

5.29.19 FS-FN adjustment - ZFold1st Fold Loop Size (ZU-609)

(1) Use

- To adjust the variation in the 1st fold position of Z-Fold.
- Forming a loop of stiff and slippery paper is difficult and a folding position on the paper may not be constant. This function adjusts loop amount to make the folding position constant.

Increase loop amount	increase the adjustment value
Decrease loop amount	decrease the adjustment value

5.29.20 FS-FN adjustment - ZFold2nd Fold Loop Size (ZU-609)

(1) Use

- To adjust the variation in the 2nd fold position of Z-Fold.
- Forming a loop of stiff and slippery paper is difficult and a folding position on the paper may not be constant. This function adjusts loop amount to make the folding position constant.

Increase loop amount	increase the adjustment value
Decrease loop amount	decrease the adjustment value

5.29.21 FS-FN adjustment - ZFold2nd Fold Speed (ZU-609)

- Not used

5.29.22 FS-FN adjustment - ZFold Adjust Custom (ZU-609)

- Not used

5.29.23 Max Staple Limit Setting (FS-537/FS-537SD)

(1) Use

- When FS-537or FS-537SD is installed, specify the maximum number of sheets that can be stapled together.
- To change the maximum that can be stapled together.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Max Staple Limit Setting].
3. Enter a desirable maximum number with the 10-key pad.
4. Touch [END].
5. Turn OFF the main power switch. Then, wait for 10 sec. or more and turn ON the main power switch.

NOTE

- **If mixed originals includes one or more large size ones (A3/11 x 17 or more), the maximum that can be stapled together is subject to the setting of large size staple limit restriction.**
- **If large size staple limit restriction is set to [-20 pieces] and the maximum number of sheets to be stapled together less 20 is 2 or less, then the restricted number of sheets as the maximum is 2.**
- **When FS-537or FS537SD is installed and the staples for 50 sheets are detected, 50 sheets becomes the upper limit even though the setting of the upper limit up to which sheets can be stapled exceeds 50 sheets.**

(3) Default setting

- Staple option setting: 100 Piece
- Large size staple limit restriction: Do not do.

(4) Setting range

- Staple option setting: 2 to 100
- Large size staple limit restriction: [-20 pieces] or [Do not do.]

5.29.24 Punch Option Setting

(1) Use

- Specifies punch settings depending on the optional punch kit attached to the finisher.
- An individual punch setting needs to be made according to the type of the punch option.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Punch Option Setting].
3. Select the type of punch kit.
4. Select the number of punch holes in accordance with the punch kit destination type.
5. Touch [decision].
6. Touch [END].
7. Touch [Exit] on the Service Mode screen.

(3) Default setting

- Non-installat.

5.29.25 Max. # of Folded Sheets Setting

(1) Use

- Imposes restriction on the number of sheets to be folded in each of different folding modes.
- To change the maximum number of sheets to be folded in each of different folding modes.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Max. # of Folded Sheets Setting].
3. Select a folding mode where the maximum is restricted and enter a desirable maximum number with the 10-key pad.
4. Touch [END].
5. Touch [Exit] on the Service Mode screen.

(3) Default setting

- Center Fold: 5 Piece
- Center Staple: 20 Piece
- Tri-Fold: 3 Piece
- Z fold/staple using together: 10 Piece
- Z fold: 50 pieces

(4) Setting range

Center Fold
- 1 to 5 Piece

Center Staple
- 2 to 20 Piece

Tri-Fold
- 1 to 3 Piece

Z fold/staple using together
- 2 to 10 Piece

Z fold
- 50 Piece/40 Piece/30 Piece/20 Piece

5.29.26 Tri-Fold Output Setting (FS-537SD)

(1) Use

- To set the position where paper is ejected when paper is conveyed to the saddle stitcher in tri-fold mode.

(2) Default setting

- Normal Output

(3) Setting item

- Normal Output
- Extend Output

5.29.27 Job Separator

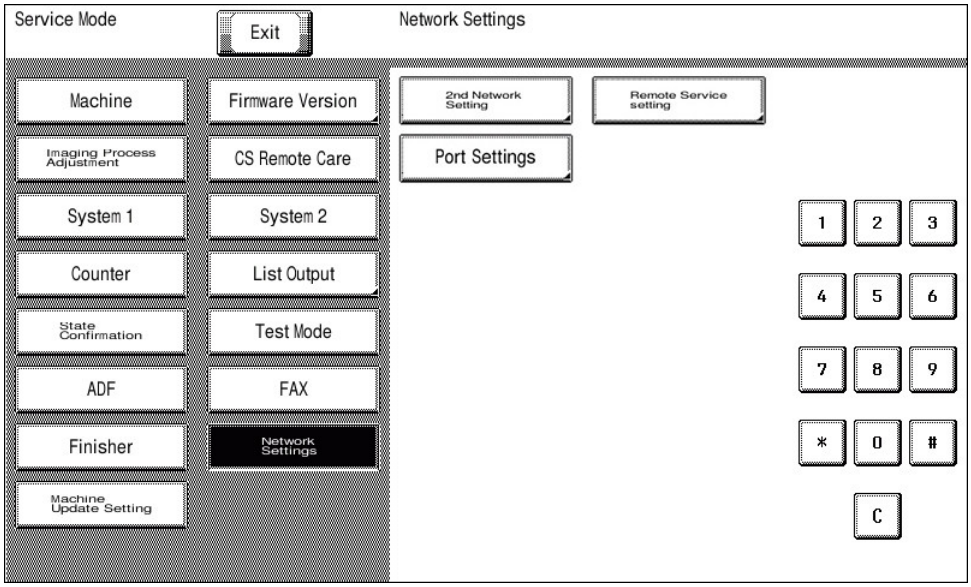
(1) Use

- Checks the job separator’s operation.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Job Separator].
3. Select the mode where you wish to check the operation.
4. Press the Start key to start job separator operation.
5. Press the Stop key to stop ongoing job separator operation.

5.30 Network Settings



- It is displayed when this machine is equipped with an optional upgrade kit UK-212or UK-215.
- To perform a remote control from an Android tablet terminal or iOS device, bizhub Remote Access are required.

5.30.1 2nd Network Setting - 2nd network card settings

(1) Use

- To be configured when an optional Upgrade Kit UK-212 or UK-215has been installed in this machine.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset
- When [Set] is selected, configure the following settings.

5.30.2 2nd Network Setting - Network Interface Settings

NOTE

- **Before making settings, note the network environment of the customer and make the settings to suit the environment.**

(1) Use

- To connect the MFP main unit as a wireless LAN adapter to a wireless LAN access point connected to the LAN environment. (when Wireless Only or Wired+Wireless (Secondary Mode) is selected)
- To perform direct communication between the MFP main unit and a mobile device. (when Wired+Wireless (Primary Mode) Wired +Wireless (Simple AP Mode), or Wired +Wireless (Wi-Fi Direct) is selected)

(2) Setting item

Network Interface Settings	Description
Wired Only	Use when the MFP main unit is connected only to a LAN environment.
Wireless Only	• Use when the MFP main unit is connected only to a wireless LAN environment. • A job is received from the client via the wireless LAN access point and executed.
Wired+Wireless (Secondary Mode)	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • A job is received from the client via the LAN and executed. • A job is received from the client via the wireless LAN access point and executed.
Wired+Wireless (Primary Mode)*1	• The MFP main unit is used as a wireless LAN access point (Primary Mode). • When starting up the MFP main unit, perform wireless LAN communication between the MFP main unit and the mobile device (Android device, iOS device, or devices supporting Wi-Fi) without via wireless LAN access point. • Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment.
Wired+Wireless (Simple AP Mode) *2	
Wired+Wireless (Wi-Fi Direct)	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • The MFP main unit is used as a wireless LAN access point. • With this mode, a mobile device (excluding iOS) can be connected to Wi-Fi Direct authentication devices easily.

- *1: When UK-212 is installed.
- *2: When UK-215 is installed.

NOTICE
- See THEORY OF OPERATION UK-212/UK-215 for more information.

5.30.3 2nd Network Setting - SSID

(1) Use
- To enter the SSID of the wireless LAN access point connected to the machine (using up to 32 characters).

5.30.4 2nd Network Setting - Authentication/Encryption Algorithm

(1) Use
- To set the algorithm used for authentication or encryption.

(2) Default setting
- No Authentication/Encryption

(3) Setting item
- “No Authentication/Encryption”
- WEP
- WPA-PSK (AES)
- WPA2-PSK (AES)

5.30.5 2nd Network Setting - WEP Key

(1) Use
- To be set when WEP is selected for authentication/encryption Algorithm.

(2) Procedure
1. Select an input method.
2. Touch Edit, then enter a new WEP key.
3. Touch OK.
4. Enter the WEP key again to make a check.
5. Touch OK.

5.30.6 2nd Network Setting - Passphrase

(1) Use
- To be set when a method including WPA is selected for authentication/encryption Algorithm.

(2) Procedure
<Input method>
- Select an input method.

<Security key>
- Enter a value of the security key of passphrase.

<Passphrase Auto Update>
- Set ON/OFF for passphrase auto update. [Yes] is specified by default.

<Update Interval>
- Set the interval for updating passphrase. [60] minutes is specified by default.

<40 to 20 MHz Auto Switch>
- Set [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default.

5.30.7 2nd Network Setting - Wireless Channel

(1) Use
- To set a wireless channel.

(2) Default setting
- Auto

(3) Setting item
- 1 to 13
- Auto

5.30.8 2nd Network Setting - ANY Connection

(1) Use
- To set whether or not to allow the ANY connection.

(2) Default setting
- Permit

(3) Setting item
- Permit
- Prohibit

5.30.9 2nd Network Setting - Connect permission extension address list

(1) Use

- To allow the connection through the only device with specified MAC address.

(2) Procedure

1. Touch [Edit], then enter the MAC address.

5.30.10 2nd Network Setting - DHCP Server Setting

(1) Use

- To set whether or not to enable the DHCP server.

(2) Default setting

- ON

(3) Setting item

- ON
- OFF
- If set to ON, set the IP leasing address, subnet mask and leasing period.

5.30.11 2nd Network Setting - TCP/IP Settings

(1) Use

- To set TCP/IP.

(2) Procedure

1. If IPv4 Settings is selected, select [Auto Input] or [Enter New Address].
   - If [Auto Input] is selected, configure DHCP settings.
   - If [Enter New Address] is selected, set [IP Address] and [Subnet Mask].
2. If IPv6 Settings is selected, the link-local address will be displayed as IPv6 type.

5.30.12 Remote Service Setting

(1) Function Setting

(a) Enable Settings

- Use
  - To set whether to use the remote service.
    NOTE
    • When [ON] is selected, [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto update setting] will not be displayed.
    • When [ON] is selected, [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Relay server setting] will not be displayed.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) Server Settings

- Use
  - To set URL, ID and password of the server to be used on remote service communication.
- Setting item

URL	(Address*1 or host name*2): port number*3 *1: IPv4 or IPv6 address *2: Alphanumeric characters and symbols up to 253 characters
ID	Alphanumeric characters and symbols: 1-64 characters
Password	Alphanumeric characters and symbols: 0-64 characters

(2) Proxy Server Setting

(a) Enable Settings

- Use
  - To set whether to use the proxy server.
  - When [ON] is set, the [WebDAV Synchronize] and [Proxy Server] settings can be configured.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) WebDAV Synchronize

- Use
  - To set whether to synchronize with [WebDAV Client Settings] in Administrator settings.

- When [Synchronize] is set, operation is performed in accordance with the configuration of the [WebDAV Client Settings] within the Administrator settings.
  NOTE
  • The [Proxy Server] is no longer appears when [Synchronize] is set.
- Default setting
  - Do not Synchronize
- Setting item
  - Synchronize
  - Do not Synchronize

(c) Proxy Server

- Use
  - To configure the proxy server settings.
- Setting item

Host Name	Address*1 or hostname*2 *1: IPv4 or IPv6 address *2: Alphanumeric characters and symbols up to 253 characters
User Name	Alphanumeric characters and symbols: NULL to 63 characters
Password	Alphanumeric characters and symbols: NULL to 63 characters
Port Number	1 to 65535

(3) Maintenance Setting

(a) Identification Code

- Use
  - To enter the identification code used to organize and manage multiple MFPs on a per-customer basis.
    NOTE
    • Note the hierarchical order of the 8-digit identification codes: first 2 digits represent the region code and the last 6 digits represent the management code.
- Setting range
  - 0 to 99999999 (Enter an 8-digit number.)

(b) Operator Name

- Use
  - To enter the keywords used by maintenance personnel to easily search for corresponding MFPs on the remote service server UI screen.
- Setting range
  - Up to 64 alphanumeric characters

(c) Setup

- Use
  - To connect to the remote service server manually.
  - Touch Start to send the identification code and operator name to the remote service server.

(4) XMPP Settings

(a) Function Setting

- Use
  - To set whether to use sessions when communicating with the XMPP server.

  NOTE
  ▪ When [Disable] is set, initial commands cannot be received from the remote service server via the XMPP server.
- Default setting
  - ON
- Setting item
  - ON
  - Disable

(b) Connection Setting - Repeat Interval

- Use
  - To set the repeat interval used when communication with the XMPP server fails.
- Default setting
  - 1 Minute
- Setting range
  - 1 to 5 Minutes

(c) Connection Setting - Connection Time-out

- Use
  - To set the timeout used for communication with the XMPP server.
- Default setting
  - 60 sec
- Setting range
  - 5 to 300 sec.

(d) Connection Setting - SSL

- Use
  - To set whether to use the SSL when communicating with the XMPP server.
- Default setting
  - ON
- Setting item
  - ON
  - OFF

(e) Connection Setting - BOSH

- Use
  - To set whether to use the BOSH connection when communicating with the XMPP server.
- Default setting
  - ON
- Setting item
  - ON
  - OFF

(f) Connection server info

- Use
  - To confirm the URL, ID, domain name, port number and connection status.

(5) Always Connection Setting

(a) Maintenance Time

- Use
  - To select the maintenance time from [Use Power Save Settings], [Always Connection] or [Individual Settings].
- Default setting
  - Individual Settings
- Setting item

User Power Save Settings	Operates when maintenance can be performed in accordance with power save settings.
Always Connection	Maintenance can be performed at any time.
Individual Settings	Maintenance start and end times are configured individually.

(b) Existence Notice Interval

- Use
  - To set the time interval used to send existence notice packets for existence notice from the MFP to the XMPP server.
- Default setting
  - 55 sec.
- Setting range
  - 1 to 3600 sec.

(c) Learning Function

- Use
  - To set whether to enable "Learning function" used to change the packet transmission interval in accordance with the XMPP session state when sending existence notice.
  - When [Enable] is set, the adjust value and lower limit must be configured.
- Default setting
  - Disable
- Setting item
  - Enable
  - Disable

(d) Learning Function - Adjust Value

- Use
  - To lengthen the next packet transmission interval by the amount of the "adjust value" when a existence notice is sent successfully.
  - To shorten the next packet transmission interval by the amount of the "adjust value" when a existence notice is sent unsuccessfully.
- Default setting
  - 30 sec.
- Setting range
  - 1 to 3600 sec.

(e) Learning Function - Lower Limit

- Use
  - To make sure not to set the packet transmission interval shorter than the "lower limit".
- Default setting
  - 30 sec.
- Setting range
  - 1 to 3600 sec.

5.30.13 Port setting

(1) Use

- To set the threshold value for determining the load state of the Raw port.

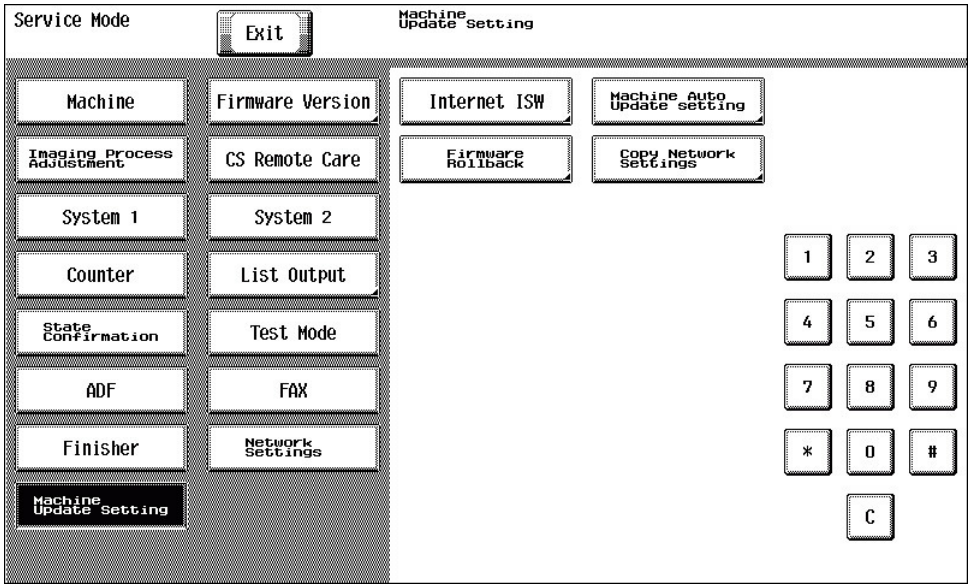
(2) Default setting

- 3 minutes

(3) Setting item

- 1 to 60 minutes

5.31 Machine Update Setting



- By using this setting, the firmware or update file stored in the server can be downloaded over internet for upgrading.

5.31.1 Internet ISW - Internet ISW Set

(1) Use

- To set whether or not to enable each setting for Internet ISW.
- To use when upgrading the firmware by Internet ISW.
- Each setting such as Server setting will be valid by setting this to “ON”.
  NOTE
  - **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, this setting will automatically be set to “OFF” and cannot be changed.**

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF
- When this setting is set to "ON," [Open Mode Settings] can be configured. When [Open Mode Settings] is set to "Set," firmware download and update via Internet ISW are available in Administrator Settings.

5.31.2 Internet ISW - HTTP Setting

- It will be displayed only when [Internet ISW Set] is set to “ON”.

(1) HTTP data acquisition setting

(a) Use

- To set whether or not to enable downloading using the HTTP protocol.
- To use when accessing the server using the HTTP protocol.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(2) Connection Time-Out

(a) Use
- To set the time for the timeout for accessing the server.

(b) Default setting
- 60 sec

(c) Setting range
- 30 to 300 sec.

5.31.3 Internet ISW - FTP Setting
- It will be displayed only when [Internet ISW Set] is set to “ON”.

(1) FTP data acquisition setting

(a) Use
- To set whether or not to enable downloading using FTP protocol.
- To use when accessing the server with FTP protocol.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

(2) Connection Setting

(a) Use
- To set the port No. and the time for timeout when accessing the FTP server, and also to set whether or not to enable PASV mode.
- To use when connecting by the PASV (passive) mode (FTP server side will inform the connection port before connecting).

(b) Procedure (Port Number)
- Enter the port number using the 10-key pad within the range of 1 to 65535.

(c) Default setting (Port Number)
- 21

(d) Procedure (Connection Time Out)
- Enter the value between 1 and 60 (min.) using the 10-key pad.

(e) Default setting (Connection Time Out)
- 1 minute

(f) Default setting (PASV Mode)
- OFF

(g) Setting item (PASV Mode)
- ON
- OFF

5.31.4 Internet ISW - Forwarding Access Setting

(1) User ID

(a) Use
- To register the user ID for accessing the program server where firmware is to be stored.

(b) Procedure
1. Select [User ID].
2. Enter the user ID (up to 64 one-byte characters) on the on-screen keyboard.

(2) Password

(a) Use
- To register the password for accessing the program server where firmware is to be stored.

(b) Procedure
1. Select [Password].
2. Enter the password (up to 64 characters) on the on-screen keyboard.

(3) URL

(a) Use
- To register the address and directory of the program server where the firmware is to be stored in URL.

(b) Procedure

1. Select [URL].
2. Enter the URL (up to 256 one-byte characters) on the on-screen keyboard.
   NOTE
   - **Enter the URL which matches to the protocol to be used.**
     When connecting to http "http:// (Host name or IP address)/ directory name" or "https:// (Host name or IP address)/ directory name".
     When connecting to ftp "ftp:// (Host name or IP address) / directory name".

(4) FileName

(a) Use

- To register the file name of the firmware data to be downloaded.

(b) Procedure

1. Select [FileName].
2. Enter the file name (up to 63 one-byte characters) on the on-screen keyboard.

5.31.5 Internet ISW - Download

NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting]. The setting of the proxy used in the Internet ISW communication is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [FTP Server Settings] or [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(1) Download/Update

(a) Use

- Access the program server according to the Internet ISW setting, and download the firmware.
- To use when updating the firmware via network.
- The firmware is downloaded and updated successively. During the firmware download and update, MFP cannot be used.

(b) Procedure

1. Select [Download/Update].
2. Touch [Start] to start downloading the firmware.
3. The message to show the status will be displayed on the screen while connecting and transferring data.
   NOTE
   - **If connection to the program server or data download fails, an error code and a message are displayed. Identify the cause of the problem with the error code and reconfigure the settings following the message.**
     Refer to "K.5.1 Error code list for the Internet ISW" for the error codes.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

(2) Download

(a) Use

- To access the program server and download the firmware in accordance with the settings configured in Internet ISW Settings.
- As the firmware is downloaded in the background, MFP can be used during download.
- If firmware data already downloaded exits in the HDD, the data is overwritten and replaced by the new data.

(b) Procedure

1. Select [Download].
2. Touch [Start] to start downloading the firmware.
3. The status message appears on the screen during connection and data transfer.
   In the middle of downloading, the task can be cancelled by touching [Cancel].
   NOTE
   - **If connection to the program server or data download fails, an error code and a message are displayed. Identify the cause of the problem with the error code and reconfigure the settings following the message.**
   - **For details on error codes refer to "K.5.1 Error code list for the Internet ISW".**
4. When the firmware download is successfully completed, the result "OK" appears.

(3) Update

(a) Use

- To update the firmware by using the firmware downloaded and saved in the HDD.
- During the firmware download and update, MFP cannot be used.
- This button is not appeared if there is no firmware in the HDD.

(b) Procedure

1. Touch [Update].
2. Check the firmware file version in HDD.
3. Press Start key to update the firmware.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

(4) Delete

(a) Use

- To delete the firmware file saved in the HDD.

- This button is not appeared if there is no firmware in the HDD.

(b) Procedure

1. Touch [Delete].
2. Press Start key to delete the firmware.

5.31.6 Internet ISW - Update Start Time Settings

(1) Use

- To set the start time in order to automatically update the downloaded firmware.

(2) Procedure

1. Select [Set] for [Update Firmware at Specified Time].
2. Touch [Hour] and [Min.] and set the firmware update start time.

NOTE

- **If updated firmware has not been downloaded by the specified time, firmware update is not performed.**
- **If the main power switch is turned OFF during a firmware update, the firmware is updated next time when the main power switch is turned ON.**
- **If a job is in process when the specified time comes, the firmware is updated after the completion of the job.**

5.31.7 Machine Auto Update setting - Auto Update setting

- Obtain the update file for the machine from the file storage server, and update the firmware or settings of the machine.
- This function is same as that of the [Administrator Settings] -> [Network Settings], but it will not be used together with the function of the service mode.
- Refer to "Machine Auto Update setting - Procedures for using the Auto Update function" for how to create an update file.

NOTE

- **When [Service Mode] -> [Network Settings] -> [Remote Service setting] -> [Function Setting] -> [Enable Settings] is set to "ON", this setting is not displayed. [Machine Auto Update setting] in Administrator settings is not applicable.**

(1) Server 1 Settings - Auto update

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

When configuring the settings for SMB with the download protocol *1

Host Name	Set the host name for the SMB server.
File Path	Set the file path used in the SMB server communication. *2
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.
Number of retries	Set the number of times to retry when failed to obtain.

- *1: If the MFP relay server is used as a server on the data providing side, the SMB protocol will not be used.
- *2: Specify the folder in which C_UpdateList.ini is stored. Refer to "Machine Auto Update setting - Procedures for using the Auto Update function" for details.

When HTTP is set for the download protocol

URL	Set the address of the http server. *1
User Name	Set the user name used to access the relay server by http protocol.
Password	Set a password used to access the http server.
Proxy	Select whether or not to use the proxy server. *2
Connection Time-out	Set the timeout period for connecting to the server.

- *1: Specify the folder in which C_UpdateList.ini is stored. Refer to "Machine Auto Update setting - Procedures for using the Auto Update function" for details.
- *2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

(2) Server 2- Settings - Auto update

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

URL	Set the address of the http server. *1
User Name	Set the user name used to access the relay server by http protocol.
Password	Set a password used to access the http server.
Proxy	Select whether or not to use the proxy server. *2
Connection Time-out	Set the timeout period for connecting to the server.

- *1: Specify the folder in which C_UpdateList.ini is stored. Refer to "Machine Auto Update setting - Procedures for using the Auto Update function" for details.
- *2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

(3) Common Settings

- Configure the common settings for [Server 1 settings] and [Server 2 settings].

(a) Update Time

- Touch Clear to set the time to update the machine.

(b) Polling Settings

- Use: Set the polling period or day of the week and clock for obtaining the update list.
- Default setting: Select Day of the Week
- Setting item
  - Set Interval. (Can be set between 1 to 240 minute/ Default setting: 60 Minute)
  - Select Day of the Week (Day of the week and clock can be specified/ Default setting: Monday/0 o'clock 0 minute)

(c) Retry Interval

- Set the period for retrying when failed to obtain.

5.31.8 Machine Auto Update setting - Procedures for using the Auto Update function

(1) Outline

- "Auto Update" is the function, which makes the main body access the program server periodically through the network to obtain a new data, then updates it automatically.

(2) Service environment

- The following conditions are necessary for using the Auto Update function.
- The MFP main body is connected to such a network environment that the update data can be downloaded on the network using the SMB or http protocol.
- The Auto Update function will not operate when the MFP main body is under the following conditions.
  - Main power switch is set to OFF.
  - Sub power OFF mode (power key is orange) or ErP auto power OFF mode (power key flashes orange) enabled
  - When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON".
  - MFP is operating, or there are jobs present (including appointed jobs).
  - MFP is in idle with suspended job.
  - Trouble has occurred.
  - Image file is in the memory.
  - Model or the circuit board of the program does not match.

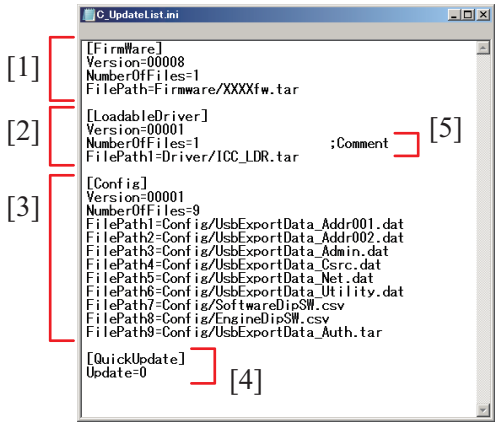
(3) Preparations

- For using this function effectively, before executing the following procedures contact with the administrator to obtain an agreement.
- Set the network parameter, program server address as well as firewall address to the MFP main body.
- Create a program update information file (C_UpdateList.ini) and store a set of data for updating in the program server.

(a) Method for creating the program update information file (C_UpdateList.ini)

- Specify the firmware, loadable driver, configuration files as shown below.
  NOTE
  - **[FirmWare], Version, FilePath, [LoadableDriver], NumberOfFiles, [Config], [QuickUpdate] and Update must be specified by using the capital letters and small letters properly.**
  - **The file path configured in FilePath describes the relative path from the program update information file.**

A sample of C_UpdateList.ini



[[1]]	Firmware updating information	[[2]]	Loadable driver updating information
[[3]]	Configuration files updating information	[[4]]	Timing for updating data
[[5]]	Comment	-	-

Firmware updating information

- [FirmWare], Version, NumberOfFiles, and FilePath are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the firmware file.

Loadable driver updating information

- [LoadableDriver], Version, and NumberOfFiles are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the Loadable Driver file.

Configuration files updating information

- [Config], Version, and NumberOfFiles are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the Configuration file(s).
- If multiple files exist, give a number to each of them as FilePath1, FilePath2 as shown in above illustration.

Timing for updating data

- [QuickUpdate] and Update are the necessary information.
- If Update is set to "0", the downloaded firmware and each setting will be rewritten in accordance with the update time settings.
- If Update is set to "1", the firmware and each setting will be rewritten soon after downloading.

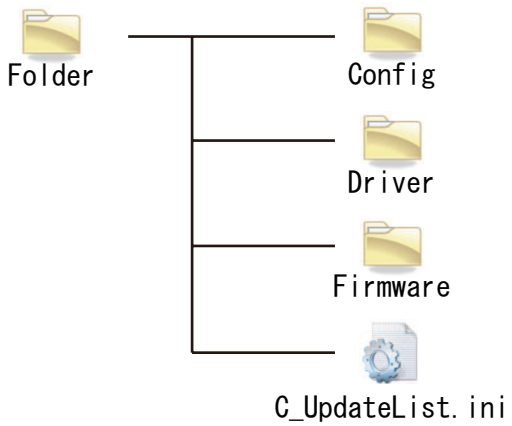
Comment

- A comment can be inserted between "#" or ";" and the line break code.

(b) Method for creating the update data

Configuration of files and folders

- The folder configuration of the sample of C_UpdateList.ini is as shown below.



Create a configuration file

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Machine Export setting].
2. Insert a USB memory into the USB port.
3. Enter a password.
4. Select [START].

5. "Result OK" will be displayed.
6. Complete the data export.
7. Store the export file to the directory described in C_UpdateList.ini.

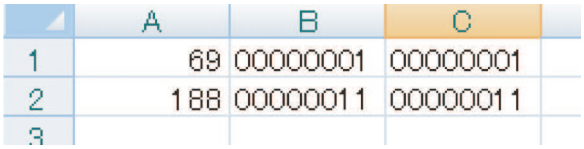
NOTE

- **On the MFP where a file is to be downloaded, the password specified at above step 3 must be set beforehand by selecting [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Machine Update Password] .**

Create the Software switch setting/Engine FW DipSW setting file

1. Create CSV files for the data with the required switch number as SoftwareDipSW.csv and EngineDipSW.csv.
2. Store the file to the directory described in C_UpdateList.ini.

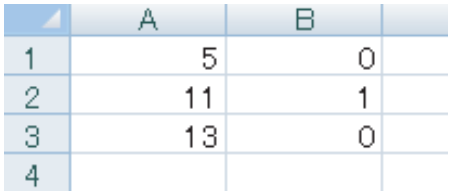
A sample of SoftwareDipSW.csv



	A	B	C
1	69	00000001	00000001
2	188	00000011	00000011
3			

A row	Software switch number
B row	Set 1 on the bit to be overwritten (bit7 to bit0 from left side)
C row	Set 1 or 0 for new setting at selected bit(s) on B row. (bit7 to bit0 from left side)

A sample of EngineDipSW.csv



	A	B
1	5	0
2	11	1
3	13	0
4		

A row	Engine FW DipSW number
B row	0 (not select) or 1 (select)

Create the user DB data file

1. Create UsbExportData_Auth.tar with a making tool of user DB data.
2. Store created file (UsbExportData_Auth.tar) to the directory described in C_UpdateList.ini.

(4) Download the update data

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting].
2. Select either [Server 1 settings] or [Server 2 settings] as the connection to configure.
3. Touch [Auto Update], then select [ON].
4. Select [Download Protocol], then select [SMB] or [HTTP]. The HTTP protocol is the only available option for [Server 2 settings].
5. Enter the information for accessing the program server on the setting screen of the selected protocol. At this time, specify the folder in which C_UpdateList.ini is stored at where to be accessed.
6. Touch [OK].
7. Touch [Common Settings].
8. Set [Update Time].
9. Set [Polling Interval].
10. Set [Repeat Interval].

- See items in “Machine Auto Update setting - Auto Update setting” for details of each setting.
- The MFP confirms the program update information file in the program server with an interval set at [Polling Interval].
- The MFP compares the program update information file in the program server with that in the MFP, and starts downloading the update data with a changed Version number.
- The downloaded update data is to be stored in a HDD.
- To use the relay server function of the MFP, select [HTTP].

(5) Data Update

- Methods for updating the downloaded data are shown below.

NOTE

- **The host name is specified with its IP address.**
- **When the SMB protocol is used, the MFP uses static IP addresses.**

(a) To update the downloaded data automatically.

- If the MFP power is turned on from [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting] -> [Common Settings] -> [Update time] , the firmware will be rewritten automatically. If the power is set to OFF at that time, no rewriting will be executed.

(b) Update the downloaded data using the control panel.

- Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Manually Update] -> [Start], then execute rewriting.

NOTE

- **Do not set the power to OFF under the following state.**
  - **It takes about 45 seconds from touching [Manually Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
  - **About one minute after the download completed screen being displayed, the MFP will restart.**
  - **When rewriting configuration files followed by the firmware, the MFP will restart again.**

(6) Error code

- The error code can be displayed using [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Update Log Display], or viewed on the PC where the log which saves up to 100 records sent by using [Transmission log Update] is received.

When using the SMB protocol:

Error code	Cause of error	Countermeasure
N00107	• Cannot access the SMB server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N04096		
N04097	• Authentication error	• Set the ID and the password correctly.
N04098		
N04105	• SMB connection error	• Check the SMB connection setting again.
N04106	• Cannot obtain C_UpdateList.ini • Cannot find the data described in C_UpdateList.ini	• Confirm that if C_UpdateList.ini is stored in the server, and set the file path for accessing C_UpdateList.ini correctly. • Set the folder name and the file path correctly.

When using the HTTP protocol:

Error code	Cause of error	Countermeasure
N00107	• Cannot access the HTTP server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N00401	• Authentication error	• Set the ID and the password correctly.
N00404	• Cannot obtain C_UpdateList.ini • Cannot find the data described in C_UpdateList.ini	• Confirm that if C_UpdateList.ini is stored in the server, and set the file path for accessing C_UpdateList.ini correctly. • Set the folder name and the file path correctly.

Common in all cases

Error code	Cause of error	Countermeasure
C00000	• XML setting error	• Make sure that the settings in each configuration file are correct.
C00001	• Decryption error	• Set the decryption password for the configuration files correctly.
D00001	• Format related error (software SW)	• Check for errors in the SoftwareDipSW.csv file.
D00010	• DipSW number not defined (software SW)	
D10001	• Format related error (Engine DipSW)	• Check for errors in the EngineDipSW.csv file.
D10010	• DipSW number not defined (Engine DipSW)	
F00000	• Firmware update error	• Check to see if the file on the server is correct.
F10107	• The file is not the firmware file	• Check to see if the file on the server is correct.
F10109		
N00100	• Network communication error	• Check the connection to the network cable and communications settings.
N00110		
T10001	• The C_UpdateList. data has not been properly downloaded • The C_UpdateList. data is corrupted	• Download the file again. • Check to see if the file on the server is correct.
T10010	• Descriptions in C_UpdateList.ini are not correct	• Set the descriptions in C_UpdateList.ini correctly.
T10020		

5.31.9 Machine Auto Update setting - Relay server setting

(1) Update File Download

(a) Default setting

- OFF

(b) Setting item

- ON
- OFF

(c) Procedure

- If [ON] is selected, configure the following settings.

Obtain Setting File-URL	Set the address of the file storage server. *1
Obtain Setting File-User Name	Set the user name used to access the file storage server.
Obtain Setting File-Password	Set the password used to access the file storage server.
Obtain Setting File-Proxy	Set whether or not to use the proxy server. *2
Obtain Setting File-Connection Time-out	Set the time out period to connecting to the server.
Polling Settings	Set the polling period or date and time for obtaining the update list.
Repeat Interval	Set the period for retrying when failed to obtain.

- *1: Specify the folder in which S_UpdateList.csv is stored. Refer to “Machine Auto Update setting - Procedures for using the Auto Update function” for details.
- *2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

In case of the distribution server (SMB)

NOTE

- **The distribution server (SMB authentication) will not be used.**

In case of the distribution server (HTTP)

User Name	Set the user name used to access the relay server by http protocol.
Password	Set the password that is used to access the http server.

NOTE

- **Be sure not to forget the password used to access the http server. It is required for reset.**

5.31.10 Machine Auto Update setting - Procedures for using the Relay server function

(1) Outline

- “Relay Server” is the function, which shares the update data (relay data) obtained from the network with the other MFP, and works as the program server of the “Auto Update” function.

NOTE

- **This function is disabled when the Marketing Area of the service mode is set to US or Others5.**

(2) Service environment

- The following conditions are necessary for using the relay server function.
- The main body is connected to such a network environment that the update data can be downloaded on the network using the http protocol.
- The relay server function will not operate under the following conditions.
  - Main power switch is set to OFF.
  - Sub power auto OFF mode (power key is orange) or ErP auto power OFF mode (power key flashes orange) enabled
  - When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.

(3) Preparations

- For using this function effectively, before executing the following procedures contact with the administrator to obtain an agreement.
- Set the network parameter, program server address as well as firewall address to the MFP main body.
- Create one set of data used to the auto update function as the relay data, and store it in the program server.
  Refer to “Machine Auto Update setting - Procedures for using the Auto Update function” for more information.)
- Create a data update information file (S_UpdateList.csv) and store up to four folders (four types) of data set in the program server for managing the relay data saved on one relay server machine.

(a) Methods for creating the data update information file (S_UpdateList.csv)

- To create a CSV file by specifying the model name, data update date and time, and path for accessing the update data folder used to the Auto Update function as shown below.
- The data with changed date and time will be downloaded.
- Specify up to four (four types) folders of relay data set.

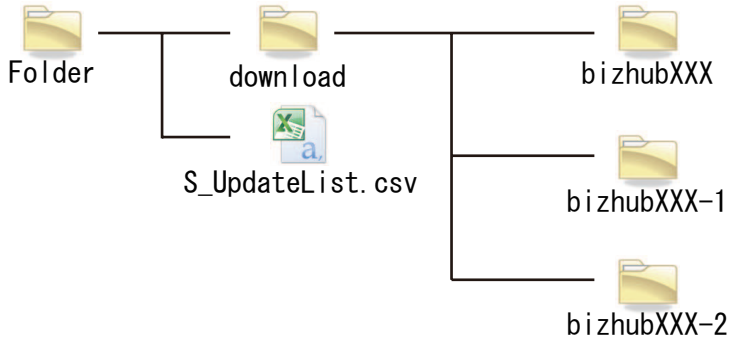
A sample of S_UpdateList.csv

	A	B	C
1	bizhubXXX Standard	YYYY/MM/DD hh:mm:ss	download/bizhubXXX
2	bizhubXXX Customer1	YYYY/MM/DD hh:mm:ss	download/bizhubXXX-1
3	bizhubXXX Customer2	YYYY/MM/DD hh:mm:ss	download/bizhubXXX-2

A row	Model name (any character string)
B row	Data update date and time
C row	Path for accessing the update data folder used to the Auto Update function

(b) Configuration of files and folders

- The folder configuration of the sample of S_UpdateList.csv is as shown below.



(4) Download the relay data

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Relay server setting].
2. Touch [Update File Download], then select [ON].
3. Select [Obtain Setting File].
4. Enter the information to access the program server on the setting screen.
   At this time, specify the folder on URL, in which S_UpdateList.csv is stored.
5. Set [Polling Interval].
6. Set [Repeat Interval].
7. Select [Distribution Server (HTTP)], then select [ON].
8. Set the information for accessing the distribution server.

NOTE

- **Do not use [SMB Authentication].**
- **The MFP confirms the data update information file in the program server with an interval set at [Polling Interval].**
- **The MFP compares the data update information file in the program server with that in the MFP, and starts downloading the relay data with a changed update date and time.**
- **The downloaded relay data is to be stored in a HDD.**

(a) Error code

- The error code can be displayed using [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Relay Server Log Confirmation], or viewed on the PC where the log which saves up to 100 records sent by using [Transmission Server Log] is received.

Error code	Cause of error	Countermeasure
N00107	• Cannot access the HTTP server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N00401	• Authentication error	• Set the ID and the password correctly.
N00404	• Cannot obtain S_UpdateList.csv • Cannot find the data described in S_UpdateList.csv	• Confirm that if S_UpdateList.csv is stored in the server, and set the file path for accessing S_UpdateList.csv correctly. • Set the folder name and the file path correctly.

(5) Download the update data opened from the relay server by using the Auto Update function on the other MFP

- The following settings is to be configured on the MFPs other than the relay server, and the models corresponding to the relayed data.

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting].
2. Select either [Server 1 settings] or [Server 2 settings] as the connection to configure.
3. Touch [Auto Update], then select [ON].
4. Select [Download Protocol], then select [HTTP] according to the settings of [Distribution Server] for the relay server.
5. Enter the information for accessing the relay server on the setting screen of the HTTP setting.
   At this time, specify the folder* in which C_UpdateList.ini is stored at where to be accessed.
6. Touch [OK].
7. Touch [Common Settings].
8. Set [Update Time].
9. Set [Polling Interval].
10. Set [Repeat Interval].

*: The file path in which a file is stored shall be set as shown below.
[URL]: http://IP address or host name of MFP to become the relay server/DAV/Service/download/bizhubXXX (in the case of the sample of S_UpdateList.csv)
File paths are case sensitive, so enter the portion after "DAV/Service/" exactly is it appears in the C column in S_UpdateList.csv.
If activate the relay server function in Administrator settings, the file path will be changed as "/DAV/Admin/".

5.31.11 Machine Auto Update setting - Transmission log Update

- The log file saves up to 100 records.
- Save the log related to machine auto update, and send it to the specified location.
- Configure settings for the transmission protocol.

(1) Default setting

- OFF

(2) Setting item

- ON
- OFF

(3) Procedure

- If [ON] is selected, configure the following settings.

(a) When SMB is set for the transmission protocol

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.

(b) When WebDAV is set for the transmission protocol

URL	Set the address of the WebDAV server.
User Name	Set the user name used to access the WebDAV server.
Password	Set the password used to access the WebDAV server.
Proxy	Set whether or not to use the proxy server. *1

- *1: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

5.31.12 Machine Auto Update setting - Transmission Server Log

- The log file saves up to 100 records.
- Save the log related to the update relay data download at relay server, and send it to the specified location.
- Configure settings for the transmission protocol.

(1) Default setting

- OFF

(2) Setting item

- ON
- OFF

(3) Procedure

- If [ON] is selected, configure the following settings.

(a) When SMB is set for the transmission protocol

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.

(b) When WebDAV is set for the transmission protocol

URL	Set the address of the WebDAV server.
User Name	Set the user name used to access the WebDAV server.
Password	Set the password used to access the WebDAV server.
Proxy	Set whether or not to use the proxy server. *1

- *1: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

5.31.13 Machine Auto Update setting - Update Log Display

(1) Use

- To check the log related to the file download of the machine auto update.
- The latest five logs can be checked.

5.31.14 Machine Auto Update setting - Relay Server Log Confirmation

(1) Use

- To check the log related to the file download of the relay server.
- The latest five logs can be checked.

5.31.15 Machine Auto Update setting - Manual Update

- This is displayed when [Auto Update] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting], and the update file has been downloaded in HDD.

(1) Use

- To execute update manually by using the downloaded file.

(2) Procedure

1. Touch [Manual Update] -> [Start] to start update.

NOTE

Do not set the main power switch to OFF under the following state.

- **It takes about 45 seconds from touching [Manual Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
- **About one minute after the download completed screen being displayed, the MFP will restart.**
- **When rewriting configuration files followed by the firmware, the MFP will restart again.**

5.31.16 Machine Auto Update setting - Machine Import setting

- This is displayed only when Switch No. “72” is set to “04” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
  NOTE
  - **In the following conditions, import of machine setting data is prohibited.**
    • [Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].
    • [Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].
    • [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].

(1) Use

- To import all importable files those are saved in the root folder of the USB memory.

Importable setting file	File name
Remote Access Setting	UsbExportData_Csrc.dat
User Settings	UsbExportData_Utility.dat
Service Settings	UsbExportData_Service.dat
Authentication customize data *2	AuthCustomMaster_***.xml
Address Book *1	UsbExportData_Addr.dat
Authentication Data *1	UsbExportData_Auth.dat
Network Settings *1	UsbExportData_Net.dat
Administrator Settings *1	UsbExportData_Admin.dat
Display Custom Settings *1	UsbExportData_Topmenu.dat, TopMenuGadget.tar
External Cert *1	UsbExportData_ExtCertificates.tar
Box configuration information *1	UsbExportData_BackUpBoxConf***.dat
Accessibility setting *1	UsbExportData_Universal.dat
Custom Settings *1 *2	UsbExportData.dat

- *1: This file can be imported when [Service Mode] -> [System 2] -> [▶] -> [▶] -> [Maintenance Mode] is set to [Effective], and [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access] is set to [Allow].
- *2: This file can be imported without inputting password, because it is not encrypted.

(2) Procedure

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update Setting] -> [Machine Import Setting].
2. Insert the USB memory into the USB port.
3. Enter a password.
4. Touch [Start].
   NOTE
   - **“OK” appears on the item that is imported successfully.**
   - **“NG” appears on the item where the password is mismatched or an error occurred.**
   - **“-“ appears when no importable file is saved in the USB memory.**
5. Follow the message appearing on the screen and turn OFF and ON the main power switch.
   NOTE
   - **If no “OK” appears in the import result, no message will be displayed.**

5.31.17 Machine Auto Update setting - Machine Export setting

NOTE

In the following conditions, export of machine setting data is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [**USB Connection Permission settings**] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [**Enhanced Security Mode**] is set to [ON].**

(1) Use

- Output the main unit configuration in XML format to a USB memory device or the SMB folder in the main unit.

(a) Target items to be exported are as follows

- Remote Access Setting
- User Settings
- Service Settings (Excluding the setting of Software switch and Engine FW DipSW)
- Address Book*
- Authentication Data*
- Network Settings*
- Administrator Settings*
- Display Custom Settings*
- External Cert (which is retained)*
- Box configuration information*
- Accessibility setting*
- Authentication customize data

NOTE

- ***: It will be displayed when [Service Mode] -> [System 2] -> [▶] -> -> [▶] -> [Maintenance Mode] is set to "Effective and [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access] is set to [Allow]."**

(2) Procedure

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update Setting] -> [Machine Export Setting].
2. Select the item to be output.
3. Select either [USB] or [SMB] as the [Export Destination]. *1
   If you select [USB], connect a USB memory device to a USB port.
4. Enter a password. *2
5. Touch [Start].
6. [Result: OK] will be displayed.
7. Complete the data export. *3

NOTE

- ***1: [SMB] displays if the following settings are made.**
  - **[Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [SMB Server Settings] -> [Share SMB File Setting] -> [ON]**
  - **[Service Mode] -> [System 2] -> [HDD] ->[Installed]**
- ***2: If an XML file is to be used on the Auto Update function, register the same password beforehand to the MFP where a data is to be downloaded as [Machine Update Password].**
- ***3: When [SMB] is selected, the data is exported to the SMB folder of this machine.**
  Check of the SMB folder: \\(IP address)\FWData_out$
  If [ON] is selected for [CE Authentication], "User Name" and "CE Password" are required to access the folder.
  - **User Name: CE**
  - **Password: CE Password**

5.31.18 Machine Auto Update setting - Machine Update Password

(1) Use

- To set a password used to decrypt the update file of the machine.

(2) Procedure

- Enter the decryption password using the on-screen keyboard.

1. Current Password: Enter the currently used decryption password (only when the decryption password has been set).
2. New Password: Enter the new decryption password.
3. Re-enter New Password: Enter the new decryption password.

NOTE

- **Be sure not to forget the decryption password. It is required for reset.**

5.31.19 Firmware Rollback

NOTE

- **This function is available when [Installed] is set for [Service Mode] -> [System 2] -> [HDD].**
- **If there is no backed up firmware, the firmware version will not be displayed.**
  For details, see "Creating back up files when updating firmware".

(1) Firmware Rollback

(a) Use

- To be used when rewriting to the backed up firmware.
- To be used when error occurs at the time of firmware updating.

(b) Procedure

1. Check the version of the firmware to be rewritten.
2. Touch [Start].
3. A reboot is started.
4. Following the reboot, a firmware update screen appears. Then, check the version of each firmware.
5. Turn OFF and ON the main power switch.
6. Make sure that a message notifying the completion of the firmware rollback appears. Then, touch [OK].

(2) Open Mode Settings

(a) Use

- To set whether to display/hide [Firmware Rollback] when selecting [Administrator Settings] -> [Network Settings] -> [Machine Update Settings].
- Even an administrator can rewrite to the backed up firmware.

(b) Default Setting

- Set

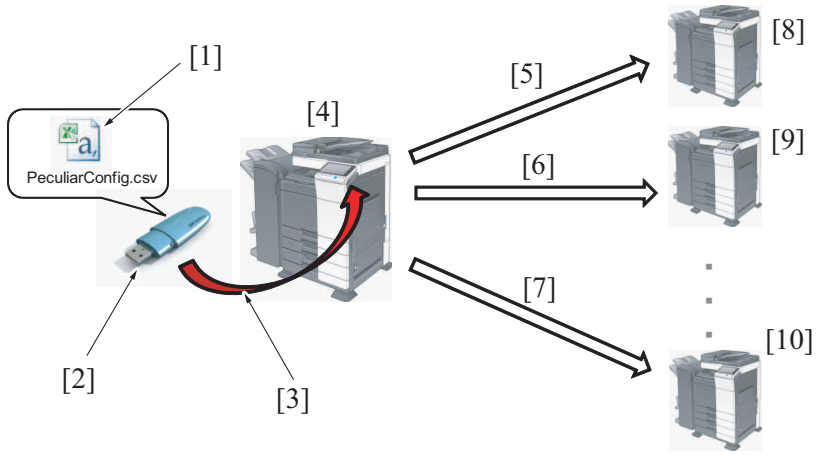
(c) Setting item

- Set
- Unset

5.31.20 Copy Network Settings

(1) Use

- To deliver the network-related information saved in the USB memory to, and set it in, other MFPs.
- One MFP is an originating side that delivers the network connection setting values to other MFPs within the same network.
- Setting values described in the CSV file and associated with the serial number of the recipient MFP are delivered and set.



[1]	CSV file containing setting values for network connection	[2]	USB memory
[3]	Connection	[4]	Recipient MFP
[5]	Delivering and setting values of recipient MFP (serial No.1)	[6]	Delivering and setting values of recipient MFP (serial No.2)
[7]	Delivering and setting values of recipient MFP (serial No.X)	[8]	Recipient MFP (serial No.1)
[9]	Recipient MFP (serial No.2)	[10]	Recipient MFP (serial No.X)

(2) Environmental preparations

- It is necessary to set and prepare in advance the originating MFP, recipient MFPs, USB memory, and the CSV file that describes the network settings.
- Perform the preparation procedure by following the steps given below.

(a) Setting the originating MFP

- Check that the originating MFP and the recipient MFP are connected to the same network (segment).
- Set a fixed IP address in the originating MFP.
- Set [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] -> [Access Setting] to “Allow”.
- Set [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] -> [External Application Connection] to “Yes”.

(b) Setting the recipient MFP

- Check that the originating MFP and the recipient MFPs are connected to the same network (segment).
- Check that the TCP/IP setting of the recipient MFP is enabled to permit network communications.
- Check that a serial number is set in the MFP.
- Set all settings in [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] to the default values.

(c) USB memory

The following shows the requirements for the USB memory to be used for copying in the network settings:

- USB flash memory compatible with the USB (1.1/2.0) interface
- The USB memory is formatted in FAT32 format.
- No security functions such as encryption and password lock have been added (or the USB memory allows its security functions to be turned OFF).
- A USB memory that is recognized by the computer as two or more drives cannot be used.
- Use any write-protected USB memory in the write-enabled condition.

(d) CSV file

- Appropriate the format of the CSV file, and prepare a CSV file where the recipient MFP and network setting value to be delivered and set have been input.
  Setting item: Corresponding to the “Column” of a CSV file format
  Setting value of recipient MFP: Corresponding to the “row” of a CSV file format
  NOTICE
  - CSV file format (PeculiarConfig.xls)

Procedure

1. Enter the serial number and the IP address v4 validation method.
2. Enter the other setting details in accordance with the CSV file format.
   For items that can be delivered and set and the detailed descriptions, see the CSV file format.
3. Enter the setting value of one recipient MFP against one row. And to set multiple MFPs, create setting value for each MFP while adding rows from top in order.

NOTE

- **The serial number and the IP address v4 validation method should invariably be entered.**
- **In any items left blank in the file, the items set in the MFP are automatically set.**
- **The file name should read “PeculiarConfig” with an extension of CSV.**
- **All MFPs having serial numbers contained in the CSV file will be the recipient MFPs. If any MFP that is to be excluded is included in the network, do not include the serial number of such an MFP in the file.**
- **Even when the serial number of the originating MFP is included in the CSV file, the originating MFP is not a recipient MFP.**
- **Up to 255 MFPs are recognized as the recipient MFP. Any serial numbers of the 256th MFP and onward contained in the CSV file will be excluded from the recipient MFPs.**

(3) Procedure

1. Prepare a CSV file (PeculiarConfig.csv) that describes the setting values to be delivered.
2. Store the CSV file immediately under the root directory of the USB memory and connect to the originating MFP.
3. Call the Service Mode to the screen.
4. Touch [Machine Update Setting] -> [Copy Network Settings] -> [Connection Timeout].
5. Set Connection Timeout and touch [OK].
   Default value: 30 Sec
   Setting range: 1 to 300 Sec
6. Touch [Machine Update Setting] -> [Copy Network Settings] -> [Copy Setting] -> [Check Connection] -> [Start].
7. Check the number of MFPs displayed at “Result” against the number of MFPs displayed “OK”.
8. Touch [Copy] -> [Start]. This delivers the setting value information to the recipient MFPs one by one.
   NOTE
   - **Screen operations are displayed in the MFP in which the setting values are being rewritten.**
   - **Do not remove the USB memory until the procedure is completed.**
9. When the delivery of the setting values to all recipient MFPs and rewriting of the setting values in all recipient MFPs are completed, the recipient MFPs are restarted.
10. The CSV file (PeculiarConfig_Result.csv) that contains the delivery result is stored in the USB memory inserted in the originating MFP.
11. Check the delivery result file in the USB memory to thereby determine that the procedure has been normally terminated.
    NOTE
    - **When an error that disables continued delivery occurs, a corresponding error code appears on the control panel.**
    - **When a delivery error occurs in any of the recipient MFPs, a message appears that prompts a check of the delivery result file.**
    - **For details of the delivery error, check the specific details of the delivery result file.**

Error code	Description
N*****	Communication error
E00001	The USB memory is not connected to the originating MFP.
E00002	The CSV file in the USB memory cannot be read.
E00003	The delivery result file cannot be created in the USB memory connected to the originating MFP.
E00004	The CSV file format is illegal.
E00005	Communication is not successful with an MFP having a serial number contained in the CSV file.
E00006 *	“Restrict” is set in [OpenAPI Settings] -> [Access Setting].
E00007 *	“ON” is set in [OpenAPI Settings] -> [Authentication].
E00008 *	“SSL Only” or “SSL/Non-SSL” is set in [OpenAPI Settings] -> [SSL/Port Settings].
E00009 *	Any data other than “50001” is set in [OpenAPI Settings] -> [SSL/Port Settings].
E00010 *	“No” is set in [OpenAPI Settings] -> [External Application Connection].
E00011	No response is received from the recipient MFP even after the lapse of a predetermined period of time after the CSV file has been delivered. (timeout error)
E00012	The recipient MFP is not at timing at which it can accept the OpenAPI message.
E00013	The recipient MFP fails in updating.
E00014	“Cancel” is selected during delivery.
E00015	The USB memory is removed from the originating MFP during delivery.
E00016	A serial number in the CSV file is illegal.
E00099	A network system error. Any of the network settings is not the default value.

- ***: Check the settings in the originating MFP when the error code appears on the control panel; check the settings in the recipient MFP when the error code is included in the delivery result file.**

6. SETUP WIZARD

6.1 Function outline

- Use of the Setup Wizard function allows those items that need to be set during the setup procedure to be extracted from the Service Mode and set.
- This enables efficient selection and setting of Service Mode functions during the setup procedure.

NOTE

- **The specific function may be set either via the "Service Mode" or the "Setup Wizard". The setting made last is the valid setting.**

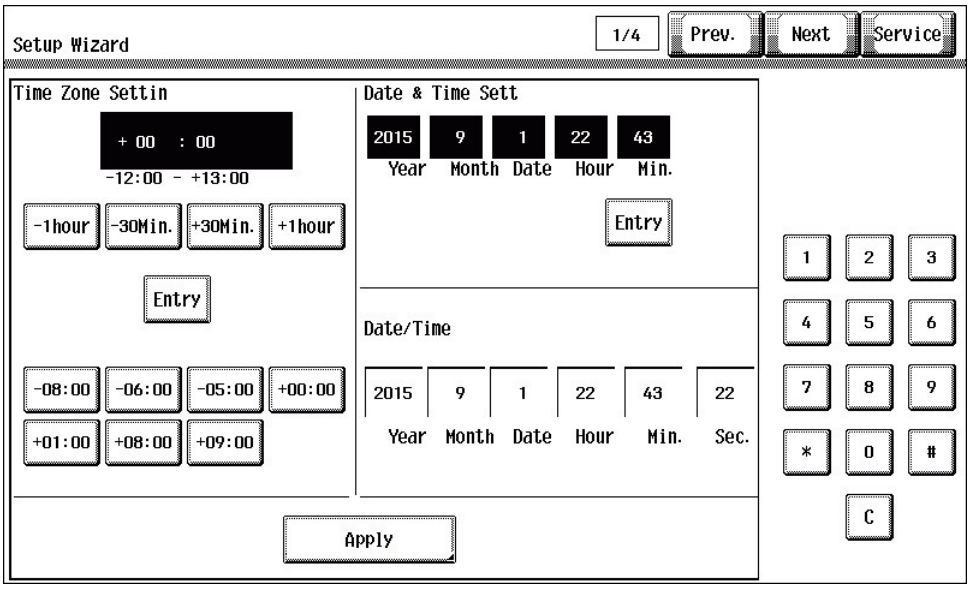
6.1.1 Setup Wizard list

Setup Wizard	Ref. page
Time Zone Setting/Date & Time Setting	Time Zone/Date & Time Input mode
Serial Number	Serial Number
Unit Change/Warning display	Unit Change
List Output	List Output

6.2 Starting/Exiting

6.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 3
3. Touch the [Prev.] key or [Next] key to select the mode.
   Exsample

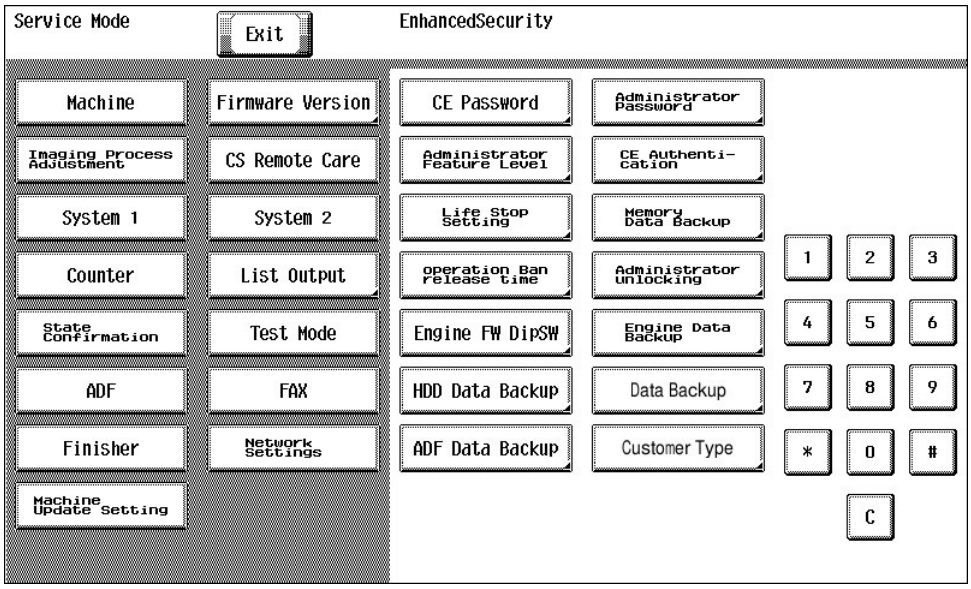


6.2.2 Exiting procedure

1. Touch [Service].
   The home Service Mode screen reappears.
2. Touch [Exit].
3. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

7. ENHANCED SECURITY

7.1 List of Enhanced Security

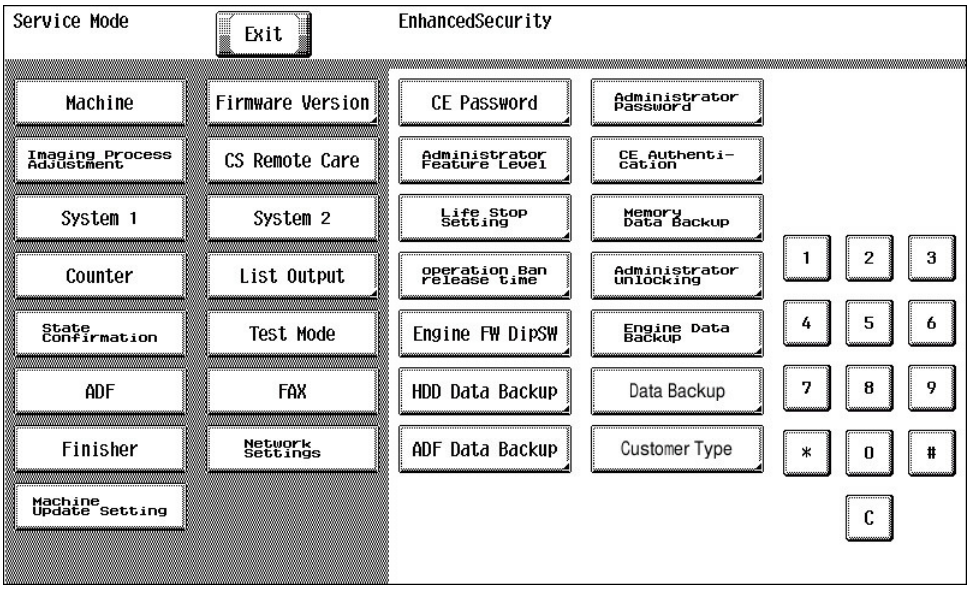


Enhanced Security	Ref. page
CE Password	I.7.3.1 CE Password
Administrator Password	I.7.3.2 Administrator Password
Administrator Feature Level	I.7.3.3 Administrator Feature Level
CE Authentication	I.7.3.4 CE Authentication
Life Stop Setting	I.7.3.5 Life Stop Setting
Memory Data Backup	I.7.3.6 Memory Data Backup
operation Ban release time	I.7.3.7 operation Ban release time
Administrator unlocking	I.7.3.8 Administrator unlocking
Engine FW DipSW	I.7.3.9 Engine FW DipSW
Engine Data Backup	I.7.3.10 Engine Data Backup
HDD Data Backup	I.7.3.11 HDD Data Backup
Data Backup	I.7.3.12 Data Backup
ADF Data Backup	I.7.3.13 ADF Data Backup
Customer Type	I.7.3.14 Customer Type
TPM Setting	I.7.3.15 TPM Setting

7.2 Starting/Exiting

7.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 0 -> Clear
3. Select a mode.



7.2.2 Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

7.3 Enhanced Security

7.3.1 CE Password

(1) Use

- To set and change the CE password.
- The CE password needs to be 8 to 64 one-byte alphameric characters and symbols.

(2) Default setting

- 9272927292729272

(3) Procedure

- Enter the CE password (8 digits) on the on-screen keyboard.

1. Current Password: Enter the currently using CE password.
2. New Password: Enter the new CE password.
3. Re-Input Password: Enter the new CE password again.

NOTE

- **When [Administrator Settings] -> [Security Settings] -> [Security Details] is set to [ON], new passwords cannot contain the same string of characters nor can be previous passwords be used.**
- **A new password is set when starts from the service mode after changing.**
- **NEVER forget the CE password. When forgetting the CE password, call responsible person of KM.**

7.3.2 Administrator Password

(1) Use

- To set and change the administrator password.
- Use this function when the administrator forget the administrator password because a new password can be set without entering the current administrator password with this.
- The administrator password needs to be 8 to 64 one-byte alphameric characters and symbols.

(2) Default setting

- 1234567812345678

(3) Procedure

- Enter the administrator password on the on-screen keyboard.

1. New Password: Enter the new administrator password.
2. Re-Input Password: Enter the new administrator password again.

NOTE

- **When [Administrator Settings] -> [Security Settings] -> [Security Details] is set to [ON], new passwords cannot contain the same string of characters nor can be previous passwords be used.**

7.3.3 Administrator Feature Level

(1) Use

- To set which modes to be allowed for the administrator to use in Service Mode.
- Use when allowing the administrator to use some modes in Service Mode.
- The modes allowed for the administrator to use in each setting are as follows.

Administrator settings function				Level 1	Level 2
System Settings	Expert Adjustment	Printer Adjustment	Erase Leading Edge	-	○
			Paper Feed Direction Adj.	-	○
		Scanner Area	Scanner Adjustment: Leading Edge	-	○
			Scanner Adjustment: Centering	-	○
			Horizontal Adjustment	-	○
			Vertical Adjustment	-	○
		ADF Adjustment	Centering	-	○
			Original Stop Position	-	○
			Centering Auto Adjustment	-	○
			Auto Adj. of Stop Position	-	○
		User Paper Settings		-	○
	Standard Size Setting	Original Glass Original Size Detect		-	○
		Foolscap Size Setting		-	○

(2) Default setting
- Prohibit

(3) Setting item
- Level 1
- Level 2
- Prohibit

7.3.4 CE Authentication
- If [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules] is "Enable", "OFF" in the setting item is not displayed.
- It will not be displayed when [Administrator Settings] -> [Network Settings] -> [Remote Panel Settings] -> [Client Settings] is set to “ON.”

(1) Use
- To determine whether or not to authenticate CE password as entering Service Mode.

NOTE
- **For setting the [Password Rules] to “ON”, set the CE Authentication to "ON". Change the initial CE password beforehand.**
- **Before setting the [Remote Panel Settings] to “ON”, set the CE Authentication to "ON".**

(2) Default setting
- ON

(3) Setting item
- ON
- OFF

7.3.5 Life Stop Setting
(1) Life stop
(a) Use
- To select whether or not to stop a print cycle when the drum unit, developing unit, transfer belt, and fusing unit reach its service life.

NOTE
- **The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.**

(b) Default setting
- Off (For Japan, North America and Europe)
- Enable (For others)

(c) Setting item
- Enable
- Off

(2) Life warning display
(a) Use
- Select whether to display or not display the pre-near life warning, near life warning, life warning, life stop warning, and L-call warning. Warning statuses are not displayed for units in which this setting is set to [Do not display] even if each warning status is enabled.
- Applicable units: drum unit, developing unit, transfer belt, and fusing unit

NOTE
- **The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.**

(b) Default setting

- Off (For Japan, North America and Europe)
- Enable (For others)

(c) Setting item

- Enable
- Off

7.3.6 Memory Data Backup

(1) Use

- To backup the data stored in the memory region on the MFP board to the flash memory.
- To backup current data in order to prevent data in the memory region on the MFP board from being erased unexpectedly.
- To backup data manually. It usually makes backup every hour automatically.
- Backup data can be restored by following the specified procedure when the trouble (CD3XX) occurred.
- Refer to “TROUBLESHOOTING” for details on restoration procedure.

(2) Procedure

1. Touch [Memory Data Backup].
2. Touch [Start] to start making a backup.
3. Check the message [Backup is completed.], and turn main power switch OFF. Wait for ten seconds or more and turn main power switch back ON.

7.3.7 operation Ban release time

(1) Use

- To set the time that elapses before the machine releases an access lock that is activated after the CE password authentication.
- To set the period of time that elapses before the machine releases the access lock, which aims to prevent the unintentional release of the access lock.
- After the CE password authentication, if the access lock is activated, the lock release timer starts to operate the following procedures.
  1. Main power switch is turned OFF and ON.
  2. Menu -> [Counter] -> [Print List]
  3. Touch [Display Keypad], displaying 10-key pad.
  4. The lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7.
  5. When the timer reaches the time specified in this setting, the access lock is released.

(2) Default setting

- 5 (minutes)

(3) Setting range

- 1 to 60 (minutes)

NOTE

- **When Enhanced Security Mode is set to ON in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode], the period of time that can be set in this setting is 5 minutes or more.**

7.3.8 Administrator unlocking

(1) Use

- To release an access lock that is activated after an administrator password authentication.
- To release the access lock with service authority when an administrator password authentication fails and the access lock is activated.
- When the main power switch is turned OFF and ON or the period of time set in the Release Time Settings elapses, the machine releases the access lock that is activated after the administrator password authentication. In addition to these operations, this setting provides another way to release the access lock.

(2) Procedure

1. Touch [Administrator unlocking].
2. Touch [unlocking] to release an access lock.
3. When [OK] is displayed, touch [OK].

7.3.9 Engine FW DipSW

(1) Use

- To make printer engine settings.
- The following table shows DIP switches that can be set in this machine.

Switch No.	Function
1	Not used
2	Not used
3	New Release Disable mode
4	Choice of alternative temperature control print prohibition (bizhub C658/C558)
5	Choice of high humidity circumstance (bizhub C458/C368/C308/C258)
6	Choice of warm-up completion temperature (bizhub C458/C368/C308/C258)
7	Choice of photo conductor pre-rotation time (bizhub C368/C308/C258)
8	Choice of 2nd image transfer output table

Switch No.	Function
9	Choice of paper size detection at bypass tray
10	Not used
11	Choice of fusing roller rotation while waiting
12	Not used
13	Choice of securing fusibility (bizhub C458/C368/C308/C258)
14	Choice of unit simultaneous replacement promotion
15	FS-534/PK-520 Punch operation noise suppression choice (bizhub C368/C308/C258)
16	Not used
17	Choice of switching main tray full detection methods
18	Choice of FS-533 tray home position switching/FS-534 main tray position lowering/FS-534 main tray position lowering
19	Choice of custom-size paper detection
20	Choice of drum unit life threshold
21	Choice of drum unit slight rotation (bizhub C368/C308/C258)
22	Choice of main scan direction white line correction
23	Choice of photo conductor pre-rotation time
24	Choice of continuous temperature control after printing
25	ACS parameter choice
26	Choice of printing pause time during temperature increase inside the machine
27	Not used
28	Choice of fusing mode for index paper (bizhub C658/C558)
29	Rotation choice of developing unit/K
30	
31 : 36	Not used
37	Silent mode choice (bizhub C658/C558/C458)
38	
39 : 46	Not used
47	Replacement timing Intelligent Control of Developing unit
48	Replacement timing Intelligent Control of Transfer Roller Unit
49	Replacement timing Intelligent Control of Transfer Belt Unit
50	Replacement timing Intelligent Control of Drum unit
51	CSRC Extension Data Notification function
52	Choice of drum unit life threshold
53 : 54	Not used
55	Shut-down control of PPM for 15A breaker (when 15A plug is used on bizhub C658 for NA)
56	Not used

(2) Procedure

1. Touch [Engine FW DipSW].
2. Touch the key that corresponds to the switch No. of the function to be set and check the key is highlighted (ON state) in reverse video.
3. Touch [OK].

(3) Details of Each Function

(a) New Release Disable mode

- To enable a unit that is temporarily used for troubleshooting or other purposes to be used again as a new unit in another machine, New Release Disable mode is provided.
- Applicable units are the following units that have the new unit detection feature. Drum unit/Y, M, C, K, Developing unit/Y, M, C, K
- When the New Release Disable mode is set, the parameter of the unit before replacement is used without making automatic adjusting control with the TCR sensor and new image stabilization control.

Procedure

1. Open the front door.
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [Engine FW DipSW].
5. Touch [3] and check the key is highlighted (ON state) in reverse video.
6. Touch [END].
7. Close the front door.

By closing the front door, the New Release Disable mode takes effect.
I.7.3.9 (4) Notes when using the New Release Disable mode

(b) Choice of alternative temperature control print prohibition (bizhub C658/C558)

- To set whether to allow a print cycle to be run when condensation is detected at the fusing section.

OFF	Disables the alternative temperature control, so that no print cycle can be run until condensation is eliminated at the fusing section. (Default)
ON	Enables the alternative temperature control. During performance of the alternative temperature control, a print cycle can be run, but productivity is reduced to 50%. It should be noted that the image quality during the performance of the alternative temperature control falls outside the image quality guaranteed range.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [4] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(c) Choice of high humidity circumstance (bizhub C458/C368/C308/C258)

- Out of Fusing PPM control for preventing the paper from losing its fusibility, "high humidity circumstance mode" which controls paper curling in high humidity is prohibited.

OFF	• Run "High-humidity Mode" in high-humidity environments. • Longer warm-up time, but no occurrence of curl even under high humidity environment (Default)
ON	• Unable to run "High-humidity Mode" even in high-humidity environments. • Shortens the warm-up time in high humidity environments, but there is a risk of paper curl occurring.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [5] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(d) Choice of warm-up completion temperature (bizhub C458/C368/C308/C258)

- To set the fusing temperature at the time of black printing.
- It controls the occurrence of a fusing error at the time of black printing on paper recommended to EU regions.

OFF	• Temperature control for regions other than EU (Default)
ON	• Temperature control for EU regions

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [6] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(e) Choice of photo conductor pre-rotation time (bizhub C368/C308/C258)

- To set the pre-rotation time of the photo conductor.
- It controls the occurrence of void areas when being left for long time.

OFF	• Photo conductor pre-rotation time: Short (priority on warm-up time reduction: Default)
ON	• Photo conductor pre-rotation time: Long (priority on image quality)

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [7] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(f) Choice of 2nd image transfer output table

- To set the 2nd image transfer output table when printing on plain paper.
- If the 2nd image transfer output is insufficient, “void areas” will occur on a printed image. In that case, set “2nd image transfer output table 2” to finely adjust the transferring output.
- If the 2nd image transfer output is excessive, “white spots” will occur on a printed image. In that case, set “2nd image transfer output table 1” to finely adjust the transferring output.

OFF	• 2nd image transfer output table 2 (high 2nd image transfer output) (Default)
ON	• 2nd image transfer output table 1 (low 2nd image transfer output)

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [8] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

6. Call the Service Mode to the screen.
7. Touch [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [2nd Transfer Adj.].
8. Make fine adjustment of the 2nd transferring for plain paper and check the printed image.

(g) Choice of paper size detection at bypass tray

- To set the bypass tray automatic paper size detection dedicated to metric or inch sizes depending on the applicable marketing area.
- Set the inch sizes for the US market. Set the metric sizes for any other marketing areas.
  NOTE
  - **The default setting is to disable automatic paper size detection of metric and inch sizes. To enable automatic size detection of mixed originals consisting of originals of both metric and inch sizes, set so as to enable the automatic paper size detection of metric and inch sizes.**

Procedure (to enable automatic size detection of mixed originals)

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [9] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(h) Choice of fusing roller rotation while waiting

- It sets whether to constantly rotate the fusing motor or not while waiting the job for MFP.

OFF	The fusing motor stops after 30 minutes in waiting condition. Steadiness while waiting has a priority. (Default)
ON	The fusing motor constantly rotates while waiting. It ensures the fusibility when immediately starts printing from the waiting status.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [11] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(i) Choice of securing fusibility (bizhub C458/C368/C308/C258)

- Sets whether or not to conduct printing wait for ensuring fusibility in low-temperature/low-humidity environments.

OFF	Without printing wait (Default)
ON	With printing wait

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [13] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(j) Choice of unit simultaneous replacement promotion

- To set whether or not to enable "F.5.3 Control causing inhibited printing for one part when an inhibited-printing event occurs in another part."

OFF	To set whether or not to enable "F.5.3 Control causing inhibited printing for one part when an inhibited-printing event occurs in another part." (Default)
ON	Disables "Control causing inhibited printing for one part when an inhibited-printing event occurs in another part."

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [14] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(k) FS-534/PK-520 Punch operation noise suppression choice (bizhub C368/C308/C258)

- The operating noise generated from the punch unit when punching holes is reduced.

OFF	• Full punching force (100%) of the punch motor is applied against the basic weight of all types of paper.
ON	• The punching force of the punch motor is controlled in accordance with the thickness of the paper (paper weight). Control the punching force of the punch motor depending on the paper thickness (basic weight). For paper other than the thick paper, 60% force is applied for punching holes. (Default) • Control the operating noise generated when punching holes on the paper other than the thick paper.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [15] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(l) Choice of switching main tray full detection methods

- It sets the main tray full detection method of FS-536 or FS-537.

OFF	Detect the main tray full status as usual without making an account of the total sheets of paper loaded in the main tray. (Default)
ON	Make an account of the total sheets of paper loaded in the main tray to detect the main tray full status.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [17] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(m) Choice of FS-533 tray home position switching/FS-534 main tray position lowering/FS-536 main tray position lowering

- It switches the tray home position when FS-533 is installed.

OFF	Tray home position becomes the low limit position. (Default)
ON	Tray home position becomes the paper receiving position.

- It sets the main tray is lowered after the print job ends to ease removing the exited paper from the tray when FS-534 is installed.

OFF	Main Tray is not lowered after the print job ends. (Default)
ON	Main Tray is lowered (about 50 mm) after the print job ends.

- It sets the main tray is lowered after the print job ends to ease removing the exited paper from the tray when FS-536 is installed.

OFF	Main Tray is lowered (about 50 mm) after the print job ends. (Default)
ON	Main Tray is not lowered after the print job ends.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [18] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(n) Choice of custom-size paper detection

- To enable the custom-size paper detection of the tray 1 and tray 2.
  NOTE
  - **This function can be set only with the refresh model.**
  - **The refresh model is set ON by default.**

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [19] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(o) Choice of drum unit slight rotation (bizhub C368/C308/C258)

- It sets whether to conduct slight rotation control or not for the color photo conductor.
- When the printing is continued with lower coverage, abrasion of the photo conductor and the cleaning blade becomes large and may cause noise when slightly rotating the drum unit.
- It is used for preventing noise caused by the slight rotation of the color photo conductor.

OFF	Conducts slight rotation control. (Default)
ON	Does not conduct slight rotation control.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [21] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(p) Choice of main scan direction white line correction

- When printing is continued with lower coverage, filming may occur to the transfer belt which may cause the main scan direction white lines.
- By setting this ON, the toner will be supplied to the transfer belt by the toner patch during image stabilization to prevent white lines to occur. The toner consumption increases by using this setting. Choose the setting suitable for the user.

OFF	Does not conduct toner patch for the white lines (Default)
ON	Conducts toner patch for the while lines

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [22] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(q) Choice of photo conductor pre-rotation time

- To select whether to execute pre rotation of the photo conductor.

OFF	Not execute pre-rotation of the photo conductor
ON	Execute pre-rotation of the photo conductor

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [23] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(r) Choice of continuous temperature control after printing

- To select the fusing unit temperature adjustment control performed when a print job sent from PC is completed.
- When [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Enter Power Save Mode] is set to "Immediately", select whether or not to turn OFF the fusing heater immediately after a print job from PC is completed.

OFF	The fusing heater is turned OFF immediately after printing a job sent from PC. (Default)
ON	The temperature control continues until the next sleep request is sent from the controller.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [24] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(s) ACS parameter choice

- It sets the black printing quantity threshold until switching the transfer belt from all press to K press when a few pages of black printing is included in color printing.
- With the initial setting, productivity has the priority and printing is conducted with all press even when the specified quantity of black printing is included. This process shortens the life of the color drum unit due to unnecessary rotation. When this setting is ON, black printing quantity threshold until switching to K press becomes smaller. This setting is to be used when the drum unit life should have priority over productivity.

OFF	Productivity has priority (Default)
ON	Life has priority

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [25] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(t) Choice of printing pause time during temperature increase inside the machine

- The printing pauses for a specified period of time in order to prevent toner from adhering when the temperature inside increases.

OFF	Productivity has priority (Default)
ON	Pause for printing becomes longer. Temperature inside comparatively becomes low which may improve the image quality.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [26] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(u) Choice of fusing mode for index paper (bizhub C658/C558)

- To set fusing temperature when printing on the index paper.
- It controls the occurrence of paper curling when printing on a thin index paper.

OFF	Fusing temperature: High (priority on fusing ability: Default)
ON	Fusing temperature: Low (priority on controlling paper curling)

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [28] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(v) Rotation choice of developing unit/K

- At the start or end of a process, reverse rotation of the transfer belt or cleaning of the 2nd transfer roller, the drum unit/K rotates. (The developing unit/K does not rotate.)
- When the drum unit/K rotates for more than 450,000 times, abnormal noise will occur on the drum unit/K.
- When abnormal noise occurs, rotate the developing unit/K to resolve the abnormal noise.

- If abnormal noise occurs even when the drum unit/K rotates for less than 450,000 times, select “OFF/ON” to resolve the abnormal noise.

SW No.		
29	30	
OFF	OFF	If the drum unit/K rotates for more than 450,000 times, rotate the developing unit/K at the time of start or end of a process, reverse rotation of the transfer belt or cleaning of the 2nd transfer roller. (Default)
ON	OFF	Prohibit rotation of the developing unit/K at the start or end of a process, reverse rotation of the transfer belt or cleaning of the 2nd transfer roller.
OFF	ON	Rotate the developing unit/K at the start or end of a process, reverse rotation of the transfer belt or cleaning of the 2nd transfer roller.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [29] or [30], and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(w) Silent mode choice

- It switches the drive for the polygon motor, fusing, and fan during standby.

SW No.		
37	38	
OFF	OFF	Normal mode (Default)
ON	OFF	Silent mode Level 1 (Advance polygon rotation is not energized)
OFF	ON	Silent mode Level 2 (Advance polygon rotation is not energized. Fusing and fan don't rotate during standby)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [37] or [38], and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(x) Replacement timing Intelligent Control of Developing unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [47] and check the key is changed (ON / OFF state).
5. Touch [END].

(y) Replacement timing Intelligent Control of Transfer Roller Unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [48] and check the key is changed (ON / OFF state).
5. Touch [END].

(z) Replacement timing Intelligent Control of Transfer Belt Unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [49] and check the key is changed (ON / OFF state).
5. Touch [END].

(aa) Replacement timing Intelligent Control of Drum unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [50] and check the key is changed (ON / OFF state).
5. Touch [END].

(ab) CSRC Extension Data Notification function

- To set the range of data notified to CSRC.

OFF	Notifies the normal data. (Default)
ON	Notifies the extension data.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [51] and check the key is changed (ON / OFF state).
5. Touch [END].

(ac) Choice of drum unit life threshold

- To change the drum unit life threshold value by setting "OFF/ON".
- This setting is available when Engine FW DipSW No.50 is set to ON.

SW No.		
52	20	
OFF	OFF	Life warning at a consumption rate of 100%; life stop at 120% (default)
OFF	ON	Life warning at a consumption rate of 110%; life stop at 130%
ON	OFF	Life warning at a consumption rate of 120%; life stop at 140%
ON	ON	Life warning at a consumption rate of 130%; life stop at 150%

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [52] or [20], and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(ad) Shut-down control of PPM for 15A breaker (when 15A plug is used on bizhub C658 for NA)

- To set whether to enable control for avoiding shut-down of the breaker.

OFF	Disables PPM for breaker
ON	Enables PPM for breaker (default) Make a trial calculation of the average current for one minute, and run it at half speed for one minute when the following condition is met. Condition: Continuing for three minutes at 16A or more, or continuing for five minutes at 15.2A or more

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [55] and check the key is changed (ON / OFF state).
5. Touch [END].

(4) Notes when using the New Release Disable mode

(a) Before starting the mode

- Output the list in [Service Mode] -> [List Output] to check the information on the wear-out rate of each unit and keep the Dmax density adjustment value. Replace units that have reached their replacement time or that are near their replacement time with new ones, and perform New Release.
- If the toner is empty, start this mode when the toner empty status is resolved by replacing the toner cartridge with a new one or charging the toner.

(b) During the New Release Disable mode

- The New Release Disable mode is subject to the condition that the New Release Disable mode should not be used for a long period, i.e. duration of printing only several tens of sheets. (Units used in the New Release Disable mode for a long time cannot be guaranteed as new ones.)
- In the New Release Disable mode, the drum unit/K life counter is not reset and it continues to count in a normal manner. If the counter reading becomes close to the value for the replacement time, the replacement time can be reached in the New Release Disable mode. (If the drum unit/K counter should reach the value for the replacement time while temporarily using a new drum unit/K in the New Release Disable mode, turn OFF the New Release Disable mode, open and close the front door (or turn the main power switch OFF and ON), and perform New Release in a normal manner. In this case, the previous drum unit/K, which has been temporarily removed, cannot be used again.)

- After activating the New Release Disable mode in [Engine FW DipSW], do not turn OFF and ON the main power switch or do not let the machine go into the sleep mode until the work in the New Release mode is completed.
  (In case that the main power switch is turned OFF or the machine goes into the sleep mode, be sure to open the front door and turn the main power switch ON or activate the machine from the sleep mode. Then turn ON the New Release Disable mode and close the front door.)

(c) After finishing work in New Release Disable mode

- When continuing to use the new unit used in the New Release Disable mode in the same machine, turn OFF the new Release Disable mode and open and close the front door (or turn OFF and ON the main power switch) to perform New Release.
- To reinstall the previous unit used in the machine, open the front door, turn OFF the New Release Disable mode, replace the new unit with the previous unit, and close the front door (or turn the main power switch OFF and ON).
  In this case, perform Initialize + Image Stabilization, Gradation Adjustment, and input of the previous Dmax density adjustment value in service mode. (If these adjustments are not performed, gradation reproducibility cannot be guaranteed.)
- After temporarily using a new drum unit/K in the New Release Disable mode, before reinstalling the previous drum unit/K, be sure to check the reading of the drum unit/K life counter in [Service Mode] -> [Counter] -> [Life] to learn that New Release is not performed on the new drum unit/K, i.e. the counter value has not decreased.
  (There is no way to determine whether New Release is performed on the new drum unit/K or not from the appearance of the unit. Checking the counter reading is necessary to avoid bringing back the drum unit/K on which New Release is performed, assuming that the drum unit/K remains new.)

7.3.10 Engine Data Backup

- Not used

7.3.11 HDD Data Backup

(1) Use

- To back up or restore the settings of the machine and the image data stored in the box.

Generic format Backup	• Store the setting data for this machine as an XML data and store the data saved in the box as a TIFF-C image to the HDD connected with a USB. However, a data that is saved at 1200dpi in the box cannot be backed up. • Since the free space in the HDD for backup cannot be checked beforehand, after starting the backup, it will be terminated as an error at the time that no space remained in the HDD.
KM Format Backup	• Save the settings of the machine as a XML data, and save the image data in the box in internal format (RAW data) to the HDD connected with a USB. • A backup starts after making a confirmation of if the storage is enough.

(a) Target

- Settings an image data in the box to be backed up and restored are as follows.
  - Setting data for MFP (User Settings, Administrator Settings, part of each settings in Service Mode)
  - User authentication, Account track settings information
  - One-touch Registration Address Information
  - Images saved in the box (User box (Public, Personal, Group, and Encrypted PDF box)) *
  - Information that configures boxes (setting data exclusive for boxes) *

NOTE

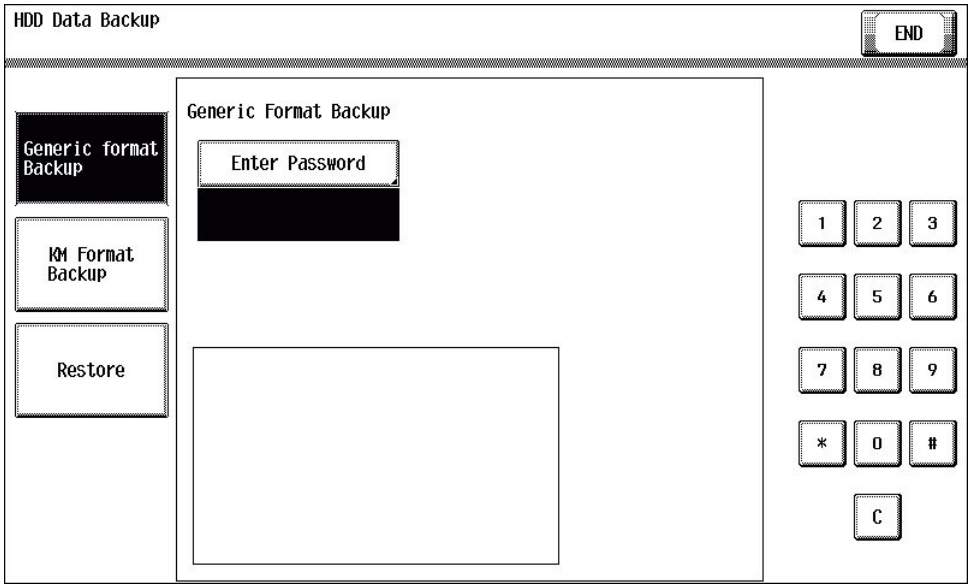
- ***: Not applicable when no hard disk is mounted**

(b) Requirements

- Conditions required to backup/restore are as follows.
  - To use a self-power external HDD (a type to supply power from outside)
    NOTE
    • A bus-power external HDD shall not be used.
  - After connecting an external HDD to the machine via a USB, the data is converted with ext3 format automatically.
  - The backup will be executed after the backup data which has already existed in the external HDD is deleted automatically.
  - Data of only one model can be saved in the external HDD.
  - Cancellation during a backup is allowed. However cancellation during formatting an external HDD is not allowed.
  - Operation of backup/restore is not allowed when a trouble or warning occurred.
  - Operation of backup/restore is not allowed when a timer job has been reserved.

(2) Setting item

- Generic format Backup
- KM Format Backup
- Restore
- Enter Password



(3) Procedure

NOTE

- **Set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Storage Data Backup] to [Allow]. If [Restrict] is set, the machine cannot be used.**
- **Be sure to turn the main power switch of the machine off and on after performing a backup/restore.**

(a) Backup

1. Connect the USB cable of an external HDD to the USB port of an MFP. (USB NG will be displayed when the HDD is not recognized correctly.)
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [HDD Data Backup].
5. Select [Generic format Backup] or [KM Format Backup].
6. Touch [Enter Password], enter an encryption password using 1 to 32 characters, then touch [END].
7. Touch [Start]. (“Processing” will be displayed.)
   Touch [Cancel] if you want to stop the backup.
8. After completing the backup, [Result OK] will be displayed.
9. Turn OFF and ON the main power switch.

(b) Restore

1. Connect the USB cable of an external HDD to the USB port of an MFP.
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [HDD Data Backup].
5. Select [Restore].
6. Touch [Enter Password], enter a decryption password using 1 to 32 characters, then touch [END].
7. Touch [Start]. (“Processing” will be displayed.)
   Touch [Cancel] if you want to stop the restore.
8. After completing the restore, [Result OK] will be displayed.
9. Turn OFF and ON the main power switch.

7.3.12 Data Backup

(1) Use

Client Function

- To be used for moving data at the time of MFP replacement.
- Back up data saved in an MFP to the WebDAV server or an HDD.

Server Function

- Use MFP as backup server (WebDAV server).

(2) Server Backup - Backup Settings

(a) Function Setting

- Use
  - To set whether to back up data to a server.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable
    - When [ON] is selected, configure settings required for backup.

NOTE
- **This function cannot be enabled when Transmission protocol, SMB Setting or HTTP Setting, Backup target and Encryption Password have not been set.**

(b) Transmission protocol
- Use
  - To select Transmission protocol.
- Default setting
  - HTTP
- Setting item
  - SMB
  - HTTP

(c) SMB Setting
- Use
  - To be set when “SMB” is selected for Transmission protocol.
  - Enter the Host Name, File Path, User Name and Password.

(d) HTTP Setting
- Use
  - To be set when “HTTP” is selected for Transmission protocol.
  - Enter the URL, User Name, Password and Proxy.

(e) Backup target
- Use
  - To select a target to back up.
- Setting item
  - Remote Access Setting
  - User Settings
  - Service Settings
  - Address Book *
  - Authentication Data *
  - Network Settings *
  - Accessibility *
  - Administrator Setting *
  - Display Custom Settings *
  - External Cert *

*: It is displayed only when [Enabled] is selected in [Service Mode] -> [System 2] -> [▶] -> [▶] -> [Maintenance Mode], and [Allow] is selected in [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access].

(f) Encryption Password
- Use
  - Enter the encryption password.

(3) Server Backup - Auto backup

(a) Use
- To set whether to execute auto backup.

NOTE
- **It is displayed when Backup Settings is enabled.**

(b) Default setting
- Unset

(c) Setting item
- Set
- Unset
  - When “Set” is selected, configure settings for Backup Period (Interval of Day(s) or Weekly Frequency) and Day Frequency, or Weekly Frequency and Backup Time.

(4) Server Backup - Immediate backup

(a) Use
- To be used for executing backup immediately.
- If “OK” appears when pressing “Start”, the backup is completed successfully.
- If “NG” appears, an error code will be displayed. Contact the KM representative as necessary.
  - S09401: The machine update password is mismatched.
  - N******: Error related to network.
  - S99999: Error other than that related to network.

(5) Server Backup - Backup result

(a) Use
- To make a confirmation of the date and time when the final backup is completed successfully.
- Up to 100 backup logs can be displayed in the order from the latest backup.

(6) Server Backup 2 - Format

- Use
  - To select the format to back up.
- Setting Item
  - Generic format
  - KM Format

NOTE
Touch [Fix] after selecting the format.

(7) Server Backup 2 - Backup Settings

(a) Function Setting

- Use
  - To set whether to back up data to a server.
  - To set whether to target box documents.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable
    - When [ON] is selected, configure settings required for backup.

NOTE
- **This function cannot be enabled when WebDAV Setting, Encryption Password and Data Hold Period have not been set.**

(b) WebDAV Setting

- Use
  - Enter the URL, User Name, Password and Proxy.

(c) Encryption Password

- Use
  - Enter the encryption password.

(d) Data Hold Period

- Use
  - To select data hold period.
- Default setting
  - 60 days
- Setting item
  - 1 day to 180 days

(8) Server Backup 2 - Auto backup

(a) Function Setting

- Use
  - To set whether to execute auto backup.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable
    - When [ON] is selected, configure settings required for backup.

(b) Full Backup

- When “Full Backup” is selected, configure settings for Backup Period (Interval of Day(s) or Weekly Frequency) and Day Frequency, or Weekly Frequency and Backup Time.

(c) Diff. Backup

- When “Diff. Backup” is selected, configure settings for Backup Time.

(9) Server Backup 2 - Backup Reservation

- Use
  - To select the backup reservation.
- Setting item
  - Full Backup
  - Difference Backup

NOTE
Touch [Fix] after selecting the backup reservation.

(10) Server Backup 2 - Backup History

- To make a confirmation of the date and time when the final backup is completed successfully.
- Up to 100 backup logs can be displayed in the order from the latest backup.

(11) Server Backup 2 - Immediate backup

- To be used for executing backup immediately.
- If “OK” appears when pressing “Start”, the backup is completed successfully.

- If “NG” appears, an error code will be displayed. Contact the KM representative as necessary.
  - S09401: The machine update password is mismatched.
  - N******: Error related to network.
  - S99999: Error other than that related to network.

(12) Restore from Server - Restore Setting

(a) Use

- To specify a server for restore.
- Select a server and press “Start” to start restoring.

(13) Restore Settings - Server settings

(a) Use

- To specify a location from where restore data is to be downloaded.

(b) Default setting

- Acquire from Backup

(c) Setting item

- Acquire from Backup: Execute restore from the server specified in Backup Settings.
- Edit Restore path: Execute restore from a location other than the server specified in Backup Settings.
  - When Edit Restore path is selected, enter Download Protocol and SMB setting, or HTTP Setting and Encryption Password.

(14) Restore from Server - Restore result

(a) Use

- To display the final date of restore.

(15) HDD Backup - Backup Settings

(a) Function Setting

- Use
  - To set whether to execute backup to an HDD.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable
    - When [ON] is selected, configure settings required for backup.

(16) HDD Backup - Auto backup

(a) Use

- To set whether to execute auto backup.

NOTE

- **It is displayed when Backup Settings is enabled.**

(b) Default setting

- Unset

(c) Setting item

- Set
- Unset

When “Set” is selected, configure settings for Backup Period (Interval of Day(s) or Weekly Frequency), Day Frequency or Weekly Frequency, and Backup Time.

(17) HDD Backup - Immediate backup

(a) Use

- To be used for executing backup immediately.
- Press “Start” to reboot the MFP, and then start backup to the HDD.

(18) HDD Backup - Backup result

(a) Use

- To make a confirmation of the date and time when the final backup is completed successfully.

(19) Restore from HDD - Restore

(a) Use

- To execute restore from an HDD.
- Press “Start” to start restoring.
- Follow the message appearing on the screen and turn OFF and ON the main power switch.

(20) Restore from HDD - Restore result

(a) Use
- To display the final date of restore.

(21) Backup Server Settings
(a) Function Setting
- Use
  - To set whether to use the MFP as backup server (WebDAV server).
- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) Server Setting
- Use
  - Enter the User Name and Password.

7.3.13 ADF Data Backup
(1) Use
- To back up or restore settings configured for ADF.
- Used to save or restore settings when the DF control board is replaced.
- The backup data is stored in the eMMC board.

(2) Procedure
(a) ADF Data Save Mode (backup)
1. Touch [Service Mode] -> [Enhanced Security] -> [ADF Data Backup].
2. Select [ADF Data Save Mode], and touch [Start].
3. Check that the result "OK" appears.

(b) ADF Data Reflect Mode (restore)
NOTE
- **This function is available only when the data backed up in [ADF Data Save Mode] is stored in the eMMC board.**

1. Touch [Service Mode] -> [Enhanced Security] -> [ADF Data Backup].
2. Select [ADF Data Reflect Mode], and touch [Start].
3. Check that the result "OK" appears.
4. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

7.3.14 Customer Type
(1) Function Settings
(a) Use
- To set whether to configure setting of customer type.

(b) Default setting
- No

(c) Setting item
- Yes
- No
  - When “Yes” is selected, configure setting of the business type and employee number.

7.3.15 TPM Setting
- It is displayed when the optional i-Option LK-115 is enabled.

(1) Initialization
(a) Use
- To initialize the memory area installed on the TPM chip.

NOTE
- **Be sure to perform it if the i-Option LK-115 is enabled.**

(b) Procedure
1. Touch [Initialization].
2. Press the Start key.

(2) Status report
(a) Use
- To notify an error which is detected by the TPM chip self diagnosis, and output the diagnosis result, or output a report file to a USB memory.
- The TPM chip self diagnosis is conducted when the machine starts to run.

(b) Procedure (List Output)

1. Touch [Status report].
2. Touch [List Output].
3. Press the Start key.
4. The status report is output.

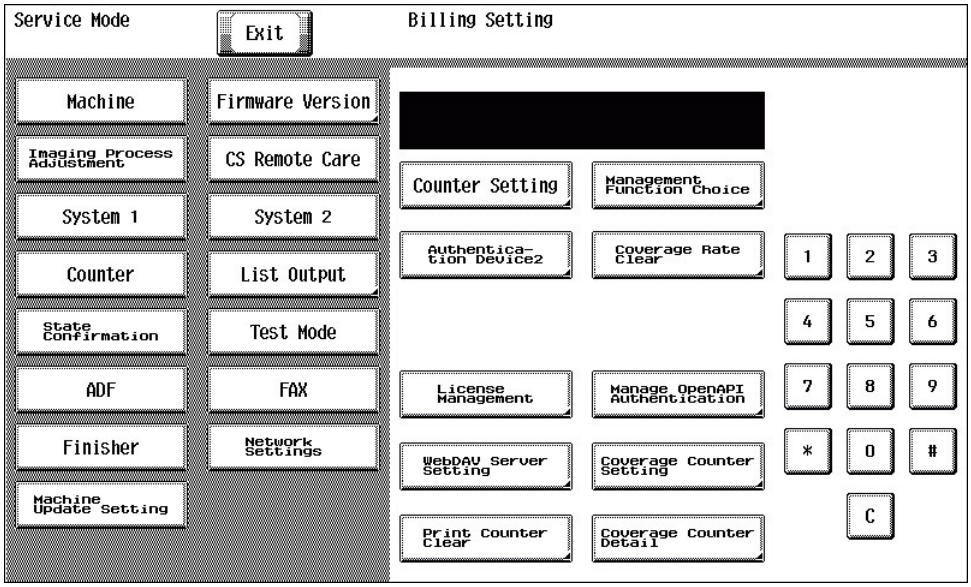
(c) Procedure (USB save)

1. Connect a USB memory to the USB port.
2. Touch [Status report].
3. Touch [USB save].
4. Press the Start key.
5. The status report file is saved to the USB memory.

8. BILLING SETTING

- When using the optional upgrade kit UK-211 and license kit LK-102 v3, LK-104 v3, LK-105 v4, LK-106, LK-107, LK-108, LK-110 v2, LK-111 , LK-114 or LK-115 v2, license management is done with [Service Mode] -> [Billing Setting] -> [License Management].
- [License Management] can set Activation/Deactivation of each i-Option functions, Repair/Initialize of functions for troubleshooting, or etc.

8.1 List of billing setting



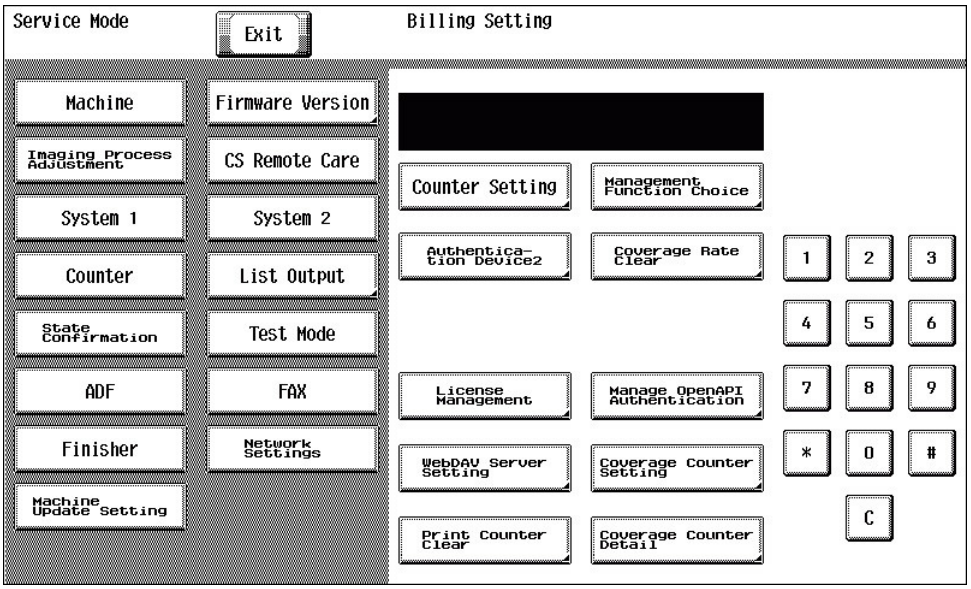
Billing Setting		Ref. page
Counter Setting		I.8.3.1 Counter Setting
Management Function Choice		I.8.3.2 Management Function Choice
Authentication Device 2		I.8.3.7 Authentication Device 2
Coverage Rate Clear		I.8.3.9 Coverage Rate Clear
License Management	Activation	I.8.3.10 License management - Activation
	Deactivation	I.8.3.11 License management - Deactivation
	Repair *1	I.8.3.12 License management - Repair
	Initialize	I.8.3.13 License management - Initialize
	Request Code	I.8.3.14 License management - Request Code
	List	I.8.3.15 License management - List
	Function List	I.8.3.16 License management - Function List
Manage OpenAPI Authentication	Restriction Code	I.8.3.17 (1) Restriction Code
	Region Code	I.8.3.17 (2) Region Code
WebDAV Server Setting		I.8.3.18 WebDAV Server Setting
Coverage Counter Setting		I.8.3.19 Coverage Counter Setting
Print Counter Clear		I.8.3.20 Print Counter Clear
Coverage Counter Detail		I.8.3.21 Coverage Counter Detail

*1: It is displayed only when “License management error” occurs.

8.2 Starting/Exiting

8.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 9
3. Select a mode.



8.2.2 Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

8.3 Billing Setting

8.3.1 Counter Setting

(1) Use

- To set the counting method for the total counter, size counter and banner paper counter.
- To set the size regarded as the large size (2 counts.)
- Use to change the counting method for the counters.

(2) Default setting (Total Counter Mode)

- Japan: Mode 1
- US, Europe, Others 1, Others 2, Others 3, Others 4, Others 5: Mode 2

(3) Setting item (Total Counter Mode)

- Mode 1: 1 count per copy cycle
- Mode 2: Large size is double counts

NOTE

- **The content of this setting is reflected in the count method with the key counter.**

(4) Default setting (Large Size Counter Mode)

- US: A3 and 11 x 17
- Europe, Others 1, Others 2, Others 3, Others 4, Others 5: A3, B4, 11 x 17, and 8 1/2 x 14
- Japan: No Count

(5) Setting item (Large Size Counter Mode)

A3/11 x 17	When it exceeds 279 mm in the main scan direction and 420 mm in the sub scan direction (exceeds 399 mm at fax scan), it is regarded as the large size.
A3/B4/11 x 17/8 $^1/_2$ x 14	When it exceeds 215 mm in the main scan direction and 355 mm in the sub scan direction (exceeds 337 mm at fax scan), it is regarded as the large size.
A3/11 x 17/B4/8 $^1/_2$ x 14/Foolscap	When it exceeds 203 mm in the main scan direction and 330 mm in the sub scan direction (exceeds 313 mm at fax scan), it is regarded as the large size. (However the size in the main scan direction changes according to the foolscap size setting.)

- No Count
- A3/11 × 17
- A3/B4/11 × 17/8 $^1/_2$ × 14
- A3/11 × 17/B4/8 $^1/_2$ × 14/Foolscap

NOTE

- **When the "Large Size Counter Mode" is set to “No Count”, the machine operate with following conditions regardless of the each control panel settings.**
  - **Total Counter: Mode1**
  - **Banner Paper Counter Mode: Mode1**
  - **Banner Counter Double Count Mode: OFF**

(6) Count-up table

Print mode	1-Sided				2-Sided			
Size	Sizes other than those specified		Specified sizes		Sizes other than those specified		Specified sizes	
Mode Type	Mode		Mode		Mode		Mode	
	1	2	1	2	1	2	1	2
Total	1	1	1	2	2	2	2	4
Size	0	0	1	1	0	0	2	2
2-sided Total	0	0	0	0	1	1	1	1

- 0: No count
- 1: 1 count
- 2: 2 counts
- 3: 3 counts
- 4: 4 counts

(7) Default setting (Banner Paper Counter Mode)

- Mode 4

(8) Setting item (Banner Paper Counter Mode)

- When printing on the long paper (457.2 mm or over), the counting value will be the total of the value set by the total counter mode and the value by this setting.

Mode 1	0 count
Mode 2	1 count
Mode 3	+ 2 counts (457.2 to 915.0 mm will be + 1 count)
Mode 4	+ 3 counts (457.2 to 686.0 mm will be + 1 count, and 686.1 to 915.0 mm will be + 2 count)

(9) Default setting (Banner Counter Double Count Mode)

- OFF

(10) Setting item (Banner Counter Double Count Mode)

- ON
- OFF

NOTE

- **To set whether to use normal count or double count when printing long size paper.**
- **When "ON" is selected, double count is applied to only long size paper.**
- **The count method used when printing long size paper depends on the combination of the Counter Setting: Settings in Banner Paper Counter Mode and Banner Counter Double Count Mode. The following shows details on count methods that are the combination of each setting.**

Total Counter	Banner Paper Counter Mode	Banner Counter Double Count Mode	Paper size	Count
Mode 1	Mode 1	OFF	Normal size	1 count
			Long size	1 count
		ON	Normal size	1 count
			Long size	2 counts
	Mode 2	OFF	Normal size	1 count
			Long size	2 counts
		ON	Normal size	1 count
			Long size	4 counts
	Mode 3	OFF	Normal size	1 count
			Long size 457.3 to 915.0 mm	2 counts
			Long size 915.1 mm or more	3 counts
		ON	Normal size	1 count
			Long size 457.3 to 915.0 mm	4 counts
			Long size 915.1 mm or more	6 counts
	Mode 4	OFF	Normal size	1 count
			Long size 457.3 to 686.0 mm	2 counts
			Long size 686.1 to 915.0 mm	3 counts

			Long size 915.1 mm or more	4 counts
		ON	Normal size	1 count
			Long size 457.3 to 686.0 mm	4 counts
			Long size 686.1 to 915.0 mm	6 counts
			Long size 915.1 mm or more	8 counts
Mode 2	Mode 1	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size	2 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size	4 counts
	Mode 2	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size	3 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size	6 counts
	Mode 3	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 915.0 mm	3 counts
			Long size 915.1 mm or more	4 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 915.0 mm	6 counts
			Long size 915.1 mm or more	8 counts
	Mode 4	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 686.0 mm	3 counts
			Long size 686.1 to 915.0 mm	4 counts
			Long size 915.1 mm or more	5 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 686.0 mm	6 counts
			Long size 686.1 to 915.0 mm	8 counts
			Long size 915.1 mm or more	10 counts

NOTE

- **When the "Large Size Counter Mode" is set to “Not count”, the machine operate with following conditions regardless of the each control panel settings.**
  - **Total Counter: Mode1**
  - **Banner Paper Count Mode: Mode1**
  - **Banner Counter Double Count Mode: OFF**

8.3.2 Management Function Choice

- To set whether or not the Key Counter, Management Device (Data controller), Authentication Device, or Vendor are to be mounted.

NOTE

- **This is not displayed when [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.**
- **When the setting shows that [Management Device 2] or [Vendor 2] is mounted, the following applications will be invalid.**
  PC FAX transmission / HDD TWAIN/PS Box Operator / PS Scan Direct / PS Job Spooler / Fiery: Scan to Box
  Also, [Administrator Settings] -> [Security Settings] -> [Function Management Settings] -> [Network Function Usage Settings] will be set to “OFF”.

8.3.3 Management Function Choice - Key Counter IF Vendor

- Not used

8.3.4 Management Function Choice - Key Counter Only

(1) Use

- To set whether or not the key counter is installed.
- Set when the key counter is mounted.
- Select [Color Mode] and [Message] when the key counter is mounted.

(2) Color Mode

- When [Mode 1] is set on [Total Counter Mode] after selecting [Billing Setting] -> [Counter setting].

Mode 1	1 count per 1 print cycle
Mode 2	2 counts per 1 print cycle
Mode 3	3 counts per 1 print cycle
Mode 4	4 counts per 1 print cycle
Mode 5	5 counts per 1 print cycle

- When [Mode 2] is set on [Total Counter Mode] after selecting [Billing Setting] -> [Counter setting] and large size is selected on [Large Size Counter Mode]

Mode 1	2 counts per 1 print cycle
Mode 2	4 counts per 1 print cycle
Mode 3	6 counts per 1 print cycle
Mode 4	8 counts per 1 print cycle
Mode 5	10 counts per 1 print cycle

- When [Mode 2] is set on [Total Counter Mode] after selecting [Billing Setting] -> [Counter setting] and sizes other than large size are selected on [Large Size Counter Mode] Mode 1

Mode 1	1 count per 1 print cycle
Mode 2	2 counts per 1 print cycle
Mode 3	3 counts per 1 print cycle
Mode 4	4 counts per 1 print cycle
Mode 5	5 counts per 1 print cycle

(3) Message

(a) Procedure

- Select the message type when the administrative unit is mounted.

Type 1	Message for key counter
Type 2	Message for card scanning
Type 3	Message for ID management
Type 4	Message for remote SW

(b) Setting item

- Type 1
- Type 2
- Type 3
- Type 4

(4) Confirmation copy

(a) Procedure

- Set whether to allow a confirmation copy when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item

- License
- Ban

(5) The next job reservation

(a) Use

- Set whether to allow the reservation of the next job when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item
- License
- Ban

NOTE
- **The setting is available only when user authentication and account track are set "OFF" with [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings].**

(6) Count Setting
(a) Use
- To set the count timing used when the key counter is installed.

(b) Default setting
- Paper feed

(c) Setting item
- Paper feed
- Paper out

8.3.5 Management Function Choice - Management Device 2
(1) Use
- To set whether or not the management device 2 is installed.

Mode 1	Use contact type device. (Logout with ID key is not allowed)
Mode 2	Use non-contact type device. (Logout with ID key is allowed.)

(2) Setting item (Management Setting)
- Mode 1
- Mode 2

NOTE
- **The setting is not available when either "External Server Authentication" of user authentication, "Password Only" of account track, "Do Not Synchronize" of user authentication and account track or "ON" of public user access has been set with [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings].**

(3) Billing Line
- To be displayed only when [Fax (Line 3)] and [Fax (Line 4)] are set to [Set] in [Service Mode] -> [System 2] -> [Option Board Status].

(a) Use
- To set which of Fax Line 1 or Fax Line 2 is used for billing Fax Line 3 and Fax Line 4.

(b) Default setting
- Line 3: Line1
- Line 4: Line2

(c) Setting item
- Line1
- Line2

8.3.6 Management Function Choice - Vendor 2
(1) Use
- To set whether or not the vendor 2 is installed.

  NOTE
  - **When using the vendor along with the key counter, inserting the key counter will set it to the "Key Counter Mode" and removing it will set it to the "Vendor Mode".**

(2) Procedure
- Select color mode and message of key counter. (Only for key counter, the type of the color mode and message are same after mounting.)

(3) Procedure (Confirmation copy)
(a) Use
- Set whether to allow a confirmation copy when a key counter is installed.

(b) Default setting
- Ban

(c) Setting item
- License
- Ban

(4) Procedure (The next job reservation)

(a) Use
- Set whether to allow the reservation of the next job when a key counter is installed.

(b) Default setting
- Ban

(c) Setting item
- License
- Ban

(5) Procedure (Count Setting)

(a) Use
- To set the count timing used when the key counter is installed.

(b) Default setting
- Paper feed

(c) Setting item
- Paper feed
- Paper out

(6) Procedure (Message)

(a) Use
- Select message of vendor.

Type 1	Message for key counter
Type 2	Message for card scanning
Type 3	Message for ID management

(b) Setting item
- Type 1
- Type 2
- Type 3

(7) Billing Line
- To be displayed only when [Fax (Line 3)] and [Fax (Line 4)] are set to [Set] in [Service Mode] -> [System 2] -> [Option Board Status].

(a) Use
- To set which of Fax Line 1 or Fax Line 2 is used for billing Fax Line 3 and Fax Line 4.

(b) Default setting
- Line 3: Line1
- Line 4: Line2

(c) Setting item
- Line1
- Line2

8.3.7 Authentication Device 2

(1) Use
- To set whether or not the authentication device 2 is installed.
- Set when the authentication unit (biometric type or card type) is mounted.

NOTE
- **When using the authentication device including AU-102, AU-201 and AU-201S the loadable device driver needs to be installed.**
  Driver Install
  Utility tool

Card	Uses IC card authentication system (AU-201/AU-201S/AU-201H/AU-202H/OMNIKEY 5427CK (AU-205H)/YSoft card reader/USB keyboard emulation card reader).
Body	Uses biometrics (finger vein) authentication system (AU-102)
Card 3	Uses IC card authentication device for PKI card system

- When selecting [Body], set a film timeout interval, capture trial time and authentication trial time.
- When selecting [Card], a response timeout interval is displayed. (The interval is unchangeable.)
- [Card 3] will be displayed only when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No. 12 is set to [00000010]/[02] (bit value/HEX value).

(2) Setting item

Authentication Mode
- Card

- Body

(3) Installation procedures of authentication unit

(a) AU-102

1. Install the AU-102 loadable driver (BIO_LDR.tar) to the main unit. *1
2. Install the AU-102 to the main unit.
3. Select [Body] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
4. Turn off the main power switch and turn it on again more than 10 seconds after.
5. Register the authentication user data.

Note *1

- **Use the loadable driver combined with the proper firmware version.**

Authentication units	Compatible IC cards
AU-102	**Biometric**

(b) AU-201/AU-201S

1. Install the loadable driver (ICC_LDR.tar) to the main unit. *1,*2,*3
2. Install the AU-201/AU-201S to the main unit.
3. Select [Card] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
4. Turn off the main power switch and turn it on again more than 10 seconds after.
5. Register the authentication card data.

Note *1

- **A combination of the loadable driver and the IC card information setting file will be supplied as a loadable driver by KM.**

Note *2

- **The loadable driver to be installed varied according to the type of the card. Identify the type of the card requiring authentication and install the correct loadable driver.**
- **Use the loadable driver combined with the proper firmware version.**

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
AU-201	**AU-201 loadable driver (FeliCa IDm)**	**FeliCa IDm, FeliCa SSFC, FeliCa FCF, FeliCa FCF(Campus), TypeA**
	AU-201 loadable driver (FeliCa Private)	**FeliCaPrivate**
AU-201S	**AU-201S loadable driver**	**FeliCa IDm, FeliCa SSFC, FeliCa FCF, FeliCa FCF(Campus), TypeA, FeliCaPrivate**

Note *3

- **If FeliCa IDm, FeliCa SSFC, FeliCa Private, or related card requiring detailed settings is to be used, make the detailed settings by using either one of the following methods:**
  1. Using the Auth Device Tool Advanced for AU-201/AU-201S, prepare a combination of the loadable driver and the IC card information setting file and export it as a loadable driver.
  Utility tool
  2. Using the Auth Device Tool Advanced for AU-201/AU-201S, prepare the IC card information setting file only and install the loadable driver in the MFP. Then, using the PageScope Data Administrator, write the IC card information setting file in the MFP.
  Utility tool

E.g.: Information setting sample when the FeliCa SSFC card is used

Information to be obtained from the administrator		
Items of FeliCa SSFC detail setting	Sample-data (decimal number)	Setting value (hexadecimal number)
Room number	37	00 25
Floor number	15	00 0F
Building number	50	00 32
Area number	85	00 55
Security level	2	00 02
Company identification code (CL code) *1	06BGLQVX17 (ASCII code)	30 36 42 47 4C 51 56 58 31 37
Company code *2	CompanyA (ASCII code)	CompanyA

*1: The character length of the company code is 10 bytes.
*2: Use alphabetical upper case/lower case characters and numeric characters for Company code. When the company code is not set, this space will be left blank.

(c) USB keyboard emulation card readers *1

1. Install the loadable driver (ICC_LDR.tar) to the main unit. *2
2. Select [Card] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
3. Turn off the main power switch and turn it on again more than 10 seconds after.
4. Set Vendor ID and Product ID of the card reader in [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [USB Device identification information]. *3
5. Turn OFF the main power switch.
6. Install the USB keyboard emulation card readers to the main unit.
7. Turn ON the main power switch.
8. Register the authentication card data.

Note *1
- **Use the card reader supporting US keyboards.**
- **The length of card ID is 1 to 512 bytes.**
- **Send data as card ID data received until the reception of the key code that has been set as a delimiter (Enter).**

Note *2
- **Use the loadable driver combined with the proper firmware version.**

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
USB keyboard emulation card readers	**KeyboardEmu loadable driver**	**Depends on the card reader ***

- ***: The card type is reported to the authentication program as an extended card type.**

Note *3
- **Vendor ID and Product ID are identification information to specify USB devices.**
- **Check Vendor ID and Product ID of the USB device to be connected as follows:**
  - **Refer to the specification of the device or ask the vendor.**
  - **Connect the device to a Windows PC and check "Property" in "Device Manager."**

(d) Miscellaneous card readers

- The same setting method as that for AU-201/AU-201S applies for other card readers.
- The following loadable drivers are necessary.
- Use the loadable driver combined with the proper firmware version.

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
AU-201H	AU-201H loadable driver	HID Prox *3
AU-202H	AU-202H loadable driver *1	HID iClass
OMNIKEY 5427CK (AU-205H)	5427CK (AU-205H) loadable driver *1	HID Prox, HID iCLASS, TypeA , FeliCa IDm *4
KM USB Reader v2 MultiReader HF	Loadable driver for YSoft card reader (Default: HID Prox) *2	Mifare
KM USB Reader v2 Legic Advant		LEGIC
KM USB Reader v2 ASK FSK 125kHz		EM4100, EM4102, RFID 125kHz
KM USB Reader v2 Mot/Ind W26		Indala
KM USB Reader v2 HID Prox		HID Prox
KM USB Reader v2 HID iCLASS		HID iCLASS

Note *1
- **If cards of HID iClass of AU-202H or HID iClass of OMNIKEY 5427CK (AU-205H) that require detailed settings are to be used, make the detailed settings by using either one of the following methods:**
  1. Using the Auth Device Tool Advanced for AU-202H or Auth Device Tool Advanced for 5427CK (AU-205H), prepare a combination of the loadable driver and the IC card information setting file and export it as a loadable driver.
  Utility tool
  2. Using the Auth Device Tool Advanced for AU-202H or Auth Device Tool Advanced for 5427CK (AU-205H), prepare the IC card information setting file only and install the loadable driver in the MFP. Then, using the PageScope Data Administrator, write the IC card information setting file in the MFP.
  Utility tool

Note *2
- **If a YSoft card reader is used, all types of card will be reported as HID Prox card to the authentication program (Default).**
- **To report the card type other than HID Prox to the authentication program, choose the corresponding card type shown in the following list.**

Card Reader Name	Readable Card Type	Card type to be reported to the authentication program (Default) *2-5, *2-7	IC Card Information Setting (card type to be reported) *2-6 Utility tool
KM USB Reader v2 MultiReader HF	Mifare	HID Prox	TypeA (1) *2-1,*2-4
KM USB Reader v2 Legic Advant	LEGIC	HID Prox	TypeA (1) *2-1,*2-4
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	HID Prox	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	HID Prox	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox	HID Prox (1) *2-2,*2-4
KM USB Reader v2 HID iCLASS	HID iCLASS	HID Prox	HID iCLASS (1) *2-3,*2-4

- ***2-1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201/AU-201S.**
- ***2-2 The content (ID) to be read from the HID Prox card setting differs from which to be read by using AU-201H.**
- ***2-3 The content (ID) to be read from the HID iCLASS card setting differs from which to be read by using AU-202H.**

- ***2-4 When add the YSoft card reader to the authentication network composed of the present AU-201, 201S, 201H and 202H, the ID may vary depending on the card reader. Therefore, it is required to set the card type to TypeA (1), HID Prox (1) or HID iCLASS (1) and register the card again.**
- ***2-5 For the content to be read from the HID Prox card, since the ID length is fixed to 16 bytes, the unused part will be bridged with 0xFF.**
- ***2-6 If a card type other than HID Prox is selected, the card ID type will be set to up to 512 bytes, the card ID length will be reported together with the card ID.**
- ***2-7 If the card type is set to HID Prox by using the LDAP-IC card authentication, specify the card ID type to be sent to the LDAP server as shown below.**
  1. Software switch No.135 Hex: 00 Reports that the 1st byte shows the ID length of the card, the 2nd byte and after shows the card ID. (Default)
  2. Software switch No.135 Hex: 01 Reports the card ID with the ID length including the 1st byte.

Note *3

- **If the card type is set to HID Prox by using the LDAP-IC card authentication, specify the card ID type to be sent to the LDAP server as shown below.**
  1. Software switch No.135 Hex: 00 Reports that the 1st byte shows the ID length of the card, the 2nd byte and after shows the card ID. (Default)
  2. Software switch No.135 Hex: 01 Reports the card ID with the ID length including the 1st byte.

Note *4

- **To use FeliCa, make either of the following settings.**
  - **Select [FeliCa] at [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [IC Card type setting].**
  - **Although [Use Card Reader Settings] is also selectable at [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [IC Card type setting], "FeliCa" is dedicated for the card reader (OMNIKEY5427CK) settings.**
  - **Make card reader (OMNIKEY5427CK) settings with the tool that is exclusively used for PC settings and downloaded from the HID web page.**

8.3.8 Setting items that automatically change the setting values

NOTE

- **Performing the setup for each unit to be mounted will internally change the setting values below. It needs resetting when cancelling the setting in order to set back to "UnSet" because the setting value will remain.**

(1) When the vendor2 is mounted

Setting Item		Vendor 2
Utility	Default Copy Settings	Factory Default
	Default Scan/Fax Settings	Factory Default
	Copy Operating Screen	[Yes]
	Fax Active Screen	Tx/Rx Display [Yes]
	Scan/Fax Settings -> Default Tab	Direct Input
	Custom Display Settings -> Left Panel Display Default	Change Left Panel Display Default to "Bookmark."
Administrator Settings	Usage Settings for Each Function	Copy, PC print, and Send Data will be set to "ON". Others Prints will be set to "OFF".
	Administrator Security Levels	Prohibit
	Restrict Access to Job Settings	Changing Job Priority, Delete Other User Jobs, and Changing Zoom Ratio will be set to "Restrict".
	Job Priority Operation Settings	"Skip Job (Fax)" will be set to "Yes". "Skip Job (Copy, Print)" will be set to "Yes". Change "Fax RX Job priority" to "No."
	External Memory Function Settings	External Memory Document Scan will be set to "OFF".
	Forward TX Setting	No
	Fax Settings -> Memory RX Setting	Password for Memory RX Setting is set to the default value of the administrator password
	DPWS Settings -> Printer Settings/Scanner Settings	OFF
	Image Log Transfer Settings	OFF
Service Mode	Software Switch Setting	SW No. 63 will be set to [00000000] at Bit assignment/[00] at HEX assignment.
	FAX	[System] -> [Display Setting] -> [Re-Transmission] will be set to "OFF".

(2) When the key counter IF vendor is mounted

Setting Item		Key counter IF Vendor
Utility	Default Copy Settings	Factory Default
	Default Scan/Fax Settings	Factory Default
	Copy Operating Screen	[Yes]
	Fax Active Screen	Tx/Rx Display [Yes]

Setting Item		Key counter IF Vendor
	Scan/Fax Settings -> Default Tab	Direct Input
	Custom Display Settings -> Left Panel Display Default	Change Left Panel Display Default to “Bookmark.”
Administrator Settings	Usage Settings for Each Function	Copy, PC print will be set to “ON”. Send Data, Others Prints will be set to “OFF”.
	Administrator Security Levels	Prohibit
	Weekly Timer ON/OFF Settings	OFF
	Restrict Access to Job Settings	Changing Job Priority, Delete Other User Jobs, Registering and Changing Addresses, and Changing Zoom Ratio will be set to “Restrict”.
	Job Priority Operation Settings	Change “Fax RX Job priority” to “No.”
	External Memory Function Settings	External Memory Document Scan will be set to "OFF". Save Document and Print Document will be set to "OFF".
	Fax Settings -> Memory RX Setting	Password for Memory RX Setting is set to the default value of the administrator password
	Forward TX Setting	No
	OpenAPI Settings	Access Setting will be set to “Restrict” and Authentication will be changed to “OFF” setting.
	Apply Stamps/Stamp	No
	Apply Stamps/Copy Protect	No
	Apply Stamps/Stamp Repeat	No
	Apply Stamps/Registered Overlay	No
	Apply Stamps/Header/Footer	No
	Apply Stamps/Page Number/Text Color	Black
	Apply Stamps/Date/Time/Text Color	Black
	DPWS Settings -> Printer Settings/Scanner Settings	OFF
	Image Log Transfer Settings	OFF
Service Mode	Software Switch Setting	SW No. 63 will be set to [00000000] at Bit assignment/[00] at HEX assignment.
	FAX	[System] -> [Display Setting] -> [Re-Transmission] will be set to “OFF”.

(3) When the management device 2 is mounted

Setting Item		Management Device 2
Administrator Settings	Usage Settings for Each Function	Copy, PC print, Send Data, and Others Prints will be set to “ON”.
	Line Parameter Setting	Receive Mode will be changed to “Auto RX”.
	DPWS Settings->Printer Settings/ Scanner Settings	OFF

(4) When the authentication device 2 is mounted

Setting Item		Authentication Device 2(Card/Body)
Administrator Settings	User Authentication/Account Track -> General Settings -> User Authentication	This setting will be set to “ON(MFP)” if External Server Authentication has been set.

8.3.9 Coverage Rate Clear

(1) Use

- To clear the coverage rate.

(2) Procedure

- Touching [END] key will clear the coverage rate.

(3) Default setting

- Unset

(4) Setting item

- Set
- Unset

8.3.10 License management - Activation

(1) Functions

- To activate i-Option functions.

(2) Use

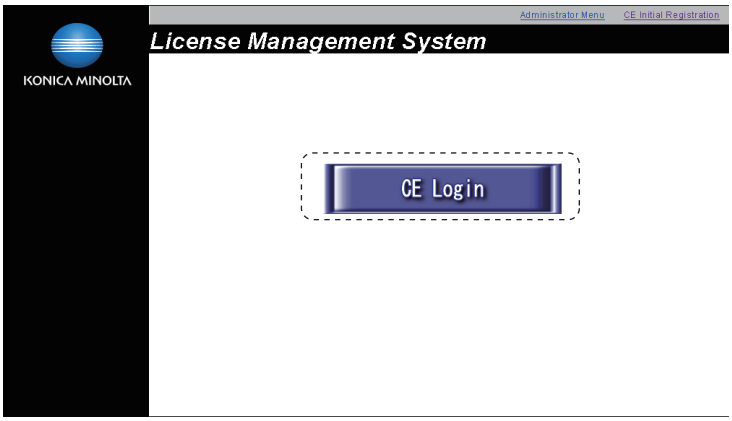
- To activate i-Option functions with CE.
- The functions can be activated by selecting the desired function and enter the appropriate license code and function code.
- Administrators also can carry out the procedure No.14 or later step to activate i-Option functions through Administrator Settings.

(3) Procedure

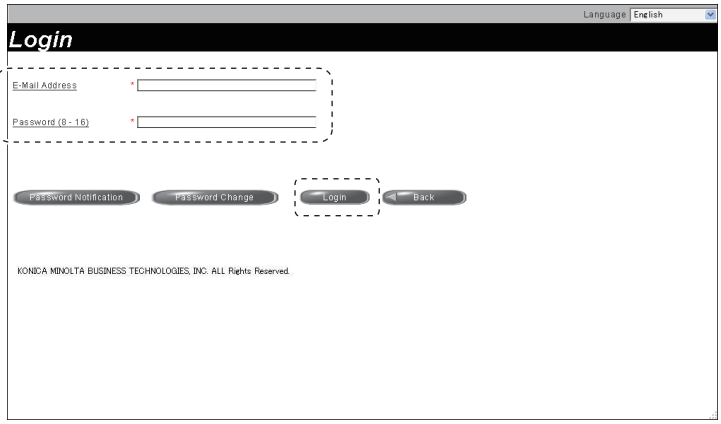
NOTE

- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**

1. Prepare “token certification.”
2. Access the following URL using the PC connected to the Internet.
   https://lms.konicaminolta.com/license/KM/support.aspx
3. Click [CE Login].



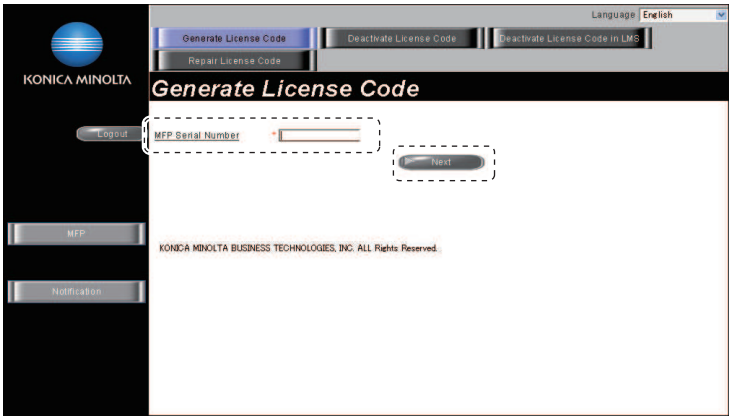
4. Enter [E-Mail Address] and [Password], and click [Login].



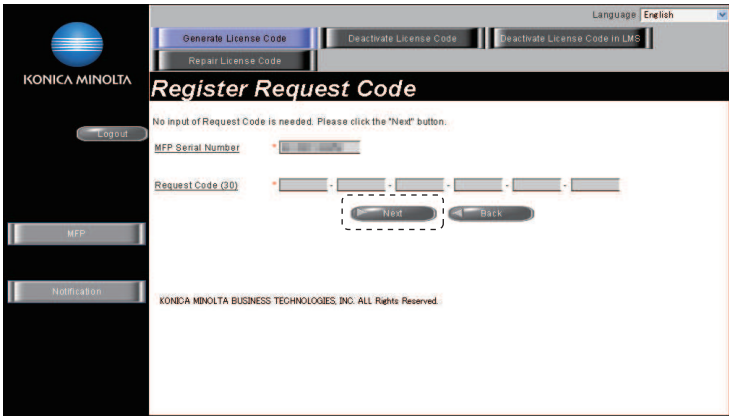
5. Click [Generate License Code].



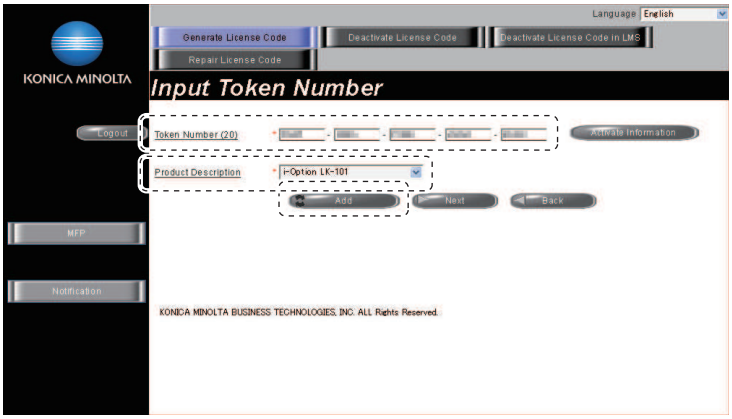
6. Enter the serial number of the target MFP, and click [Next].
   NOTE
   - **Make sure to enter alphabet letters of the serial number in all capital letters.**



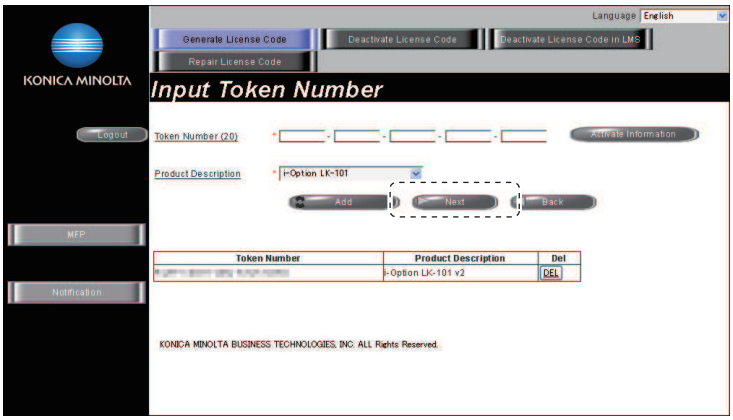
7. Click [Next].



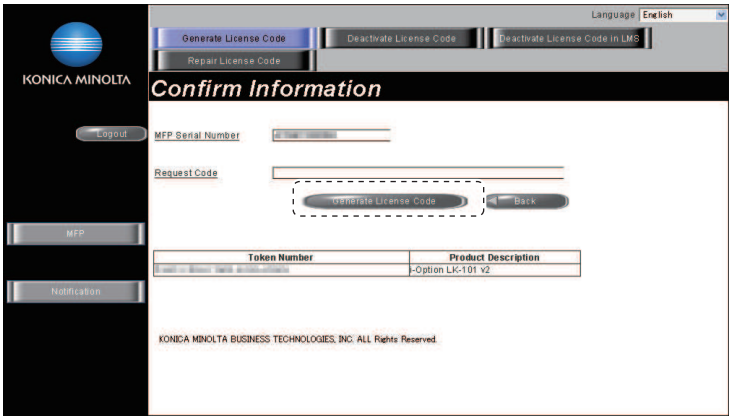
8. Enter the token number written in the token certification, and select the product description.
9. Click [Add].



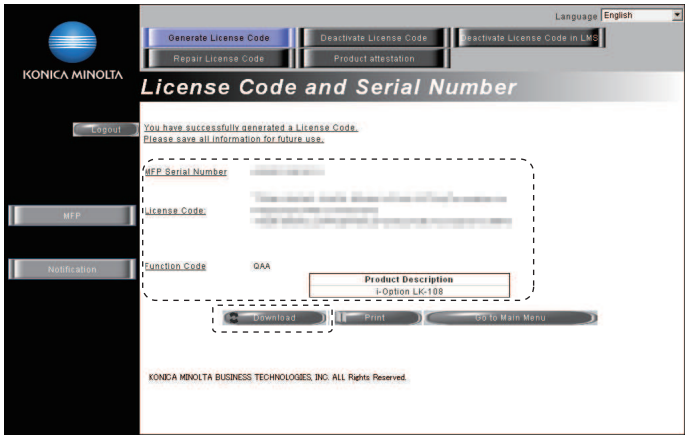
10. Confirm the registered items, and click [Next].



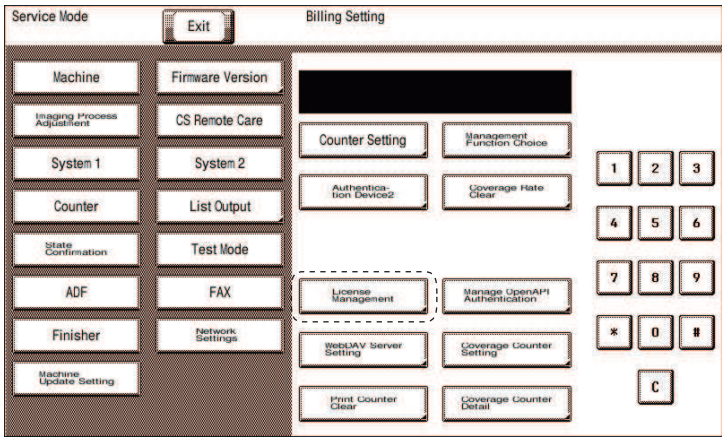
11. Click [Generate License Code].



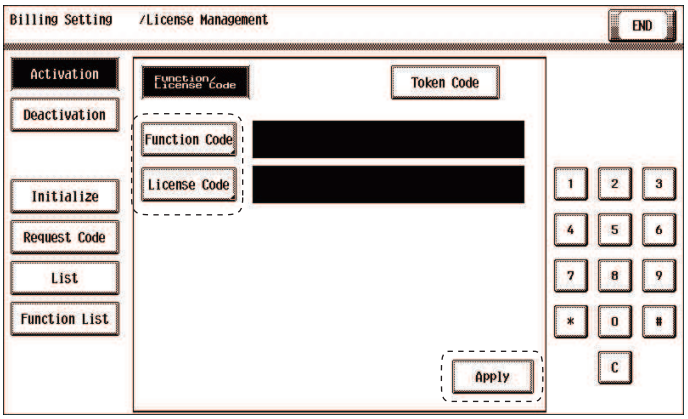
12. LMS issues license code and function code.
13. Write down the serial number, license code and function code.
    <When activating with an USB memory>
    Click [Download], and save a "***.fek" file to the root directory of the USB memory.



14. Select [Service Mode] -> [Billing Setting] -> [License Management].



15. Select [Activation] -> [Function Code] or [License Code], and enter the function code and the license code confirmed at Step13.
    <When activating with an USB memory>
    Connect the USB memory to the USB port on the side of the control panel, and select [Activation] -> [USB].
16. Touch [Apply].



17. Follow the massage appearing on the screen and turn OFF and ON the main power switch.
<When activating with an USB memory>
This step is unnecessary. Proceed to the next step.
18. Select [Service Mode] -> [Billing Setting] -> [License Management] -> [Function List], and confirm that the activated function is displayed at the list.

8.3.11 License management - Deactivation

(1) Functions

- To deactivate i-Option functions.

(2) Use

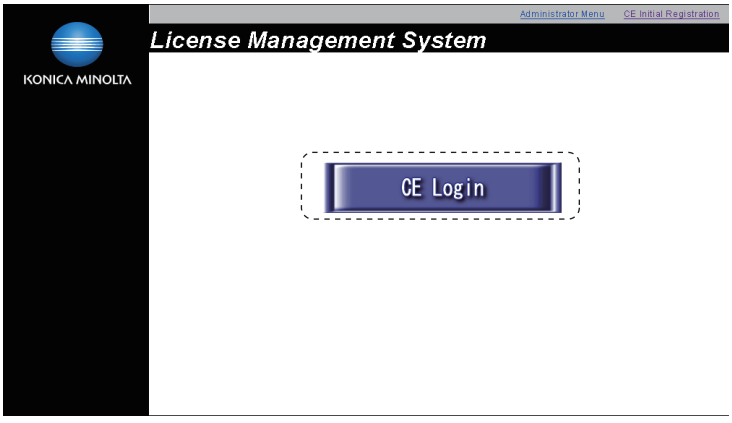
- To deactivate i-Option functions due to registration error, expiration of lease term, change to other MFP or etc.
- The functions can be deactivated by selecting the desired function and enter the appropriate deactivation code.

(3) Procedure

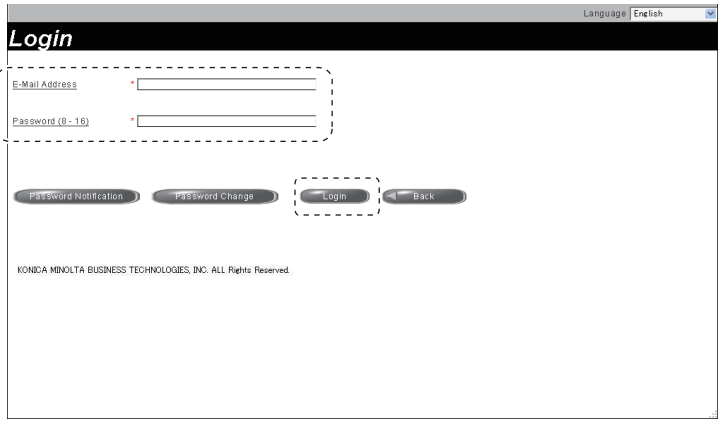
NOTE

- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**

1. Check the serial number of the target MFP.
2. Access the following URL using the PC connected to the Internet.
https://lms.konicaminolta.com/license/KM/support.aspx
3. Click [CE Login].



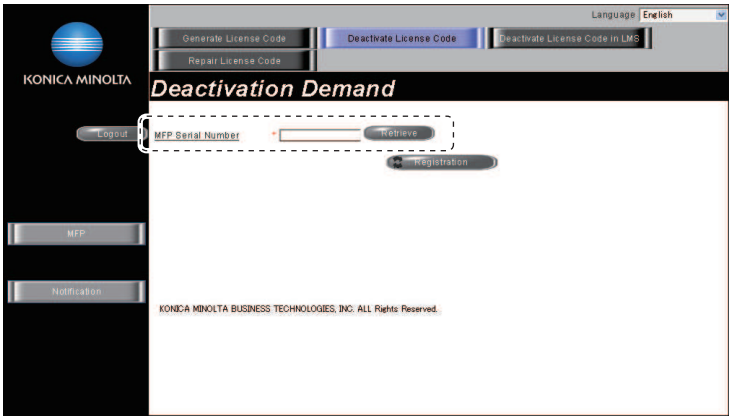
4. Enter [E-Mail Address] and [Password], and click [Login].



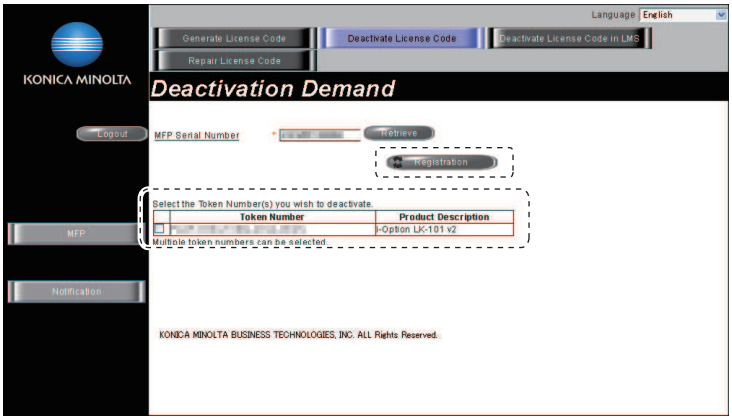
5. Click [Deactivate License Code].



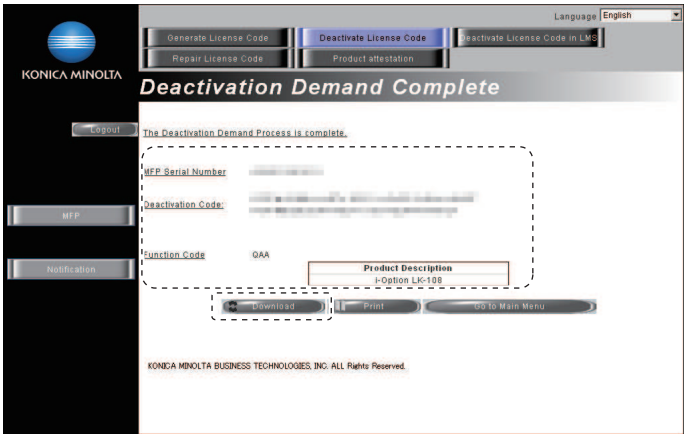
6. Enter the serial number of the target MFP, and click [Retrieve].
NOTE
- **Make sure to enter alphabet letters of the serial number in all capital letters.**



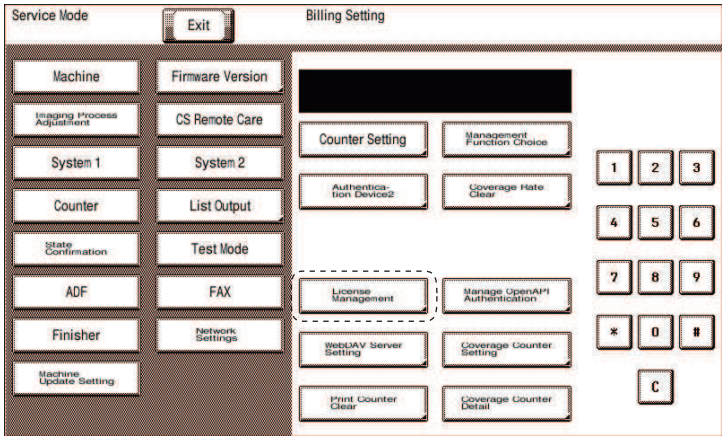
7. Select the token to be deactivated, and click [Registration].



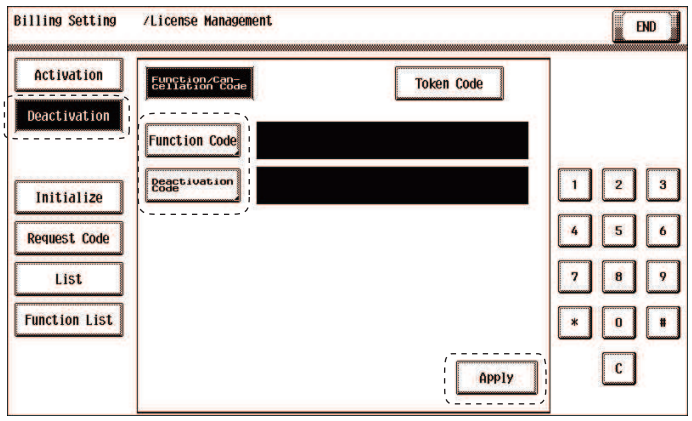
8. LMS issues deactivation code and function code.
9. Write down the serial number, deactivation code and function code.
   <When deactivating with an USB memory>
   Click [Download], and save a "***.fek" file to the root directory of the USB memory.



10. Select [Service Mode] -> [Billing Setting] -> [License Management].



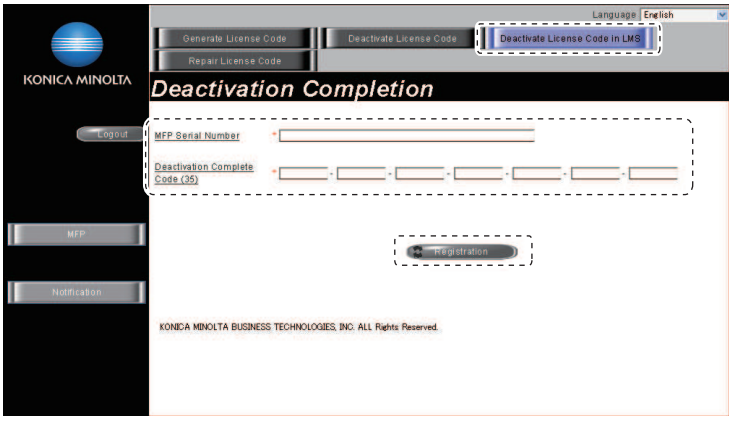
11. Select [Deactivation] -> [Function Code] or [Deactivation Code], and enter the function code and the deactivation code confirmed at Step9.
    <When deactivating with an USB memory>
    Connect the USB memory to the USB port on the side of the control panel, and select [Deactivation] -> [USB].
12. Touch [Apply].



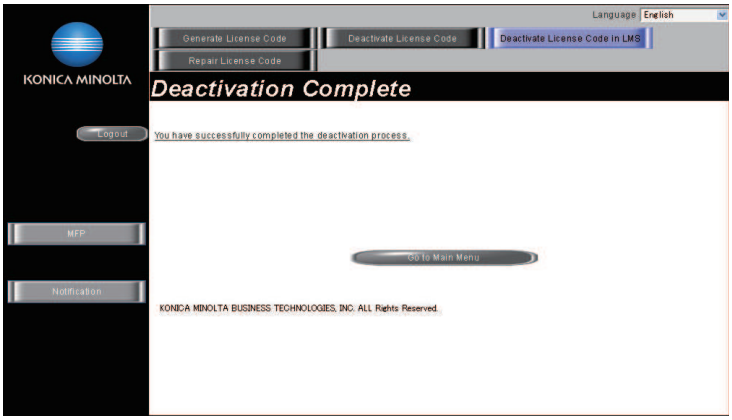
13. Write down or print out the serial number and deactivation complete code.
<When deactivating with an USB memory>
MFP will restart automatically. After MFP restarts, write down or print out the serial number and deactivation complete code.
NOTE
- **When A4S or 8 1/2 x 11S is set to the paper feed tray, the above-mentioned serial number and deactivation complete code can be printed out by pressing the start key.**
- **Serial number and deactivation complete code can be confirmed in [List] available from [License Management].**



14. Follow the massage appearing on the screen and turn OFF and ON the main power switch.
<When deactivating with an USB memory>
This step is unnecessary. Proceed to the next step.
15. Access to the LMS and login again.
For detail of the login method, refer to step 2 to step 4.
16. Click [Deactivate License Code in LMS].
17. Enter the serial number and the deactivation complete code confirmed at step13.
NOTE
- **Make sure to enter alphabet letters of the serial number in all capital letters.**



18. “Deactivation Complete” message will be displayed.
The license become invalid at both MFP and LMS, and deactivated token number can be used for another MFP.



8.3.12 License management - Repair

(1) Functions

- To repair license management information.

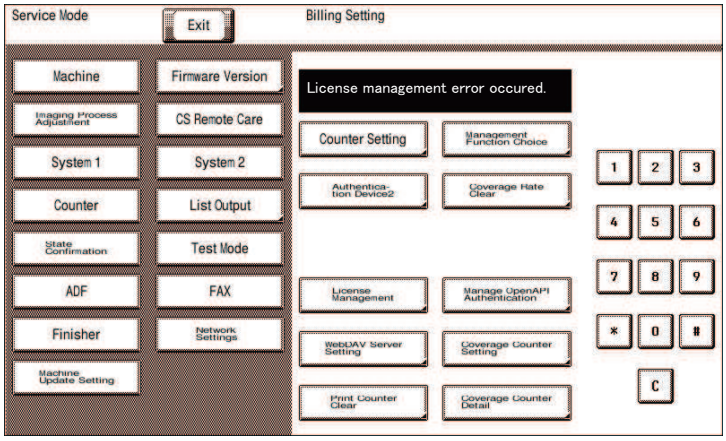
(2) Use

- To be used when license management information is lost due to replacement of MFP board or the eMMC board, or some other trouble.
- License management information can be repaired by acquiring repair code with repair request code, and entering the repair code.

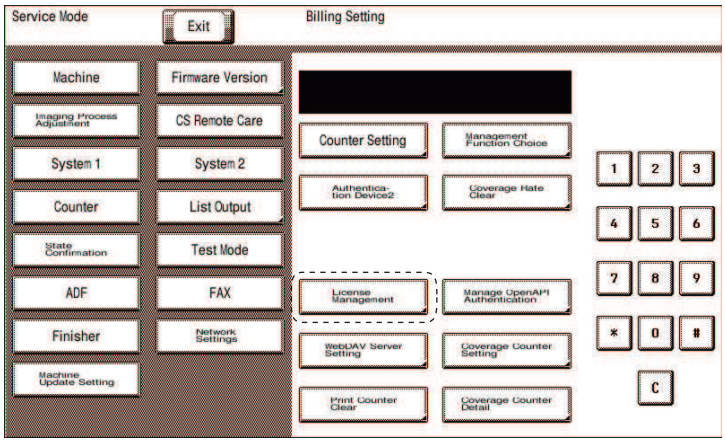
(3) Procedure

NOTE

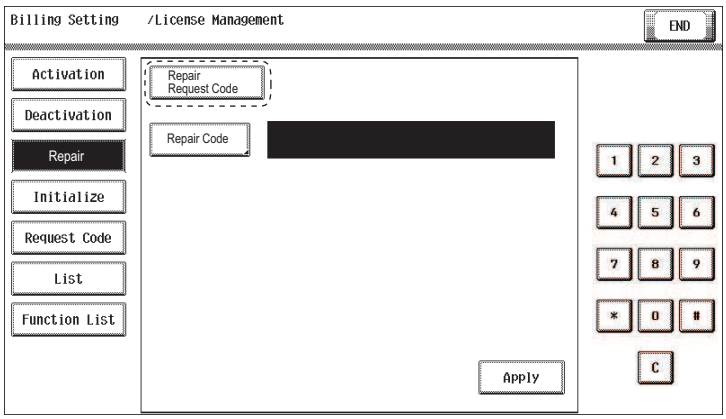
- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**
- **When the message "License management error occurred." is displayed, carry out the repair operation with the following steps.**



1. Select [Service Mode] -> [Billing Setting] -> [License Management].



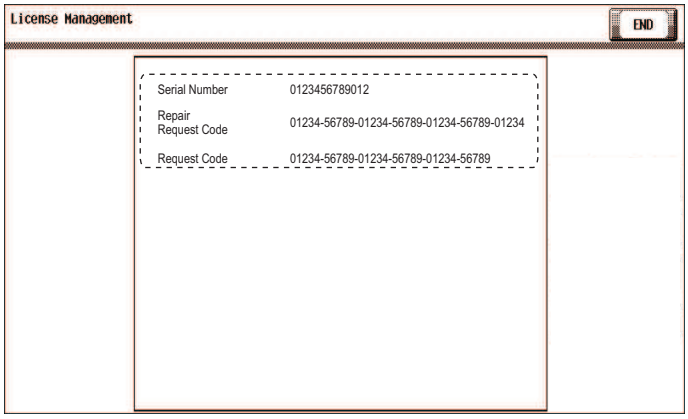
2. Select [Repair] -> [Repair Request Code].



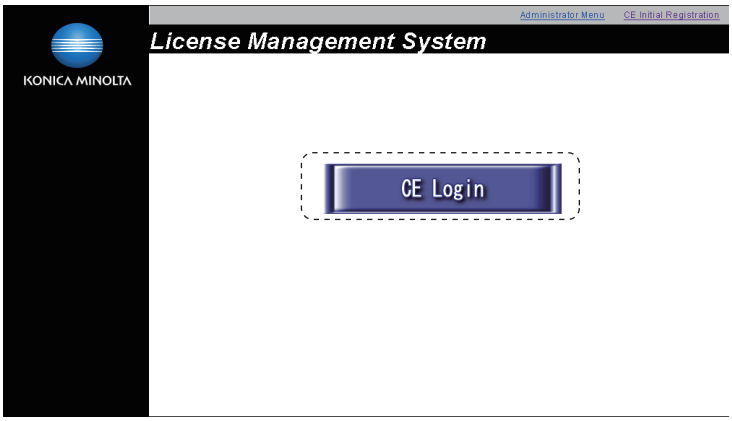
3. Write down or print out the serial number, repair request code and request code.

NOTE

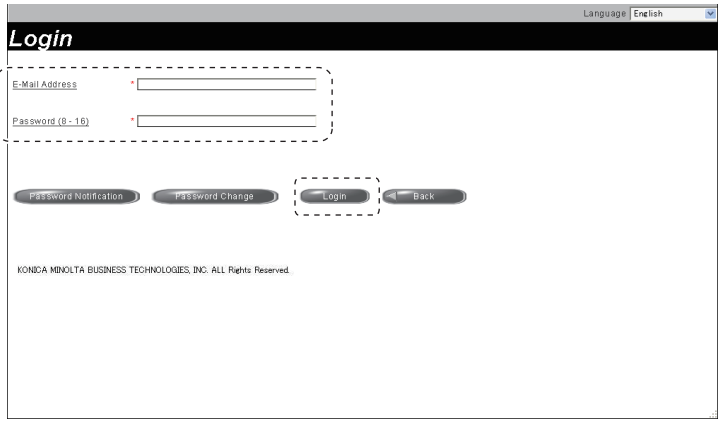
- **When A4S or 8 1/2 x 11S is set to the paper feed tray, the above-mentioned serial number and repair request code can be printed out by pressing the start key.**



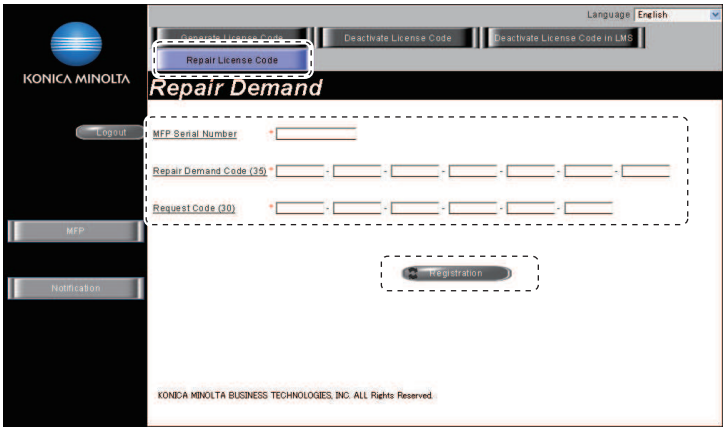
4. Access the following URL using the PC connected to the Internet.
   - https://lms.konicaminolta.com/license/KM/support.aspx
5. Click [CE Login].



6. Enter [E-Mail Address] and [Password], and click [Login].



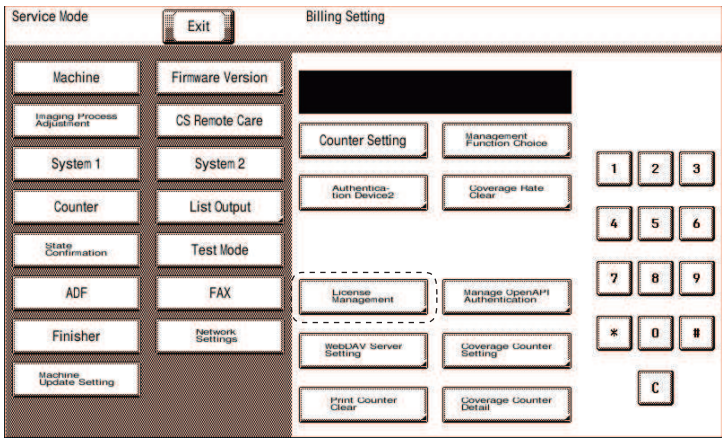
7. Click [Repair License Code].
8. Enter the serial number, repair request code and request code confirmed at step3, and click [Registration].
   NOTE
   - **Make sure to enter alphabet letters of the serial number in all capital letters.**



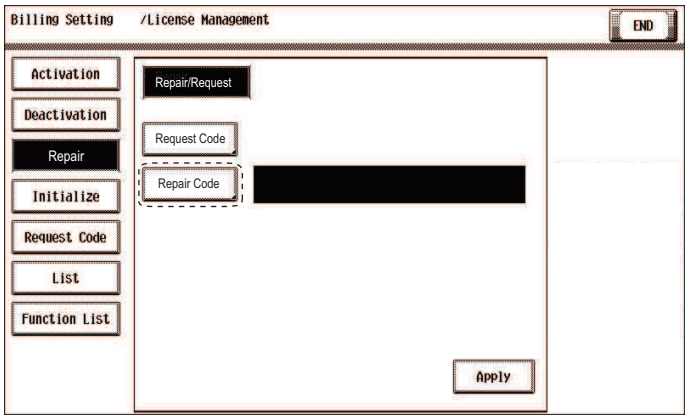
9. LMS issues repair permission code.
10. Write down the serial number and repair permission code.



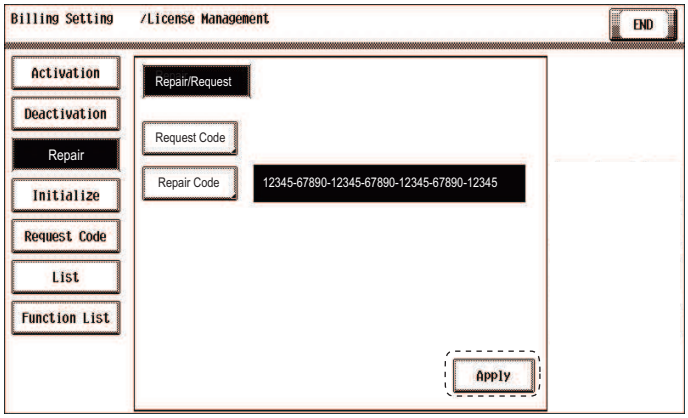
11. Select [Service Mode] -> [Billing Setting] -> [License Management].



12. Select [Repair] -> [Repair Code], and enter the repair code confirmed at step10.



13. Touch [Apply].



14. After repair is completed, the machine restarts automatically.

8.3.13 License management - Initialize

(1) Functions

- To initialize license management information.

(2) Use

- To be used when license management information cannot be repaired.
- License management information should be initialized when the machine fails to generate request code or repair request code due to any trouble and the information cannot be repaired.

(3) Procedure

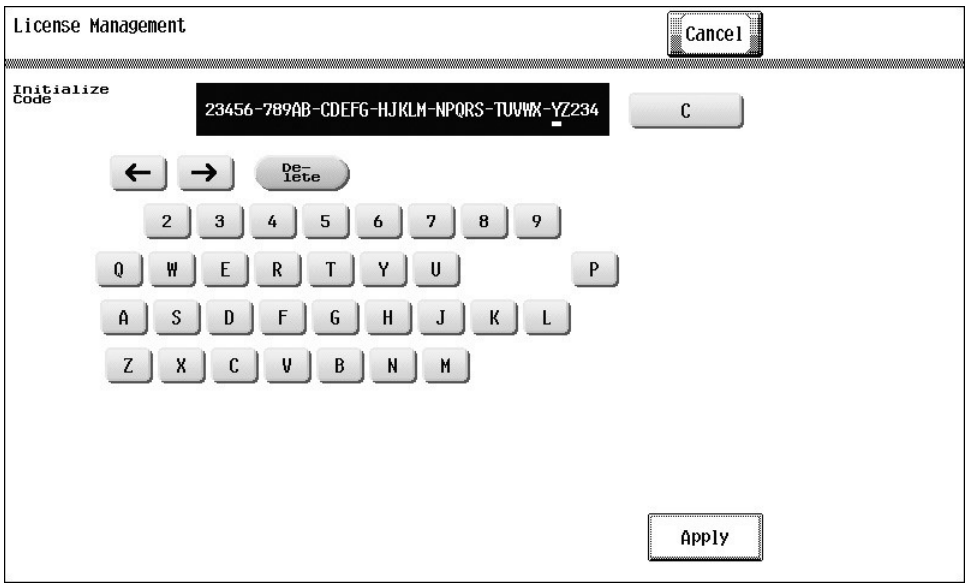
NOTE

- **You need to access License Management System (LMS) to implement each function setting.**

- When license management information cannot be repaired, initialize the information with the following procedure.

1. Contact the license management section of sales company to report the information necessary to issue the initialize code.
2. The license management section of sales company supplies the initialize code.

3. Call the Billing Setting to the screen.
4. Touch [License Management] -> [Initialize].
5. Enter the initialize code issued by call center using the keyboard on the screen, and touch [Apply].



6. After completing the initialization, follow the message appearing on the screen and turn OFF and ON the main power switch.

8.3.14 License management - Request Code

- When the license management error is occurred, it will not be displayed until the repair code is input.

(1) Functions

- To display and print request code and serial number.

(2) Use

- To check the request code and serial number.

(3) Procedure

- Set A4S or 8 1/2 x 11S paper to the tray, and press start key at request code screen to print.

8.3.15 License management - List

(1) Functions

- To display and print deactivation complete code and serial number.

(2) Use

- To display and print deactivation complete code and serial number.

(3) Procedure

- Set A4S or 8 1/2 x 11S paper to the tray, and press start key at deactivation complete code screen to print.

8.3.16 License management - Function List

(1) Functions

- To display currently activated functions.

(2) Use

- To display activated functions.

8.3.17 Manage OpenAPI Authentication

(1) Restriction Code

(a) Use

- These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

(2) Region Code

(a) Use

- These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

8.3.18 WebDAV Server Setting

(1) Select Address

(a) Use

- To select the address of the LMS server used to manage the license of i-Option.
- Used to change the LMS server address set at the time of shipment.

Fixed Address	Uses the LMS server address set at the time of shipment. The specified address cannot be changed.
Specify Address	Specifies a desired LMS server address. When selecting [Specify Address], [Server Setting] is displayed.

(b) Default setting

- Fixed Address

(c) Setting item

- Fixed Address
- Specify Address

(2) Server Setting

(a) Use

- To configure the settings on the WebDAV server that communicates with MFP when selecting [Specify Address] in [Select Address].

(b) Procedure

Host Name	Set the host name of the WebDAV server. (Up to 253 one-byte alphameric characters and symbols)
File Path	Set the file path used in the WebDAV server communication. (Up to 47 one-byte alphameric characters and symbols)
User name	Set the user name used to access the WebDAV server. (Up to 64 one-byte alphameric characters and symbols)
Password	Set the password that is used to access the WebDAV server. (Up to 64 one-byte alphameric characters and symbols)
Port Number	Set the port number that is used to access the WebDAV server. (Default: 80)

(3) Polling

(a) Use

- To set the number of times and interval at which MFP polls the WebDAV server.

(b) Procedure

Polling Count	Set the number of times that MFP polls the WebDAV server. (Default: 30 times.)
Polling Interval	Set the interval at which MFP polls the WebDAV server. (Default: 20 seconds.)

NOTE

- **When MFP accesses to WebDAV server via proxy server, set the proxy setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].**

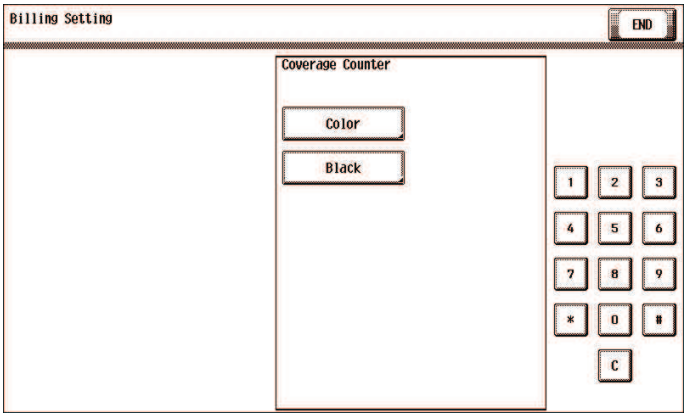
8.3.19 Coverage Counter Setting

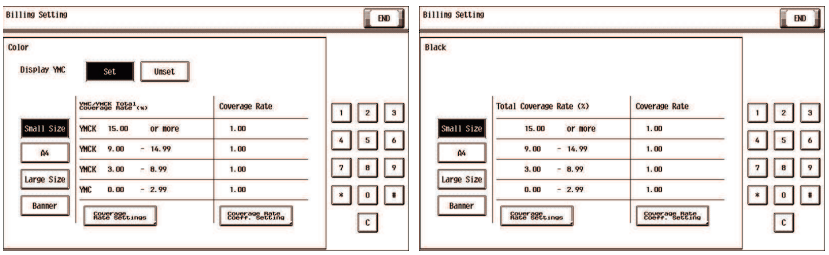
- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

- To set the counting method according to the print paper size, the total coverage rate of each color, and the count-up coefficient.
  NOTE
  - **The coverage rate refers to a ratio of the print area of each color relative to the print paper size.**
- The coverage rate and the coefficient can be set for each of the print modes and paper sizes listed in the following table.

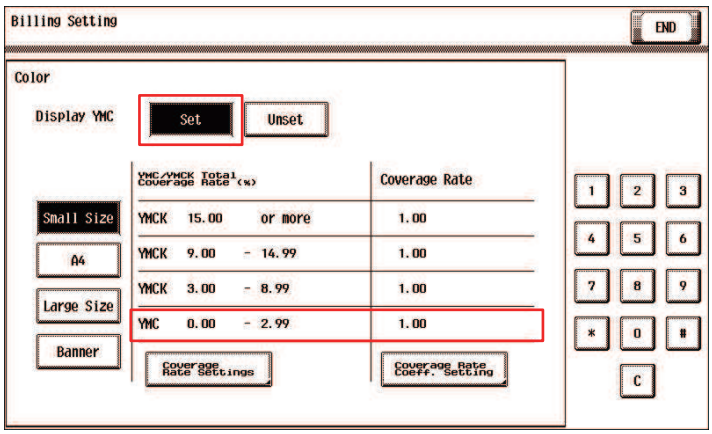
Print mode	Paper size	Description
Color/Black	Small Size	Set the counting method for data printed on paper having a size smaller than A4/Letter.
	A4	Set the counting method for data printed on paper having a size of A4/Letter.
	Large Size	Set the counting method for data printed on paper having a size larger than A4/Letter and equal to or smaller than A3.
	Banner	Set the counting method for data printed on paper having a size larger than A3.



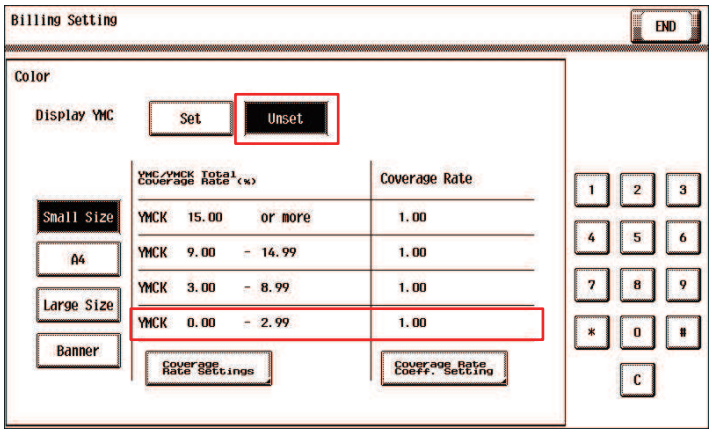


(2) Display YMC

- Set whether to use the total coverage rates of YMC, but K (black), in color printing as a basis for calculating the coverage counter.
- “Set” is the default setting.
- When “Set” is set, counting is performed regardless of the coverage rate of K as long as the coverage rate of YMC falls within the YMC total coverage rate.



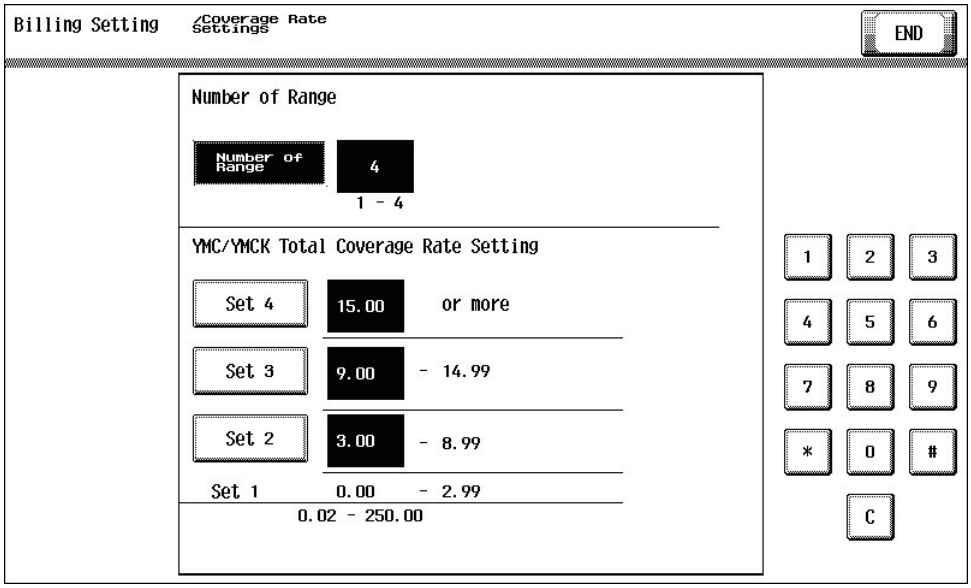
- If “Unset” is set, the area to be counted is determined based on the total coverage rate of YMCK.



(3) Setting item (Coverage Rate Settings)

- Make settings relating to the YMC/YMCK total coverage rate.

Setting item	Description
Number of Range Settings	Set the number of ranges used for setting the YMC/YMCK total coverage rate. Default number of ranges: 4 Setting range: 1 to 4
YMC/YMCK Total Coverage Rate Setting	Set the threshold values of each of the sets of the total coverage rate. Default value: “Set 4” - 15.00 or more “Set 3” - 9.00 to 14.99 “Set 2” - 3.00 to 8.99 “Set 1” - 0.00 to 2.99 Setting range: 0.02 to 250.00 The setting values should satisfy the following relation: 0.02 ≦ setting values of set 2 < setting values of set 3 < setting values of set 4 ≦ 250.00



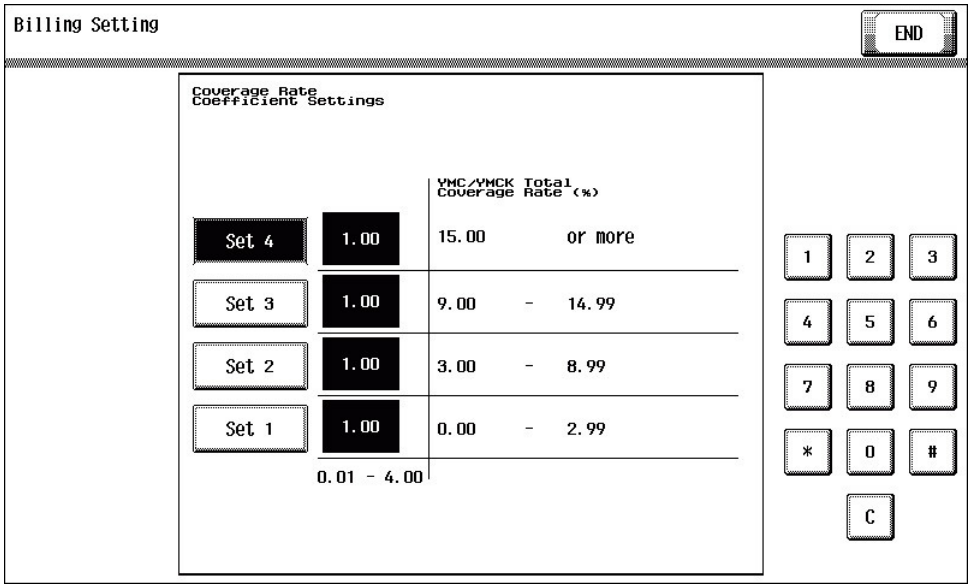
(4) Procedure (Coverage Rate Settings)

1. Touch the [Coverage Counter Setting].
2. Select the [Color] or [Black].
3. When [Color] is selected, select [Set] or [Unset] for YMC display.
4. Select the paper size.
5. Touch the [Coverage Rate Settings].
6. Enter [Number of Range] from the 10-key pad.
7. When [Number of Range] is entered, the corresponding number of sets are displayed.
8. Select a [Set] and enter the threshold values of the coverage to be set from the 10-key pad.
9. After the values are entered, touch [END].

(5) Setting item (Coverage Rate Coeff. Settings)

- Set the coverage rate coefficient relative to the set made in Coverage Rate Settings.

Setting item	Description
Coverage Rate Coeff. Settings	Set the coefficient relative to the set total coverage rate set. Default value: 1.00 Setting range: 0.01 to 4.00



(6) Procedure (Coverage Rate Coeff. Settings)

1. Select the paper size.
2. Touch the [Coverage Rate Coeff. Settings].
3. Touch the [Set] set by [Coverage Rate Settings] and enter the coefficient from the 10-key pad.
4. After the coefficient has been entered, touch [END].

8.3.20 Print Counter Clear

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

- To clear Print Counter and Subtotal values of Coverage Counter Detail.
- Clear Subtotal value in [Meter Count] -> [Coverage Counter].

(2) Procedure

- Select [Set] and touch [END].

(3) Default setting

- Unset

(4) Setting item

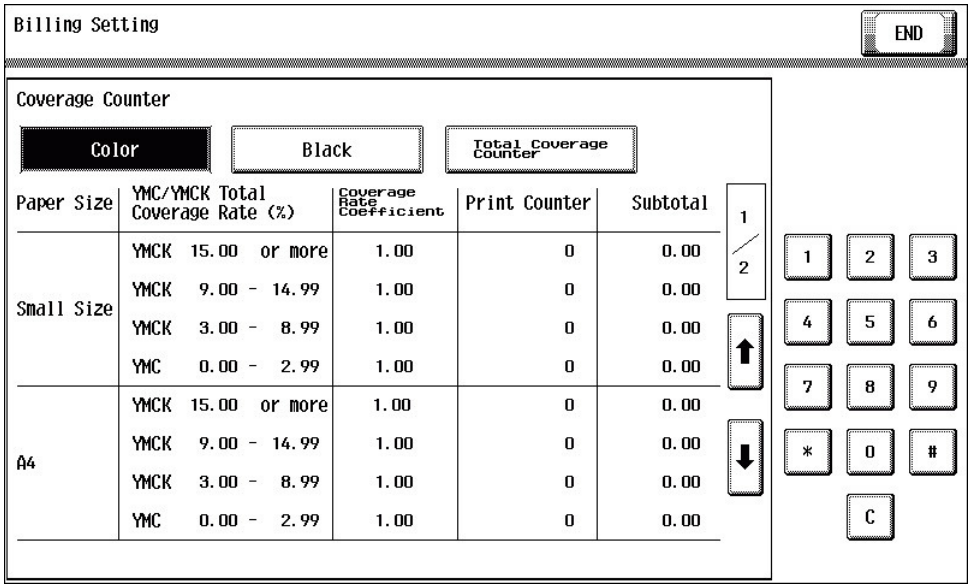
- Set
- Unset

8.3.21 Coverage Counter Detail

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

- To display details of the coverage counter value calculated according to Coverage Counter Setting.



Indication	Description
Color/Black	Displays the count values of color and monochrome printing.
Total Coverage Counter	Displays the count values of color, monochrome, and total. Displays the cumulative value of the coverage counter since the installation of the machine.
YMC/YMCK Total Coverage Rate (%) *1	Displays the set of the total coverage rate that serves as a basis for counting.
Coverage Rate Coefficient *1	Displays the coverage rate coefficient set for each set that serves as the basis for countering.
Print Counter	Displays the count value of the number of printed pages on which the print paper size and the total coverage rates of each color satisfy the counting base.
Subtotal	Displays the counter value obtained through the following calculation involving the print counter and the coverage rate coefficient: Subtotal = print counter × coverage rate coefficient

- *1: What is displayed complies with the setting made in [Service Mode] -> [Billing Setting] -> [Coverage Counter Setting].

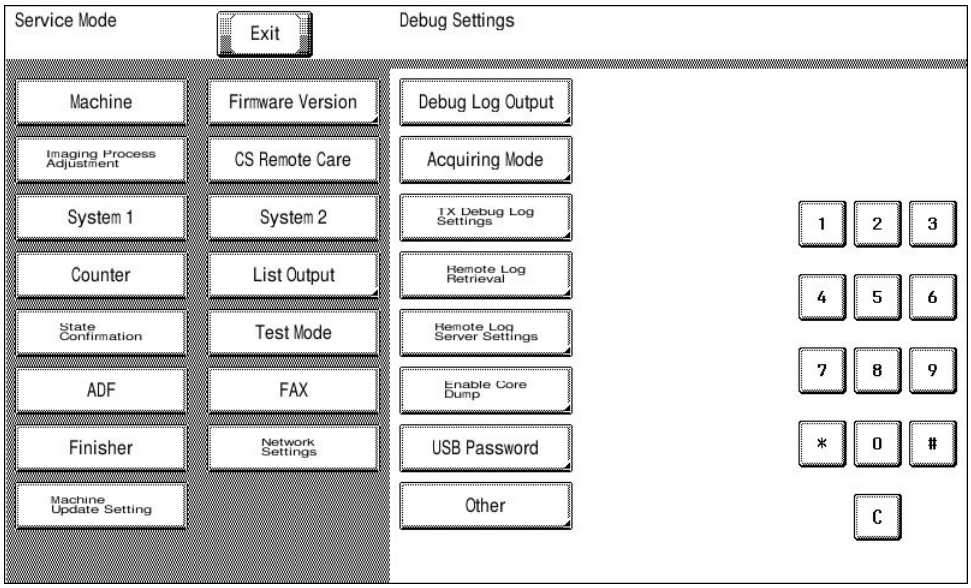
NOTE

- **The total coverage counter has been activated upon the installation of the machine regardless of whether it is displayed on the screen. Thus, the counter default value during screen display setting is not necessarily “0”.**
- **The total coverage counter value is the cumulative value since the installation of the machine, while the print counter value is the cumulative value since the last performance of print counter clear. Thus, the sum of the subtotal values does not necessarily coincide with the total coverage counter value.**

9. DEBUG SETTINGS

- To configure the settings on log information acquisition performed to analyze the MFP controller's internal operation.

9.1 List of debug settings



Debug Settings		Ref. page
Debug Log Output		I.9.3.1 Debug Log Output
Acquiring Mode		I.9.3.2 Acquiring Mode
TX Debug Log Settings		I.9.3.3 TX Debug Log Settings
Remote Log Retrieval	Remote Log Retrieval	I.9.3.4 (1) Remote Log Retrieval
	Time Setting	I.9.3.4 (2) Time Setting
	polling	I.9.3.4 (3) Polling
	Retrieve Log Information	I.9.3.4 (4) Retrieve Log Information
Remote Log Server Settings		I.9.3.5 Remote Log Server Settings
Enable Core Dump		I.9.3.6 Enable Core Dump
USB Password		I.9.3.7 USB Password
Other		I.9.3.8 Other

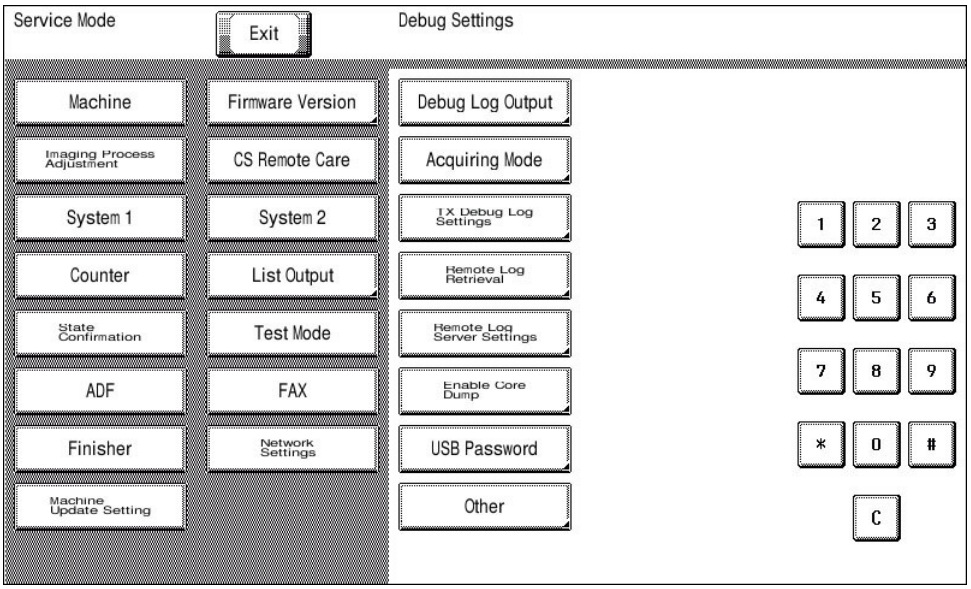
9.2 Starting/Exiting

9.2.1 Starting procedure

NOTE

- **Before the procedure, set the switch No. 155 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].**

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 6 -> 1 -> 8
3. Select a mode.



9.2.2 Exiting procedure

1. Touch [Exit] on the Service Mode screen.
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

9.3 Debug Settings

9.3.1 Debug Log Output

(1) Use

- To select debug log data to be output and save it in a USB memory.

All	Outputs available all logs.
Select File	Specifies a desired file and outputs it. Capable of narrowing file types from [Normal], [Trouble], or [Print Data].
Select Time	Specifies a desired period and outputs corresponding data.
Shared Memory -> HDD	• Manually stores debug information written in the memory into the HDD. • After selecting [Save], saving is started by pressing the Start key.
HDD -> USB Memory	• Outputs debug information stored in the HDD into a USB flash drive. • After selecting [Output], saving is started by pressing the Start key.

Logs obtained under normal operation and logs obtained upon occurrence of trouble are separated and stored in different areas. Up to 20 logs can be stored.

- Logs obtained under normal operation: 10 logs
- Logs obtained upon occurrence of trouble: 10 logs

When the number of saved logs reaches the upper limit, files are overwritten starting from the oldest file.

(2) Setting item

- All
- Select File
- Select Time
- Shared Memory -> HDD
- HDD -> USB Memory

NOTE

- **If a USB memory is not connected to the USB port of MFP or [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] is set to [Restrict], output is unavailable.**

9.3.2 Acquiring Mode

(1) Use

- To select mode used to acquire debug logs.
- If the cause of a problem cannot be identified by the debug logs acquired in basic mode, obtain more detailed debug logs in Enhance mode and analyze them.

Basic	Normal mode Stores debug information saved in the memory into the HDD.
Enhance	Mode that enables you to obtain more detailed debug information than Basic mode. When a large amount of detailed information must be output, the CPU or other devices is heavily loaded and the performance of MFP is affected.

(2) Default setting

- Basic

(3) Setting item
- Basic
- Enhance

(4) Enhance mode
- When "Enhance" is selected, configure the following items.

(a) Network Packet
- If network packet information is necessary, select "ON."

(b) Acquisition function
- Select the functions to be covered when obtaining debug logs.
  Select All, Copy, Printer, Box, Net/Scan, PSWC, FAX, Net Fax, and Authentication
- This item will not be displayed when [Network Packet] is set to ”ON.”

(c) Network Packet
- If [Network Packet] is set to "ON," configure [Capture Filter Settings] and [Capture Settings].
- This item will not be displayed when [Network Packet] is set to "OFF."

(d) By Job
- Set the number of jobs handled as a unit (the number of jobs by which debug information is acquired).

(e) Individual Command
- Register and execute individual debug commands.

(f) Command Set
- Install a command set and execute it.

(5) Timing of Saving Debug Information in Each Mode
(a) Basic mode
Debug information is stored in the HDD at the timings described below.
- When trouble occurs
- When there is no job
- During transition to energy save mode (sleep mode or low power mode)
- When authentication fails
- When [Debug Log Output] -> [Shared Memory -> HDD] is performed manually

(b) Enhance mode
- Save debug information to the USB memory or HDD as needed.

9.3.3 TX Debug Log Settings
- To configure settings used to send debug information via the network.
- To send the information via the network, SMB, FTP, or WebDAV transmission is selectable.
- This item will be displayed only when [Acquiring Mode] is set to “Basic.”

(1) Select TX Method
(a) Use
- To select a method used to send via the network.

(b) Default setting
- OFF

(c) Setting item
- OFF
- SMB
- FTP
- WebDAV

(2) SMB Setting
(a) Use
- To configure settings used in SMB transmission.

(b) Procedure

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.

(3) FTP Settings

(a) Use

- To configure settings used in FTP transmission.

(b) Procedure

Host Name	Set the host name of the FTP server.
File Path	Set the file path used in the FTP server communication.
User Name	Set the user name used to access the FTP server.
Password	Set the password used to access the FTP server.
Port Number	Set the port number that is used to access the FTP server.
PASV	Set PASV mode to ON or OFF
Proxy	Set whether or not to connect to a proxy server.

(4) WebDAV Setting

(a) Use

- To configure settings used in WebDAV transmission.

(b) Procedure

Host Name	Set the host name of the WebDAV server.
File Path	Set the file path used in the WebDAV server communication.
User Name	Set the user name used to access the WebDAV server.
Password	Set the password that is used to access the WebDAV server.
Port Number	Set the port number that is used to access the WebDAV server.
Proxy	Set whether or not to connect to a proxy server.
SSL Settings	Select to use SSL communication.

9.3.4 Remote Log Retrieval

(1) Remote Log Retrieval

(a) Use

- Use the WebDAV server to retrieve remote access logs.
- Downloads the command set from the server configured from [Remote Log Server Settings] -> [Command Set Acquisition pt.] at the timing configured from [Time Setting] and [Polling].
- If the command set successfully downloads, logs and settings data is retrieved in accordance with the command set, and the log files and settings data files are saved on the server configured from [Remote Log Server Settings] -> [Log Save Destination].

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(2) Time Setting

(a) Use

- Downloads the command set at the specified time and retrieves/saves the logs and settings data.

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(3) Polling

(a) Use

- Downloads the command set at each specified time and retrieves/saves the logs and settings data.

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(4) Retrieve Log Information

(a) Use

- Immediately downloads the command set and retrieves/saves the logs and settings data.

9.3.5 Remote Log Server Settings

(1) Command Set Acquisition pt.

(a) Use

- Configures the server from which command sets as used for [Remote Log Retrieval] are retrieved.
- Touch [Copy Setting] after settings parameters are selected to copy the settings to the destination as configured from [Log Save Destination].

(2) Log Save Destination

(a) Use

- Configures the server for storing files used for [Remote Log Retrieval].
- Touch [Copy Setting] after settings parameters are selected to copy the settings to the destination as configured from [Command Set Acquisition pt.].

9.3.6 Enable Core Dump

(1) Use

- To set whether to acquire a log of Core Dump.

(2) Default setting

- Disable

(3) Setting item

- Enable (Select [USB Memory] or [Remote Log Server].)
- Disable

NOTE

- **When [Enable] is selected, select a saving location and press [Fix].**
- **When [Remote Log Server] is selected, be sure to complete setting of [Log Save Destination] in [Remote Log Server Settings].**

9.3.7 USB Password

(1) Use

- To set a password used to store debug information into a USB flash drive.
- CE informs the KM contact person of this password and the debug information data separately.

NOTE

- **NEVER forget the USB password.**

(2) Default setting

- 01234567890123456789

(3) Procedure

- Enter an USB password from the keyboard on the screen.
  1. Current Password: Enter the USB password currently in use.
  2. New Password: Enter a new USB password.
  3. Re-input Password: Re-enter the new USB password.

9.3.8 Other

(1) Screen Capture

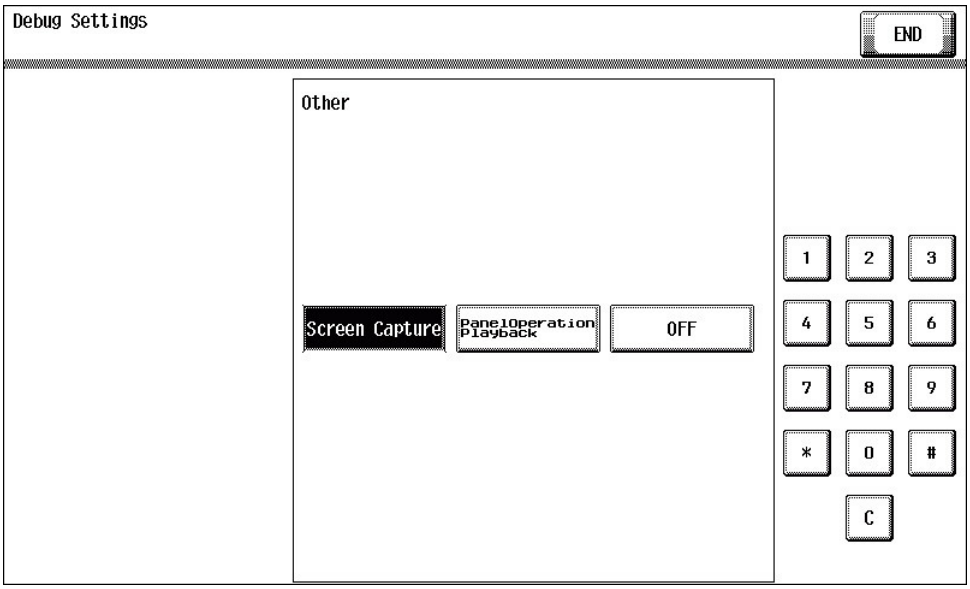
- The screen displayed on the control panel can be captured and saved in a USB memory as a file.

(a) Preparations

NOTE

- **Use a USB memory having no security functions.**

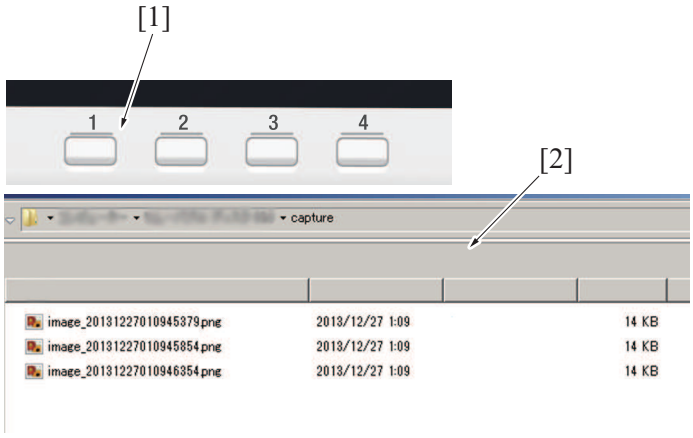
1. Touch [Other].
2. Touch [Screen Capture] and then [END].



3. Insert the USB memory.

(b) Procedure

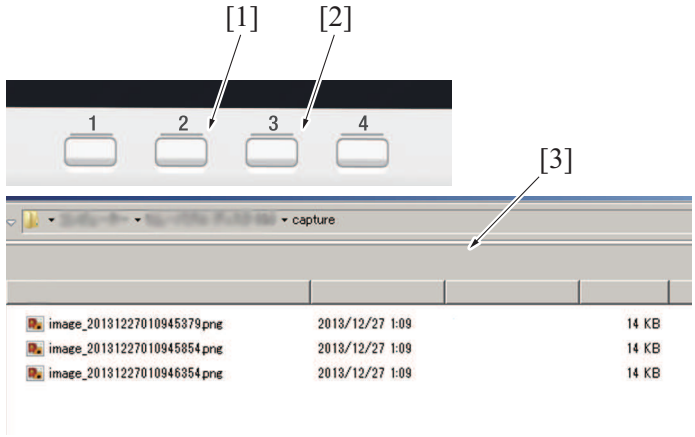
1. Call the screen to be captured to the control panel.
2. Touch [1] on the control panel. This saves the screen in memory.
   A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[1] key	[2]	In USB memory

(c) Continuous capturing procedure

1. Call the screen to be captured to the control panel.
2. Touch [2] on the control panel.
3. Start the screen operations.
4. When the operations are completed, touch [10 keypad].
5. A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[2] key	[2]	[10 keypad] key

[3]	In USB memory	-	-

(2) Panel Operation Playback

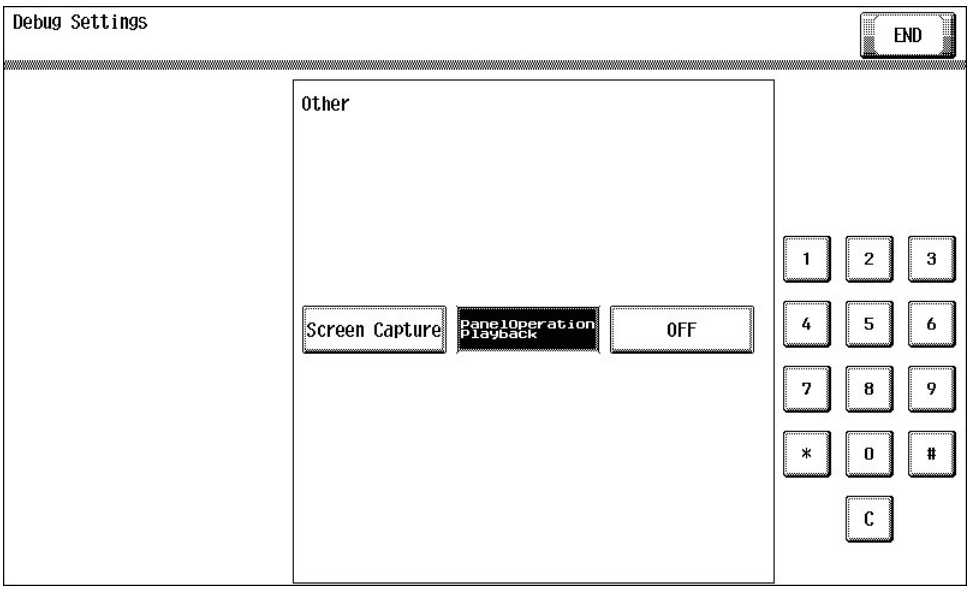
- A series of operations is stored in memory and automatically played back on the control panel.

NOTE

- **To perform the playback, be sure to go back to the first screen with which the capturing was started. A playback operation starting with any screen not stored in memory results in faulty playback.**

(a) Preparations

1. Touch [Other].
2. Touch [Panel Operation Playback] and then [OK].



(b) Procedure

1. Call the auto playback starting screen to the control panel.
2. Touch [1].
3. Start the screen operations to store a series of screens.
4. When the operations are completed, touch [2].
5. Go back to the first screen and touch [10 keypad].

9.4 Operation of the debug log function

9.4.1 Basic mode

(1) Intended purpose

- To retrieve the program sequence logs from the MFP; for analyzing field problems caused by MFP controller program malfunction which could be difficult to reproduce in KM.

NOTE

- **CE should get permission from CUSTOMER before retrieving the program sequence logs from the customer's MFP.**
- **A Key generate utility is required for creation of a key file.**
- **For how to obtain or how to use the Key generate utility, please conduct the KM support department.**

(2) Outline

1. Save the key file in the USB memory by using the Key generate utility on the PC.
2. Set the Debug Settings to “ON” in the Service Mode.
3. Sets an encryption word.
4. Try to reproduce the problem/malfunction on the MFP.
5. The problem/malfunction is reproduced.
6. Set the debug log acquisition to "Allow" in Administrator Settings.
7. Select the debug log(s) that corresponds to the problem. Select "USB Memory" as the output destination and acquire the log(s).
8. Send the log(s) and the USB password to the department of KM from which you receive instructions.

NOTE

- **Up to a total of 20 log files can be saved, including ten during normal operations and another ten when errors occur.**
- **When the number of log files saved exceeds the upper limit, the log files are overwritten in chronological order.**
- **Each log file is concerned with a single job.**
- **Priority is given to job processing. A log file may not therefore be saved if jobs are performed continuously or if power is turned OFF immediately after processing of a job has been completed.**

(3) Details of the procedure

(a) Advance preparation

- Save a key file into a USB memory.
  1. Set the USB Password on the Key generation utility.
  2. Generate the Key file by typing in the Serial number (capital letter) of the target MFP.

3. Copy the created "Debug Log" folder into the root directory of the USB memory.
- Make sure that [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to OFF.

(b) Settings for acquiring logs

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **Logs include the MFP control program sequences only. They do not include the copy/scan/print/fax image data.**
2. Set the switch No.155 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings to the screen.
4. Select [Basic] in [Debug Settings] -> [Acquiring Mode].
5. Ask the administrator of the MFP to set a debug log encryption pass phrase in [Administrator Settings] -> [Security Settings] -> [HDD Settings] -> [Debug Log Encryption Settings]. (Default: 01234567890123456789)
   NOTE
   - **This setting is used to encrypt debug logs to be stored in the HDD.**
   - **Be sure to set the encryption password. Failure to set the encryption password may hamper correct analysis of the log.**
6. Try to reproduce the problem/malfunction on the MFP.
7. The problem/malfunction is reproduced.
8. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
9. Call the Debug Settings in Service Mode.
10. Set the USB password in [Debug Settings] -> [USB Password].
    NOTE
    - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
11. Display [Debug Settings] -> [Debug Log Output] on the screen.
12. Connect the USB memory prepared in advance preparation to the USB port located on the right-side of the MFP control panel.
13. Touch [Select File]. Select the intended file and touch [Output] in [HDD -> USB Memory].
14. Check that the Start key lights up in blue, and press the Start key.
    NOTE
    - **If the Start key lights up orange, the USB password and/or MFP serial number on for the MFP do not match the key file.**
15. [OK] will be displayed.
16. Touch [OK], and exit the Debug Settings.
17. Return the switch No. 155 to [00000000] at Bit assignment/[00] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
18. Exit the Service Mode.
19. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxxx.log".
20. Send KM your request of analyzing the problem with the log file.
    NOTE
    - **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

9.4.2 Enhance mode

(1) Intended purpose

- To retrieve from the MFP more detailed program sequence log than that of Basic mode; for analyzing field problems caused by MFP controller program malfunction which could be difficult to reproduce in KM.

NOTE
- **CE should get permission from CUSTOMER before retrieving the program sequence logs from the customer's MFP.**
- **Please explain to the CUSTOMER that the MFP performance will be down during the procedure. The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs.**

(2) Outline

1. Save the key file in the USB memory by using the Key generate utility on the PC.
2. Set the Debug Settings to “ON” in the Service Mode.
3. Sets an encryption word.
4. Select the target device (USB memory or HDD) to save the log files.
   - When selecting USB memory as target, ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
   - Connect the USB memory into the USB port on the right-rear side of the MFP.
5. Try to reproduce the problem/malfunction on the MFP.
6. The problem/malfunction is reproduced.
7. Remove the USB memory if you select USB memory as a target device.
8. When selecting HDD as target, ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
   - Select the debug log(s) that corresponds to the problem, and select "USB Memory" as the output destination and acquire the log(s).
9. Send the log(s) and the USB password to the department of KM from which you receive instructions SEPARATELY.

(3) Details of the procedure

(a) Advance preparation

- Save a key file into a USB memory.
  1. Set the USB Password on the Key generation utility.
  2. Generate the Key file by typing in the Serial number (capital letter) of the target MFP.
  3. Copy the created "Debug Log" folder into the root directory of the USB memory.
- Make sure that [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to OFF.

(b) Settings for acquiring logs (When selecting USB memory as a target device)

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **They do not include the copy/scan/print/fax image data unless selecting printer. Logs include the MFP control program sequences only.**
   - **The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs. Please explain to the CUSTOMER that the MFP performance will be down during the procedure.**
2. Set the switch number "155" to "01" in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings to the screen.
4. Select [Enhance] in [Debug Settings] -> [Acquiring Mode].
5. Select the target logs.
   NOTE
   - **DO NOT TOUCH the command settings (Individual Command and Command Set) without KM instructions.**
6. Set the USB password in [Debug Settings] -> [USB Password].
   NOTE
   - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
7. Exit the Service Mode.
8. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
9. Connect the USB memory into the USB port on the right-rear side of the MFP.
10. Try to reproduce the problem/malfunction on MFP.
    Cautions when saving log files each time the problem/malfunction is reproduced
    - **Saved Logs will not be overwritten. USB memory should have enough capacity to save the all logs.**
    - **Debug log function will stop if USB memory is FULL.**
    - **While saving the log data, a specific ICON will appear on the control panel. DO NOT REMOVE the USB memory when the ICON is displayed.**
11. The problem/malfunction is reproduced.
12. Return the switch number "155" in HEX Assignment to "00" in [Service Mode] -> [System 2] -> [Software Switch Setting].
13. Exit the Service Mode.
14. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxxx.log".
15. Send KM your request of analyzing the problem with the log file.
    NOTE
    - **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

(c) Settings for acquiring logs (When selecting HDD as a target device)

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **They do not include the copy/scan/print/fax image data unless selecting printer. Logs include the MFP control program sequences only.**
   - **The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs. Please explain to the CUSTOMER that the MFP performance will be down during the procedure.**
2. Set the switch number "155" to "01" in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings to the screen.
4. Select [Enhance] in [Debug Settings] -> [Acquiring Mode].
5. Select the target logs.
   NOTE
   - **DO NOT TOUCH the command settings (Individual Command and Command Set) without KM instructions.**
6. Set the USB password in [Debug Settings] -> [USB Password].
   NOTE
   - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
7. Exit the Service Mode.
8. Ask the administrator of the MFP to set a debug log encryption pass phrase in [Administrator Settings] -> [Security Settings] -> [HDD Settings] -> [Debug Log Encryption Settings]. (Default: 01234567890123456789)
   NOTE
   - **This setting is used to encrypt debug logs to be stored in the HDD.**
   - **Be sure to set the encryption password. Failure to set the encryption password may hamper correct analysis of the log.**
9. Try to reproduce the problem/malfunction on the MFP.
10. The problem/malfunction is reproduced.
11. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
12. Call [Debug Settings] -> [Debug Log Output] to the screen.
13. Connect the USB memory prepared in advance preparation to the USB port located on the right-side of the MFP control panel.
14. Touch [Select File]. Select the intended file and touch [Output] in [HDD -> USB Memory].
15. Check that the Start key lights up in blue, and press the Start key.
    NOTE
    - **If the Start key lights up orange, the USB password and/or MFP serial number on for the MFP do not match the key file.**
16. [OK] will be displayed.
17. Touch [END], and exit the Debug Settings.
18. Return the switch number "155" in HEX Assignment to "00" in [Service Mode] -> [System 2] -> [Software Switch Setting].
19. Exit the Service Mode.
20. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxxx.log".
21. Send KM your request of analyzing the problem with the log file.

NOTE

- **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

10. CONTENTS TO BE CLEARED BY RESET FUNCTION

Function for clearing / Contents to be cleared		Front door open/close	Main power switch OFF/ON	Trouble reset	Initialize							
					System Error Clear	Clear All Data	Clear Individual Data					
							Copy Program Data	Address Registration Data	Fax Setting Data	All History Data	Network Setting Data	Server Cache Data
Jam display		○	-	-	○	○	-	-	-	-	-	-
Malfunction display	Rank A	-	-	○	○	○	-	-	-	-	-	-
	Rank B	○	-	○	○	○	-	-	-	-	-	-
	Rank C	-	○	○	○	○	-	-	-	-	-	-
Erratic operation / display		-	○	-	○	○	-	-	-	-	-	-
Utility Mode (Except items on engine adjustment)		-	-	-	-	○	-	-	-	-	-	-
Job memory setting data		-	-	-	-	○	○	-	-	-	-	-
Address registration data		-	-	-	-	○	-	○	-	-	-	-
Fax setting data (Excluding destination related data)		-	-	-	-	○	-	-	○	-	-	-
History data (Job history, Journal history, Receive reject history, Destination history, Job secure counter)		-	-	-	-	○	-	-	-	○	-	-
Network setting data (Excluding destination related data)		-	-	-	-	○	-	-	-	-	○	-
Cache data of external authentication server		-	-	-	-	○	-	-	-	-	-	○
Service Mode (System 1/2)		-	-	-	-	△*1	-	-	-	-	-	-
Billing Setting	Management Function Choice	-	-	-	-	○	-	-	-	-	-	-
Adjustment of the touch panel position		-	-	-	-	○	-	-	-	-	-	-
Trouble auto release retry count		-	-	-	○	○	-	-	-	-	-	-

○: Will be cleared (initialized)
- : Will not be cleared

△ *1: Items to be cleared	
System 1	Marketing Area (Fax Target only)
System 2	HDD
	Image Controller Setting

11. MECHANICAL ADJUSTMENT bizhub C368/C308/C258

11.1 Scanner section

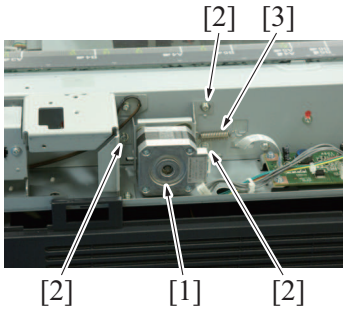
11.1.1 Adjustment of the scanner motor belt

(1) Purpose

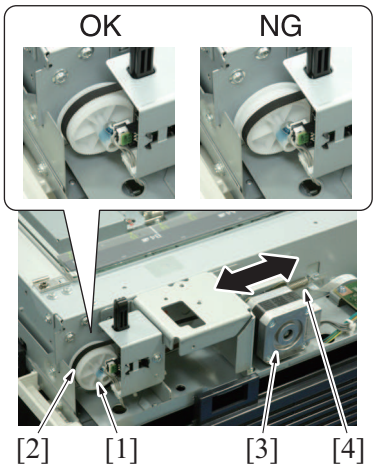
This adjustment must be made in the following case:

- The scanner motor assy has been removed.

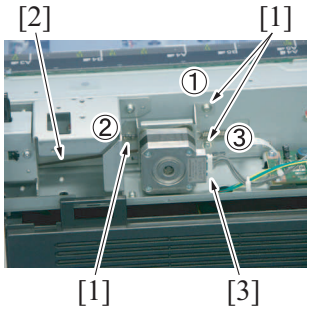
(2) Procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].
   NOTE
   - **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**
   - **When installing the scanner motor, make sure that the scanner motor is disconnected with the connector.**



3. Attach the drive belt [2] to the pulley [1] and the gear of scanner motor.
4. Move the scanner motor assy [3] in the direction shown in the illustration for two to three times, then make sure that it runs smoothly.
   NOTE
   - **Make sure that the drive belt [2] is properly kept tight by the spring [4] force.**
   - **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**
   - **Make sure that the drive belt [2] is attached to the pulley [1] correctly.**



5. Tighten three screws [1] in the order shown in the illustration to fix the scanner motor assy.
6. Connect the connector [3] to the scanner motor.
   NOTE
   - **When tightening the screw [1], make sure that the scanner motor assy is not touched.**
   - **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [2] are not excessive.**

11.2 Paper feed section

11.2.1 Centering adjustment of the tray 1/2

(1) Purpose

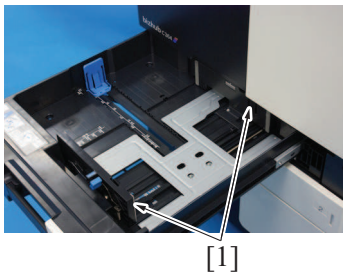
This adjustment must be made in the following case:

- When an image printed on a copy is displaced from the correct position with the use of the tray1/2.

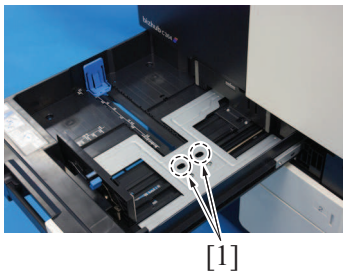
(2) Procedure

1. Make a test print and check the amount of misalignment.
2. Pull out the tray where this adjustment is made.

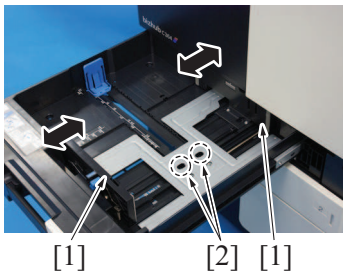
3. Stretch the paper guides [1] to the maximum size position.



4. Loosen two screws [1].



5. Move the paper guides [1] complete according to the amount of the mis-centering you checked in step 1 and adjust the center position of it.
6. Tighten two screws [2].



7. Make another test print and check the amount of misalignment.

11.2.2 Pick-up pressure adjustment of the tray 1/2

(1) Purpose

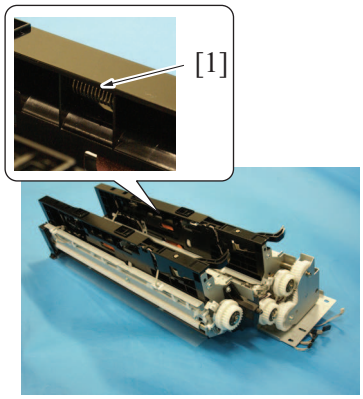
This adjustment must be made in the following case:

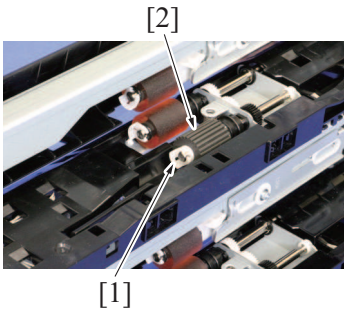
- When paper jam occurs while thin paper (52 g/m^2) is fed.

(2) Procedure

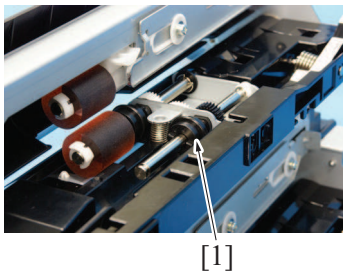
1. Remove the paper feed unit.
   G.5.3.2 Paper feed unit

2. Remove the spring [1] stored for replacement from the paper feed unit.

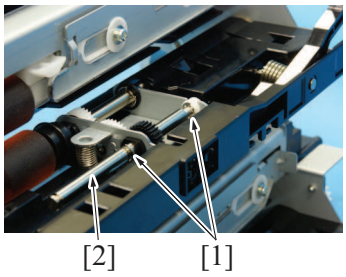




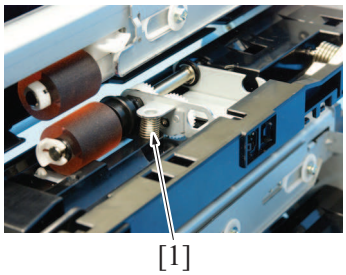
3. Remove the C-clip [1], and remove the tray 2 pick-up roller [2].



4. Remove the bushing [1].



5. Remove two E-rings [1], and remove the shaft [2] of the pick-up roller.



6. Remove the spring [1] and replace it with the replacement spring prepared in step 2.
NOTE
- **The pick-up pressure of the tray 1 can be adjusted by replacing the spring of the tray 1 paper feed unit with the replacement spring prepared in step 2.**

7. To reinstall, reverse the order of removal.
8. Make a test print to check whether paper is fed properly.

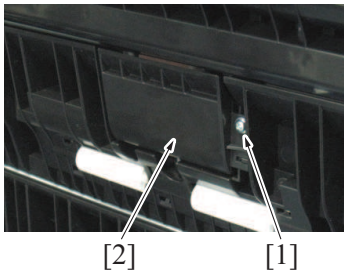
11.2.3 Separator roller pressure adjustment of the bypass tray

(1) Purpose

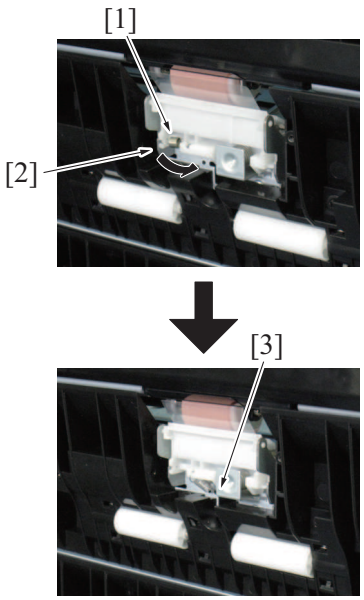
This adjustment must be made in the following case:
- When paper jam occurs with a specific type of thick paper (300 g/m^2) is fed.

(2) Procedure

1. Open the right door.



2. Remove the screw [1], and remove the cover [2].



3. Hold the edge of the spring [1] with a plier, etc, to pull it off the hook part [2].
4. Hook the edge of the removed spring to the hook part [3] shown on the illustration.
5. Make a test print to check whether paper is fed properly.
6. When returning the pressure to the original status, return the hook of the spring in reverse steps.

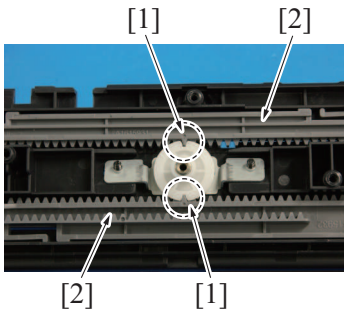
11.2.4 Adjustment of the bypass CD paper size VR

(1) Purpose

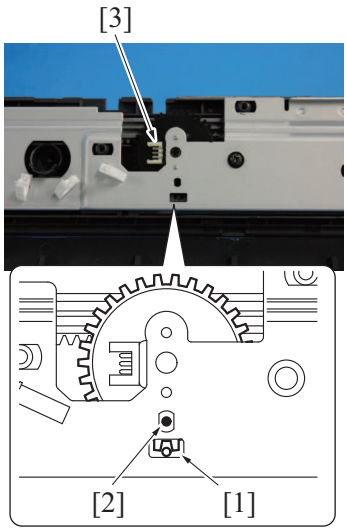
This adjustment must be made in the following case:

- The bypass CD paper size VR has been removed.

(2) Procedure



1. Align the match mark [1] on the bypass guide rack gear with the groove on the gear rim at two places and install two bypass guide rack gears [2].



2. When installing the bypass CD paper size VR assy [3], make sure that the part [1] (pointed by the arrow) on the bypass guide rack gear and the gear's hole [2] on the bypass CD paper size VR assy are placed in a straight line.
3. Secure the bypass CD paper size VR assy with two screws.
4. After the bypass CD paper size VR base has been mounted, check that the lever of the bypass CD paper size VR moves smoothly in a manner operatively connected to the bypass guide.
5. Call the Service Mode to the screen and select [Machine] -> [Manual Bypass Tray Width Adj]. Then, carry out manual bypass tray width adjustment.

11.3 Fusing section

11.3.1 Adjusting the parallelism of the fusing unit path

(1) Purpose

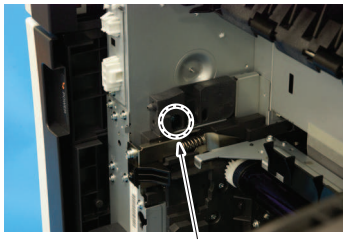
This adjustment must be made in the following case:

- When the second transfer paper feed path and the fusing section path are not parallel and caused wrinkles on the paper.

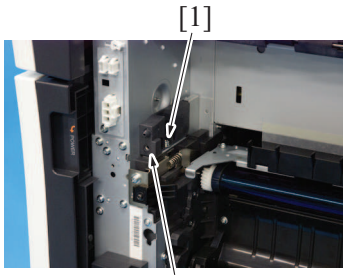
(2) Procedure

1. Remove the fusing unit.
   F.7.9.1 Replacing the fusing unit

2. Remove the screw [1] for the fusing unit positioning material.

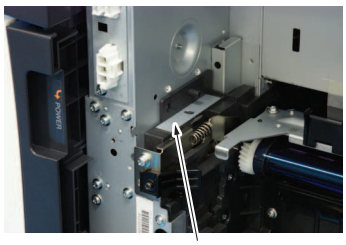


3. Remove the screw [1], and remove the fusing unit positioning material [2].



4. 0.6 mm adjusting shim plate [1] is installed as the standard status. Add or reduce the number of shims to adjust the parallelism.
   - Removing the standard adjusting shim plate: The fusing unit mounting position (front side) will move down by 0.6 mm.
   - Adding one adjusting shim plate: The fusing mounting position (front side) will move up by 0.6mm.

   Adjusting shim plate parts number: A161 1126##



5. To reinstall, reverse the order of removal.
6. Make a test print to check whether paper is fed properly.

12. MECHANICAL ADJUSTMENT bizhub C658/C558/C458

12.1 Scanner section

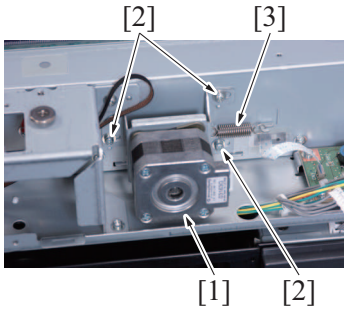
12.1.1 Adjustment of the scanner motor belt

(1) Purpose

This adjustment must be made in the following case:

- The scanner motor assy has been removed.

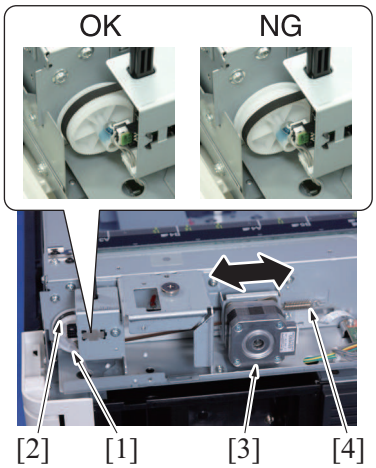
(2) Procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].

NOTE

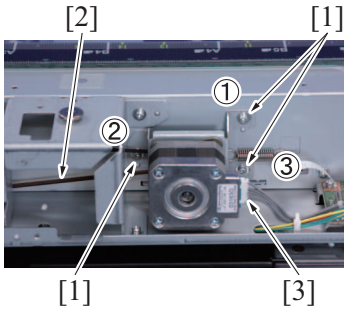
- **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**
- **When installing the scanner motor, make sure that the scanner motor is disconnected with the connector.**



3. Attach the drive belt [2] to the pulley [1] and the gear of scanner motor.
4. Move the scanner motor assy [3] in the direction shown in the illustration for two to three times, then make sure that it runs smoothly.

NOTE

- **Make sure that the drive belt [2] is properly kept tight by the spring [4] force.**
- **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**
- **Make sure that the drive belt [2] is attached to the pulley [1] correctly.**



5. Tighten three screws [1] in the order shown in the illustration to fix the scanner motor assy.
6. Connect the connector [3] to the scanner motor.

NOTE

- **When tightening the screw [1], make sure that the scanner motor assy is not touched.**
- **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [2] are not excessive.**

12.1.2 Skew Adj.

(1) Purpose

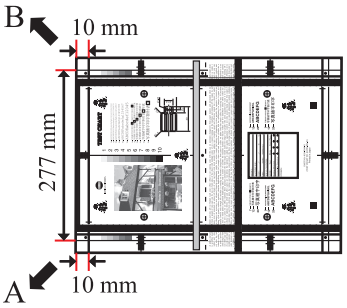
This adjustment must be made in the following case:

- Images are tilted when scanning or copying images.

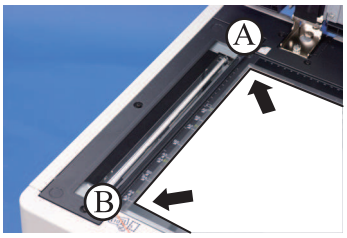
NOTE

- **Perform a test print and make sure the printed image is not tilted.**
- **If printed images are tilted, make adjustments from [Service Mode] -> [Machine] -> [Printer Area] before making this adjustment.**
- **After performing the print head skew adjustment, perform the [Scan Area] function from [Service Mode] -> [Machine].**

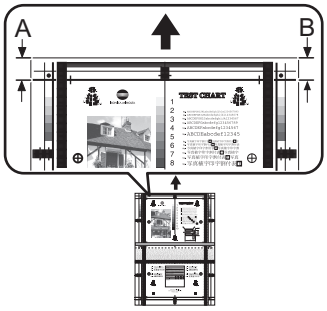
(2) Confirmation procedure



1. Prepare a chart to check for tilting.



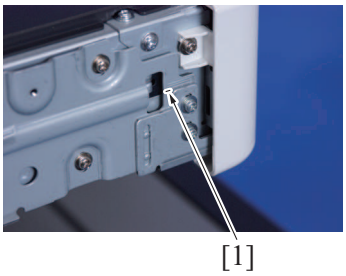
2. Set the test chart on the original document glass.
   NOTE
   - **Set the test chart against the original document scale and make sure the gap between the test chart and original document scale is 0.3 mm or less.**
3. Make sure the original document cover is completely closed.
4. Press the Start key to make a copy.



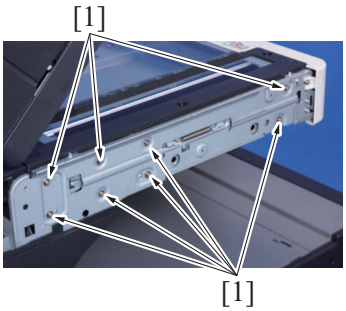
5. Check copy for image tilting.
6. Perform the following adjustment if the image tilt (different between width A and width B) is more than the standard of ±1.4 mm.

(3) Adjustment procedure

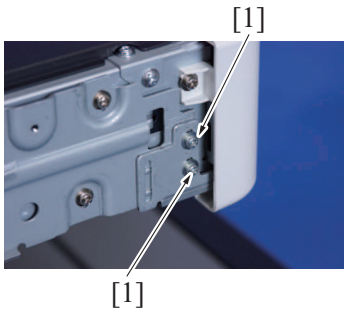
1. Remove the scanner left cover.
   G.6.2.4 Scanner left cover



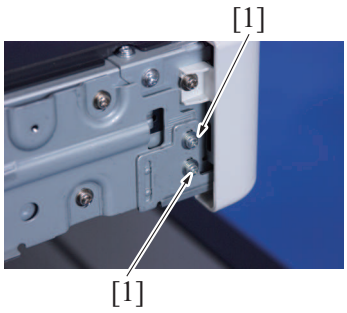
2. Record the default value [1] before making adjustments.



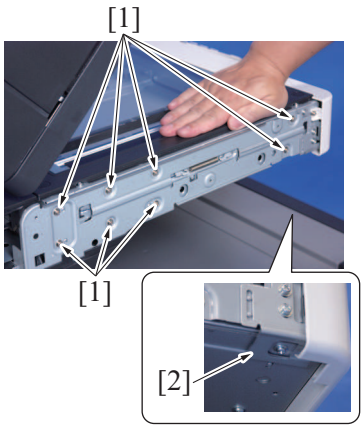
3. Loosen eight screws [1].



4. Loosen two screws [1], and adjust the scanner orientation.
   - Subtract width B from width A to calculate the difference. Use a value of two times this difference as the amount of scanner movement.
     Positive value differences:
     Ex.) If the difference is +2, move the scanner up by 4 mm (4 scales).
     Negative value differences:
     Ex.) If the difference is -2, move the scanner down by 4 mm (4 scales).



5. Tighten two screws [1].



6. Tighten eight screws [1] while pressing down on the scanner.
   NOTE
   - **Tighten the screws while the bottom of the scanner makes contact with the plate [2].**
   - **Do not press the scanner with too much force that causes the support column to give. (Tightening the screws with too much force applied to the support column will cause skew to occur once you release the scanner.)**

12.2 Document feed section

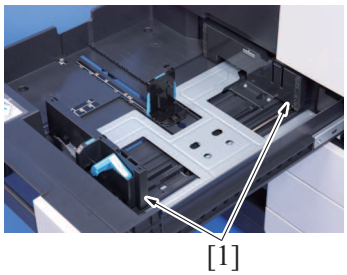
12.2.1 Centering adjustment of the tray 1/2

(1) Purpose

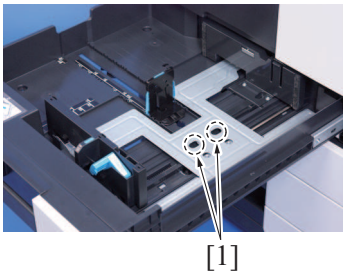
This adjustment must be made in the following case:
- When an image printed on a copy is displaced from the correct position with the use of the tray1/2.

(2) Procedure

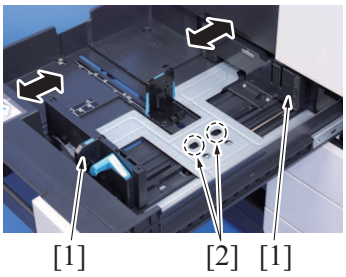
1. Make a test print and check the amount of misalignment.
2. Pull out the tray where this adjustment is made.
3. Stretch the paper guides [1] to the maximum size position.



4. Loosen two screws [1].



5. Move the paper guides [1] complete according to the amount of the mis-centering you checked in step 1 and adjust the center position of it.
6. Tighten two screws [2].
7. Make another test print and check the amount of misalignment.



12.2.2 Pick-up pressure adjustment of the tray 1/2

(1) Purpose

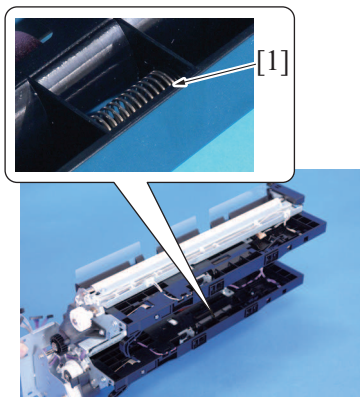
This adjustment must be made in the following case:

- When paper jam occurs while thin paper (52 g/m^2) is fed.

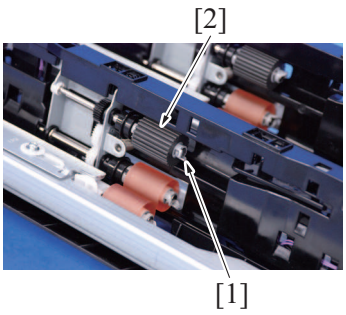
(2) Procedure

1. Remove the paper feed unit.
   G.6.3.2 Paper feed unit

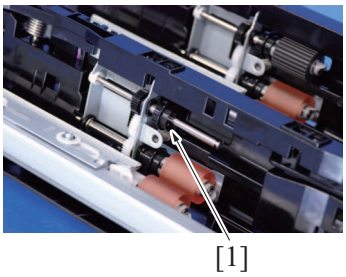
2. Remove the spring [1] stored for replacement from the paper feed unit.



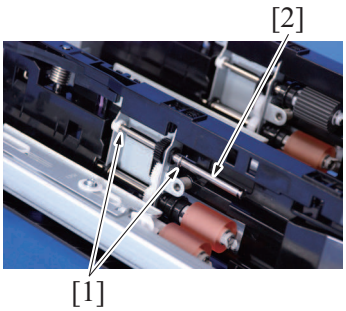
3. Release the tab [1], and remove the tray 2 pick-up roller [2].



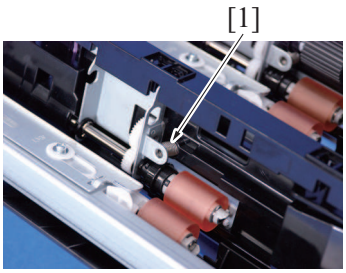
4. Remove the bushing [1].



5. Remove two E-rings [1], and remove the shaft [2] of the pick-up roller.



6. Remove the spring [1] and replace it with the replacement spring prepared in step 2.
NOTE
- **The pick-up pressure of the tray 1 can be adjusted by replacing the spring of the tray 1 paper feed unit with the replacement spring prepared in step 2.**



7. To reinstall, reverse the order of removal.
8. Make a test print to check whether paper is fed properly.

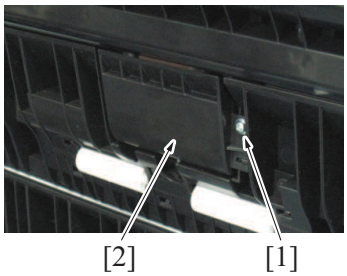
12.2.3 Separator roller pressure adjustment of the bypass tray

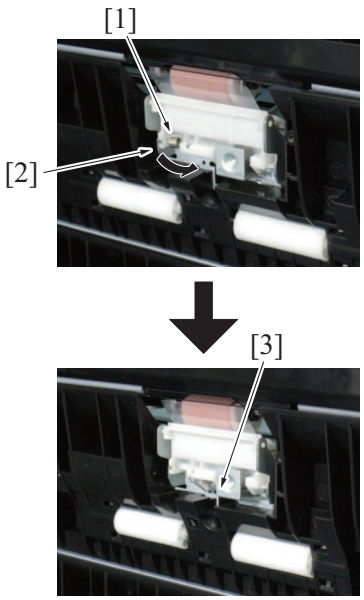
(1) Purpose

This adjustment must be made in the following case:
- When paper jam occurs with a specific type of thick paper (300 g/m^2) is fed.

(2) Procedure

1. Open the right door.
2. Remove the screw [1], and remove the cover [2].





3. Hold the edge of the spring [1] with a plier, etc, to pull it off the hook part [2].
4. Hook the edge of the removed spring to the hook part [3] shown on the illustration.
5. Make a test print to check whether paper is fed properly.
6. When returning the pressure to the original status, return the hook of the spring in reverse steps.

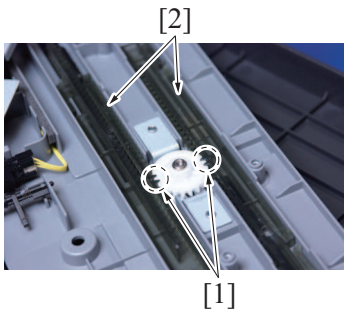
12.2.4 Adjustment of the bypass CD paper size VR

(1) Purpose

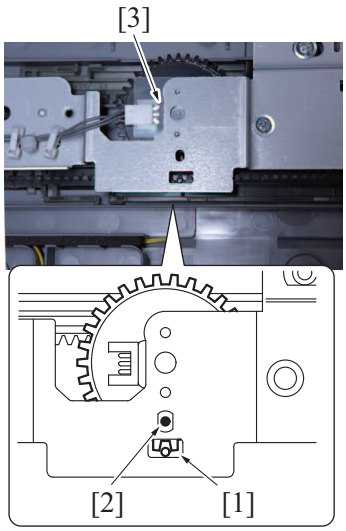
This adjustment must be made in the following case:

- The bypass CD paper size VR has been removed.

(2) Procedure



1. Align the match mark [1] on the bypass guide rack gear with the groove on the gear rim at two places and install two bypass guide rack gears [2].



2. When installing the bypass CD paper size VR assy [3], make sure that the alignment mark [1] on the bypass guide rack gear and the gear hole [2] on the bypass CD paper size VR assy are placed in a straight line.
3. Secure the bypass CD paper size VR assy with four screws.
4. After the bypass CD paper size VR base has been mounted, check that the lever of the bypass CD paper size VR moves smoothly in a manner operatively connected to the bypass guide.
5. Call the Service Mode to the screen and select [Machine] -> [Manual Bypass Tray Width Adj]. Then, carry out manual bypass tray width adjustment.

12.3 Fusing section

12.3.1 Adjusting the parallelism of the fusing unit path

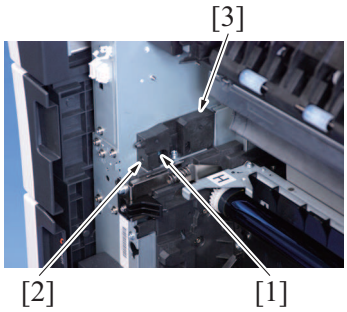
(1) Purpose

This adjustment must be made in the following case:

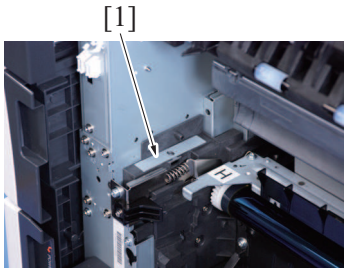
- When the second transfer paper feed path and the fusing section path are not parallel and caused wrinkles on the paper.

(2) Procedure

1. Remove the fusing unit.
   F.8.10.1 Replacing the fusing unit (bizhub C658/C558)
   F.8.10.2 Replacing the fusing unit (bizhub C458)



2. Remove the screw [1] for the fusing unit positioning material.
3. Remove the screw [2], and remove the fusing unit positioning material [3].



4. 0.6 mm adjusting shim plate [1] is installed as the standard status. Add or reduce the number of shims to adjust the parallelism.
   - Removing the standard adjusting shim plate: The fusing unit mounting position (front side) will move down by 0.6 mm.
   - Adding one adjusting shim plate: The fusing mounting position (front side) will move up by 0.6mm.

   Adjusting shim plate parts number: A161 1126##

5. To reinstall, reverse the order of removal.
6. Make a test print to check whether paper is fed properly.

13. MECHANICAL ADJUSTMENT dual scan document feeder

13.1 Original document feed section

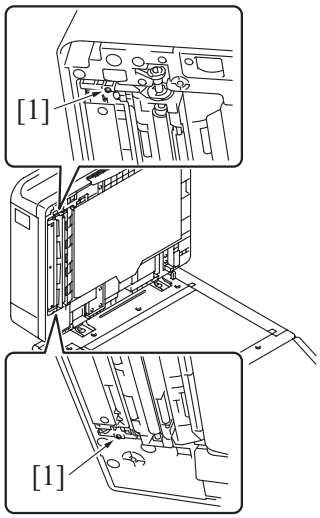
13.1.1 Adjusting the height

(1) Purpose

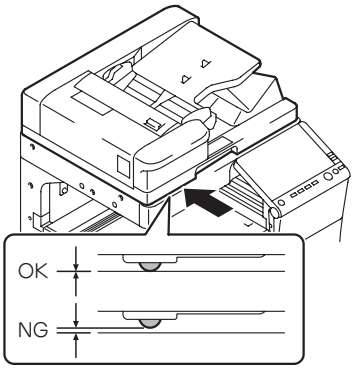
This adjustment must be made in the following case:

- When the dual scan document feeder has been reinstalled.

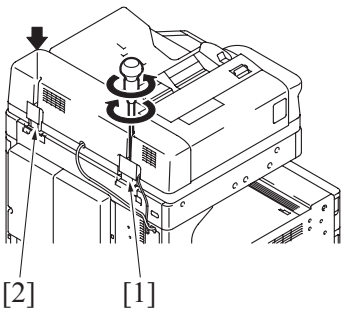
(2) Procedure



1. Check the clearance between the upper face of scanner and the protrusion [1] on the dual scan document feeder side (2 spots).



2. **NOTE**
   - **There must be no clearance between the protrusion [1] on the dual scan document feeder and the upper face of scanner.**
3. If there is any clearance, the following adjustment is needed.



4. Remove the clearance by turning the adjusting screw [1].
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side
5. Use the adjusting screw [2] when further adjustment is needed.
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side

13.1.2 Adjusting front side skew feed on dual scan document feeder

(1) Purpose

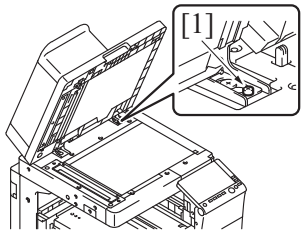
This adjustment must be made in the following case:

- When the dual scan document feeder has been reinstalled.

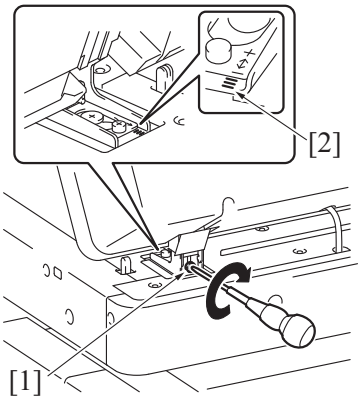
(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
   [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew (Front)]
2. If the [Avg. Value] of measurement result does not fall within the "standard range", perform the following adjustment.

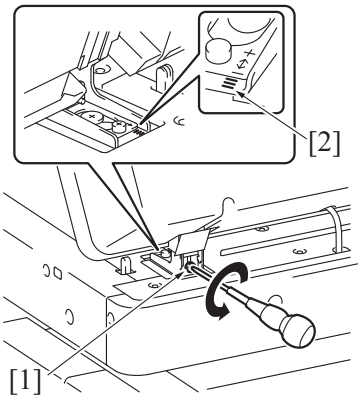
3. Loosen the mounting screw [1] on the right hinge viewed from the front.



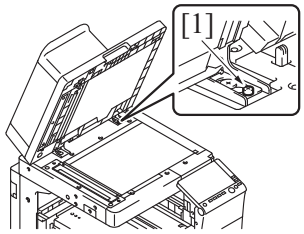
4. If "1.0" is displayed in the [Scale], turn the adjuster screw clockwise to move the scale scribe line one graduation in the "+" direction.
Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "4".
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



5. If "-1.0" is displayed in the [Scale], turn the adjuster screw counterclockwise to move the scale scribe line one graduation in the "-" direction.
Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "2".
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



6. After the adjustment is completed, tighten the mounting screw [1] on right side hinge securely with screwdriver.



7. Re-scan the chart five times by selecting [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew(Front)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range".
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.

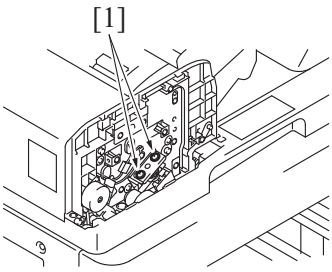
13.1.3 Adjusting back side skew feed on dual scan document feeder

(1) Purpose

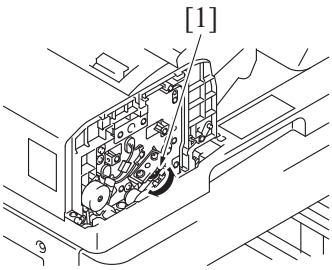
This adjustment must be made in the following case:
- When the dual scan document feeder has been reinstalled.
- When the CIS module has been reinstalled.

(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
[ADF] -> [Skew Measurement] -> [DFSkew (Back)]
2. If the [Avg. Value] of measurement result does not fall within the "standard range", perform the following adjustment.
3. Remove the front cover of the dual scan document feeder.
G.7.2.1 Front cover (dual scan document feeder)



4. Loosen two screws [1].



5. Depending on the difference of the Skew value, turn the adjustment dial [1] to make adjustments.
   - When the difference is a positive (+) value, turn the dial clockwise.
   - When the difference is a negative (-) value, turn the dial counterclockwise.

6. After completing the adjustment, tighten the screw loosened in step 4.
7. Re-scan the chart five times by selecting [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew(Back)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range".
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
10. Install the front cover.

13.1.4 Adjusting the pressure of the separation roller

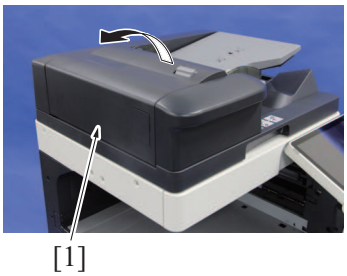
(1) Purpose

This adjustment must be made in the following case. The adjustment can also be performed in three levels.

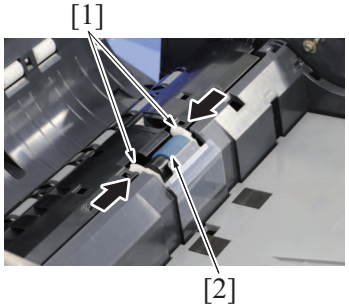
- When document misfeed often occurs.

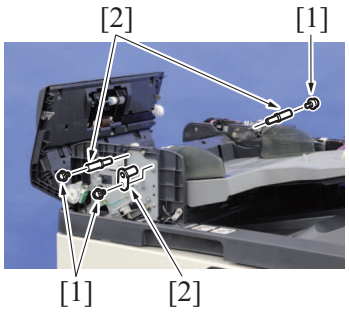
(2) Procedure

1. Open the left cover [1].

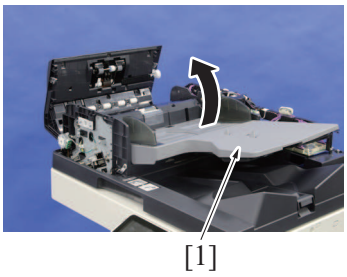


2. Grip the part [1] and remove the separation roller assy [2].

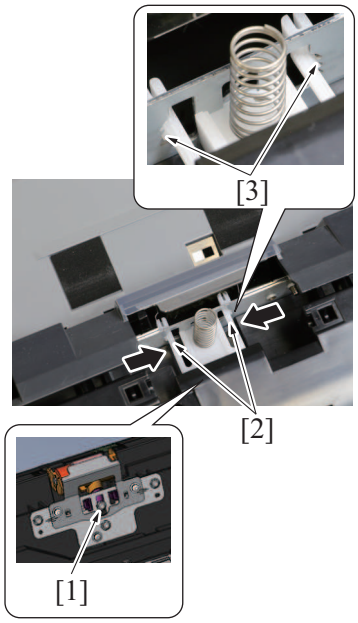




3. Remove three screws [1], and remove three pins [2].



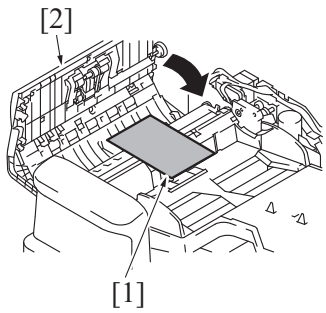
4. Lift up the document feed tray [1].



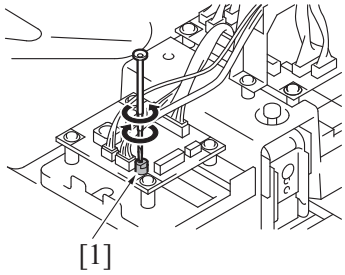
5. Remove the screw [1].
6. Grasp the part [2], perform adjustment by moving it along the groove [3] of the metal plate.
   NOTE
   - **Move upward, the spring force becomes stronger.**
   - **Move downward, the spring force becomes weaker.**
7. To reinstall, reverse the order of removal.

13.1.5 Adjusting multi-feed detection UK-501

1. Remove the rear cover.
   G.7.2.2 Rear cover (dual scan document feeder)

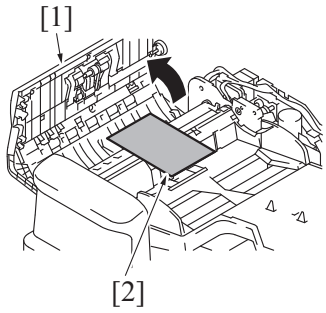


2. Set the supplied adjustment sheet [1] on the detection area of the multi feed detection sensor, as shown in the illustration, then close the left cover [2].
3. Press the Menu key to close the Paper Jam screen.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Multi-Feed DetectionAdj].
6. Press the Start key.
   The Check Value is displayed.



7. Adjust the Check Value by turning the screw [1] on the sensor control board as shown in the illustration so that the value falls within 3,700 to 3,800.
   Clockwise: The value will decrease.
   Counterclockwise: The value will increase.
   Note:
   - **Be sure not to touch any portions other than the adjustment screw.**

8. Press the Stop key.
9. Touch [END] -> [Exit] on the Service Mode screen.



10. Open the left cover [1] and remove the adjustment sheet [2].
11. Close the left cover.
12. Turn OFF and ON the power switch.
    NOTE
    - **When displayed the Service Mode screen, be sure to turn off the power after exiting the Service Mode screen and wait for 10 seconds or more before turning on.**

14. MECHANICAL ADJUSTMENT DF-629

14.1 Original document feed section

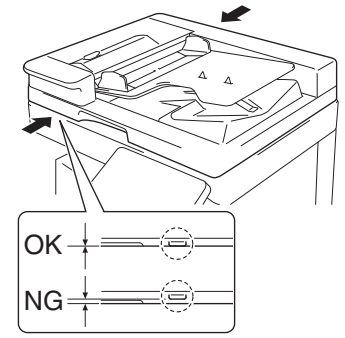
14.1.1 Adjusting the height

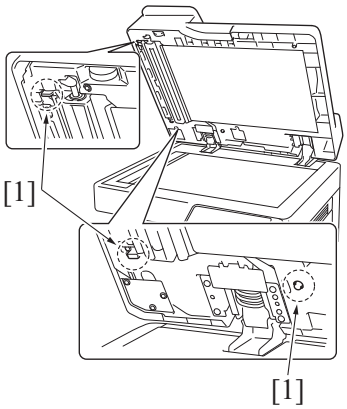
(1) Purpose

This adjustment must be made in the following case:

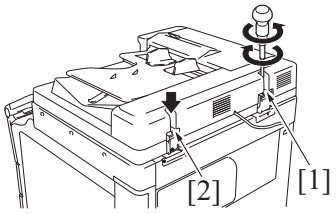
- When the reverse automatic document feeder has been reinstalled.

(2) Procedure





1. Check the clearance between the upper face of scanner and the protrusion [1] on the reverse automatic document feeder side (3 spots).
   NOTE
   - **There must be no clearance between the protrusion [1] on the reverse automatic document feeder and the upper face of scanner.**
2. If there is any clearance, the following adjustment is needed.



3. Remove the clearance by turning the adjusting screw [1].
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side
4. Use the adjusting screw [2] when further adjustment is needed.
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side

14.1.2 Adjusting front side skew feed on ADF

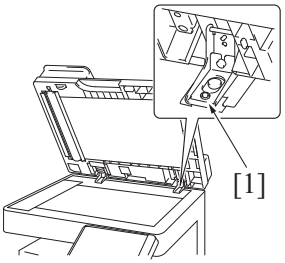
(1) Purpose

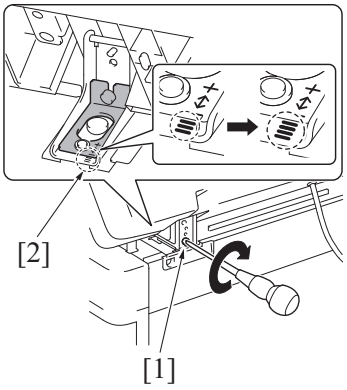
This adjustment must be made in the following case:

- When the reverse automatic document feeder has been reinstalled.

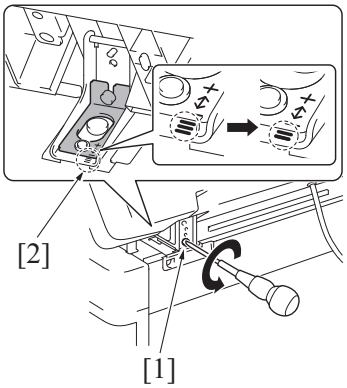
(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
   [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew (Front)]
2. If the [Avg. Value] of measurement result does not fall within the "standard range", perform the following adjustment.
3. Loosen the mounting screw [1] on the right hinge viewed from the front.

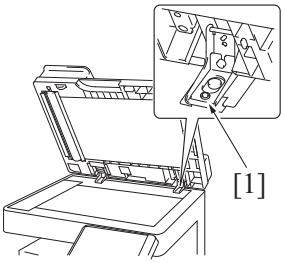




4. If "1.0" is displayed in the [Scale], turn the adjuster screw clockwise to move the scale scribe line one graduation in the "+" direction.
Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "4".
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the reverse automatic document feeder is opened at 90 degrees to prevent the screw from being broken.**



5. If "-1.0" is displayed in the [Scale], turn the adjuster screw counterclockwise to move the scale scribe line one graduation in the "-" direction.
Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "2".
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the reverse automatic document feeder is opened at 90 degrees to prevent the screw from being broken.**



6. After the adjustment is completed, tighten the mounting screw [1] on right side hinge securely with screwdriver.

7. Re-scan the chart five times by selecting [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew(Front)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range".
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.

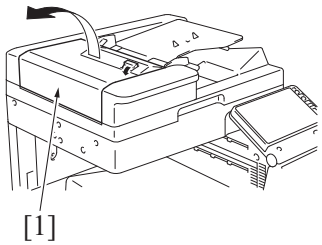
14.1.3 Adjusting the pressure of the separation roller

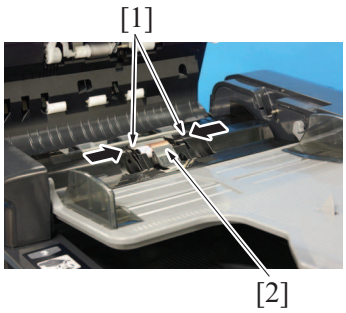
(1) Purpose

This adjustment must be made in the following case: The adjustment is available in two different levels.
- Original misfeed often occurs.

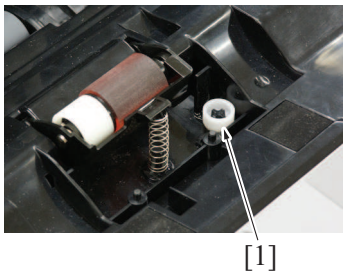
(2) Procedure

1. Open the left cover [1].

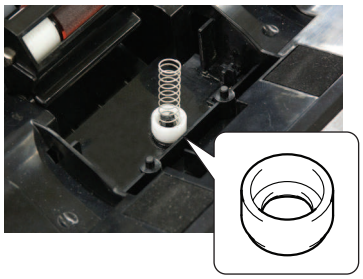




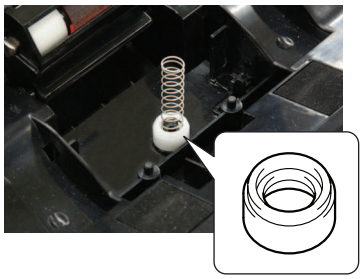
2. Grip both sides [1] of the holder and remove the cover [2].



3. Remove the spacer [1] shown on the illustration.



4. Set the spacer to the lower part of the spring in the direction shown on the illustration (with deeper groove facing upper side).
NOTE
- **When this procedure does not improve the situation, carry out the adjustment below for the stronger spring force.**



5. Set the spacer to the lower part of the spring in the direction shown on the illustration (with shallow groove facing upper side).

15. MECHANICAL ADJUSTMENT DF-704

15.1 Original document feed section

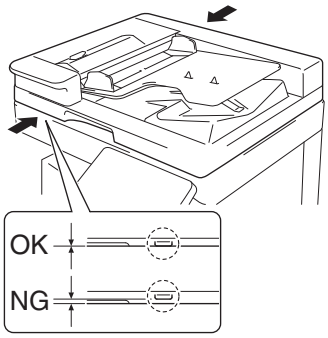
15.1.1 Adjusting the height

(1) Purpose

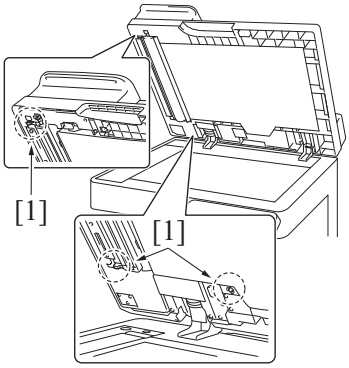
This adjustment must be made in the following case:

- When the dual scan document feeder has been reinstalled.

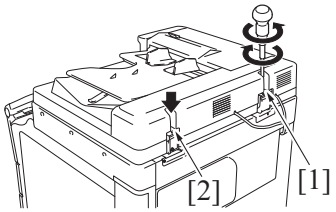
(2) Procedure



1. Check the clearance between the upper face of scanner and the protrusion [1] on the dual scan document feeder side (3 spots).
   NOTE
   - **There must be no clearance between the protrusion [1] on the dual scan document feeder and the upper face of scanner.**
2. If there is any clearance, the following adjustment is needed.



3. Remove the clearance by turning the adjusting screw [1].
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side
4. Use the adjusting screw [2] when further adjustment is needed.
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side



15.1.2 Adjusting front side skew feed on ADF

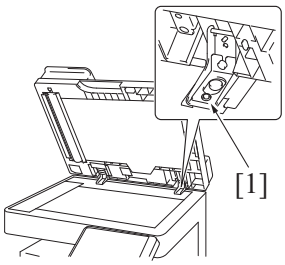
(1) Purpose

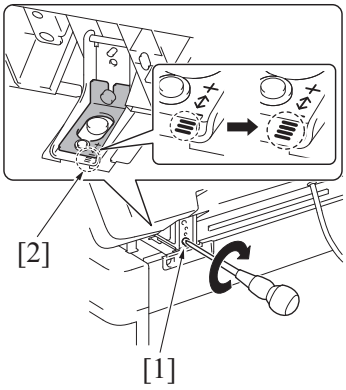
This adjustment must be made in the following case:

- When the dual scan document feeder has been reinstalled.

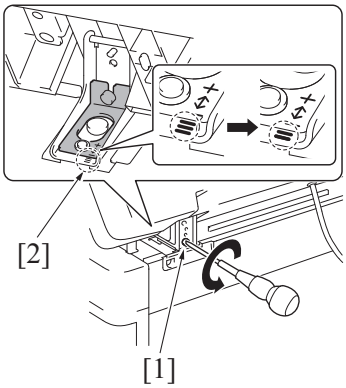
(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
   [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew (Front)]
2. If the [Avg. Value] of measurement result does not fall within the "standard range", perform the following adjustment.
3. Loosen the mounting screw [1] on the right hinge viewed from the front.

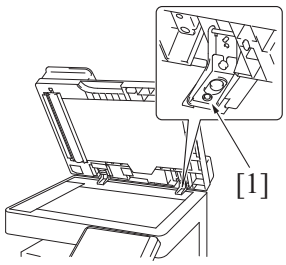




4. If "1.0" is displayed in the [Scale], turn the adjuster screw clockwise to move the scale scribe line one graduation in the "+" direction.
   Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "4".
   NOTE
   - **Look at the guide lines [2] when making the adjustment.**
   - **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



5. If "-1.0" is displayed in the [Scale], turn the adjuster screw counterclockwise to move the scale scribe line one graduation in the "-" direction.
   Example: If the scribe line is on graduation "3" before adjusting, adjust the scribe line to graduation "2".
   NOTE
   - **Look at the guide lines [2] when making the adjustment.**
   - **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



6. After the adjustment is completed, tighten the mounting screw [1] on right side hinge securely with screwdriver.

7. Re-scan the chart five times by selecting [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew(Front)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range".
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.

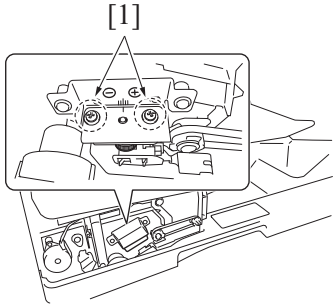
15.1.3 Adjusting back side skew feed on ADF

(1) Purpose

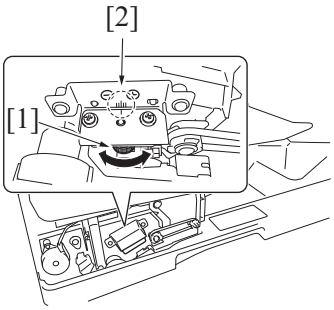
This adjustment must be made in the following case:
- When the dual scan document feeder has been reinstalled.
- When the CIS module has been reinstalled.

(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
   [ADF] -> [Skew Measurement] -> [DFSkew (Back)]
2. If the [Avg. Value] of measurement result does not fall within the "standard range", perform the following adjustment.
3. Remove the front cover of the dual scan document feeder.
   G.8.4.1 Front cover (DF-704)



4. Loosen two screws [1].



5. Depending on the difference of the Skew value, turn the adjustment dial [1] using the marks [2] as a guide.
   - When the difference is a positive (+) value, turn the dial clockwise.
   - When the difference is a negative (-) value, turn the dial counterclockwise.

6. After completing the adjustment, tighten the screw loosened in step 4.
7. Re-scan the chart five times by selecting [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew(Back)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range".
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
10. Install the front cover.

15.1.4 Adjusting the pressure of the separation roller

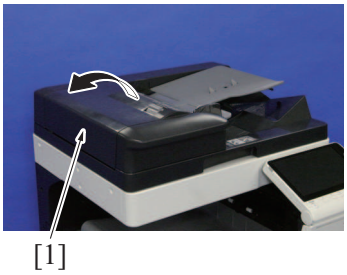
(1) Purpose

This adjustment must be made in the following case: The adjustment is available in two different levels.

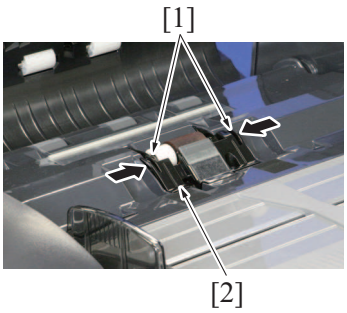
- Original misfeed often occurs.

(2) Procedure

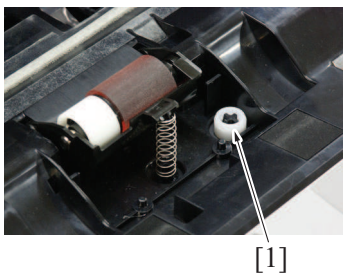
1. Open the left cover [1].

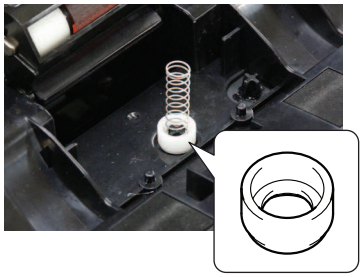


2. Grip both sides [1] of the holder and remove the cover [2].

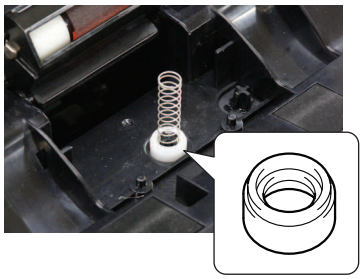


3. Remove the spacer [1] shown on the illustration.





4. Set the spacer to the lower part of the spring in the direction shown on the illustration (with deeper groove facing upper side).
   NOTE
   - **When this procedure does not improve the situation, carry out the adjustment below for the stronger spring force.**



5. Set the spacer to the lower part of the spring in the direction shown on the illustration (with shallow groove facing upper side).

16. MECHANICAL ADJUSTMENT PC-110/PC-210

16.1 Paper reference position

16.1.1 Purpose

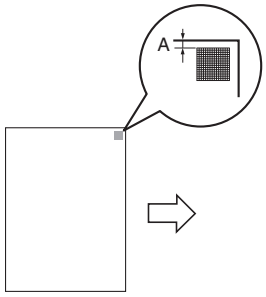
This adjustment must be made in the following case:

- When the PH unit has been replaced.
- When the image on the print is offset in the main scan direction.
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

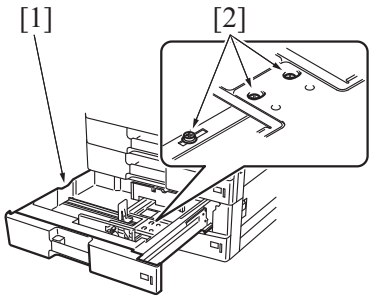
NOTE

- **When optional finisher FS-534 or FS-534SD is installed, mechanical adjustment is necessary before adjustment [Printer Image Centering Side 1].**

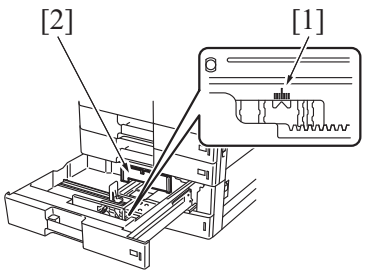
16.1.2 Procedure



1. Measure the width of printed reference line A. Target: 3.0 mm ± 1.0 mm



2. Slide out the tray [1] and unload paper from it.
3. Loosen three screws [2] at the center of the paper lifting plate.



4. Watching the graduations [1] provided in the drawer, move the paper width guide [2] in the rear.
   - If width A is greater than the target, move the paper width guide toward the front.
   - If width A is smaller than the target, move the paper width guide toward the rear.

5. Tighten three screws which have been loosened.
6. Perform another test print and check the reference deviation.

17. MECHANICAL ADJUSTMENT PC-115/PC-215

17.1 Paper reference position

17.1.1 Purpose

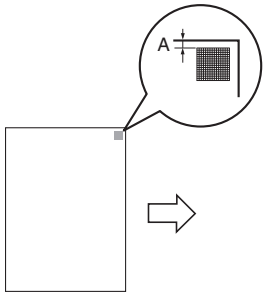
This adjustment must be made in the following case:

- When the PH unit has been replaced.
- When the image on the print is offset in the main scan direction.
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

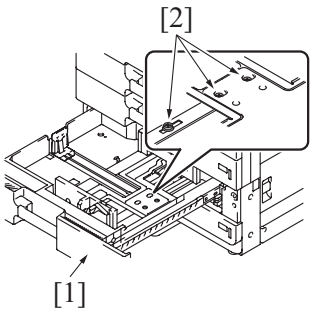
NOTE

- **When optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is installed, mechanical adjustment is necessary before adjustment [Printer Image Centering Side 1].**

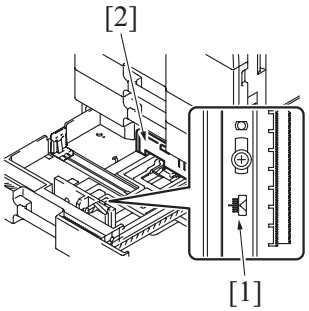
17.1.2 Procedure



1. Measure the width of printed reference line A. Target: 3.0 mm ± 1.0 mm



2. Slide out the tray [1] and unload paper from it.
3. Loosen three screws [2] at the center of the paper lifting plate.



4. Watching the graduations [1] provided in the drawer, move the paper width guide [2] in the rear.
   - If width A is greater than the target, move the paper width guide toward the front.
   - If width A is smaller than the target, move the paper width guide toward the rear.

5. Tighten three screws which have been loosened.
6. Perform another test print and check the reference deviation.

18. MECHANICAL ADJUSTMENT PC-410

18.1 Paper reference position

18.1.1 Purpose

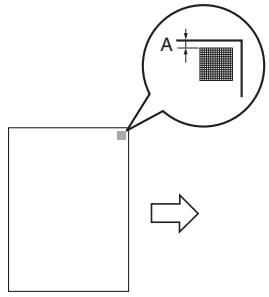
This adjustment must be made in the following case:

- When the PH unit has been replaced.
- When the image on the print is offset in the main scan direction.
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

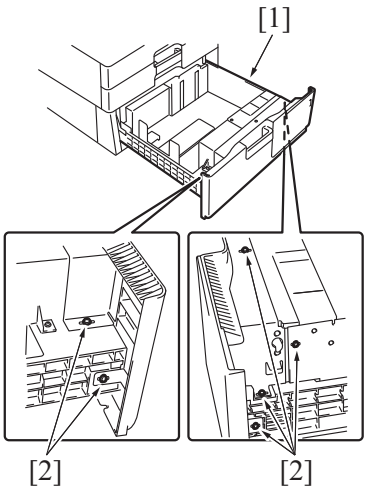
NOTE

- **When optional finisher FS-534 or FS-534SD is installed, mechanical adjustment is necessary before adjustment [Printer Image Centering Side 1].**

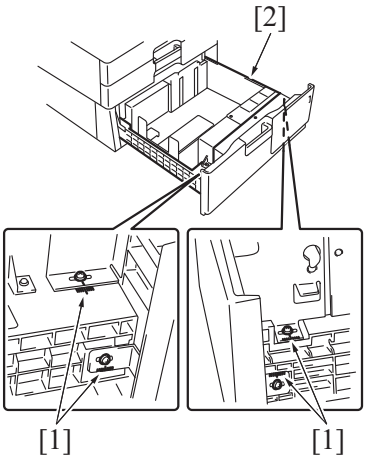
18.1.2 Procedure



1. Measure the width of printed reference line A. Target: 3.0 mm ± 1.0 mm



2. Slide out the paper feed tray [1] and unload paper from it.
3. Loosen six screws [2].

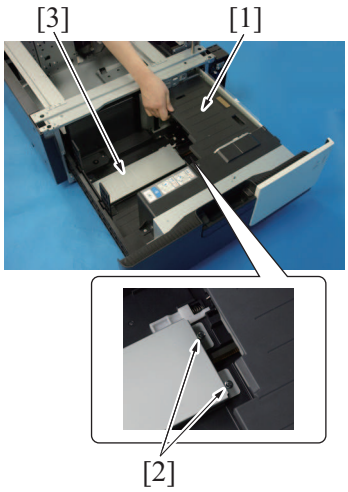


4. Watching the graduations [1] provided near the screws, move the front cover assy [2].
   - If width A is greater than the target, move the front cover assy toward the rear.
   - If width A is smaller than the target, move the front cover assy toward the front.
5. Tighten six screws which have been loosened.
6. Perform another test print and check the reference deviation.

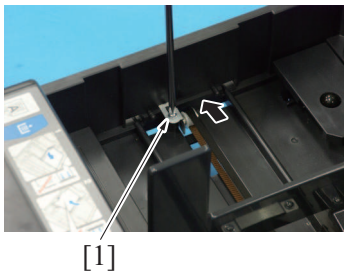
18.2 Shifter movement timing belt adjustment

18.2.1 Procedure

1. Remove the paper feed tray.
   G.8.7.4 Paper feed tray (PC-410)



2. While raising the main tray [1], and remove two screws [2] that hold the shift tray in position.
   NOTE
   - **When reinstalling, use caution because the wire of the main tray [1] comes off easily.**
3. Remove the shift tray [3].



4. Move the sifter.
5. Loosen the tension pulley assy fixing screw [1] and move it in the direction of the arrow.
6. After moving the shifter, tighten the tension pulley assy fixing screw [1].

19. MECHANICAL ADJUSTMENT PC-415

19.1 Paper reference position

19.1.1 Purpose

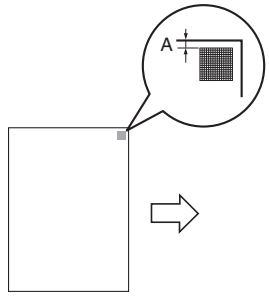
This adjustment must be made in the following case:

- When the PH unit has been replaced.
- When the image on the print is offset in the main scan direction.
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

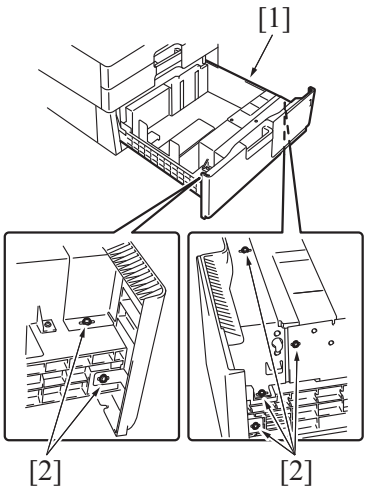
NOTE

- **When optional finisher FS-536, FS-536SD, FS-537, or FS-537SD is installed, mechanical adjustment is necessary before adjustment [Printer Image Centering Side 1].**

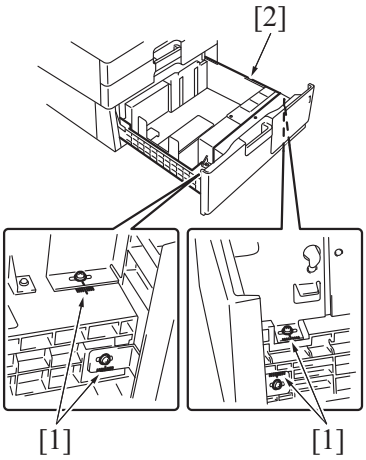
19.1.2 Procedure



1. Measure the width of printed reference line A. Target: 3.0 mm ± 1.0 mm



2. Slide out the paper feed tray [1] and unload paper from it.
3. Loosen six screws [2].



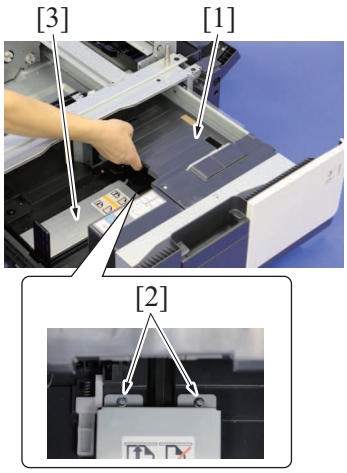
4. Watching the graduations [1] provided near the screws, move the front cover assy [2].
   - If width A is greater than the target, move the front cover assy toward the rear.
   - If width A is smaller than the target, move the front cover assy toward the front.

5. Tighten six screws which have been loosened.
6. Perform another test print and check the reference deviation.

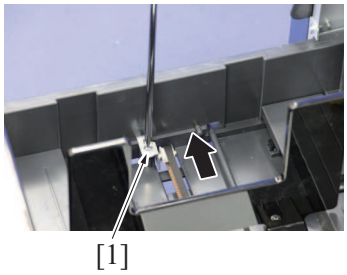
19.2 Shifter movement timing belt adjustment

19.2.1 Procedure

1. Slide out the paper feed tray.



2. While raising the main tray [1], and remove two screws [2] that hold the shift tray in position.
   NOTE
   - **When reinstalling, use caution because the wire of the main tray [1] comes off easily.**
3. Remove the shift tray [3].



4. Move the sifter.
5. Loosen the tension pulley assy fixing screw [1] and move it in the direction of the arrow.
6. After moving the shifter, tighten the tension pulley assy fixing screw [1].

20. MECHANICAL ADJUSTMENT LU-207

20.1 Paper feed section

20.1.1 Changing the paper size

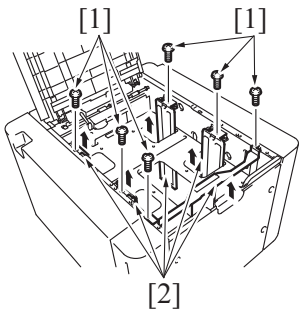
(1) Purpose

This adjustment must be made in the following case:

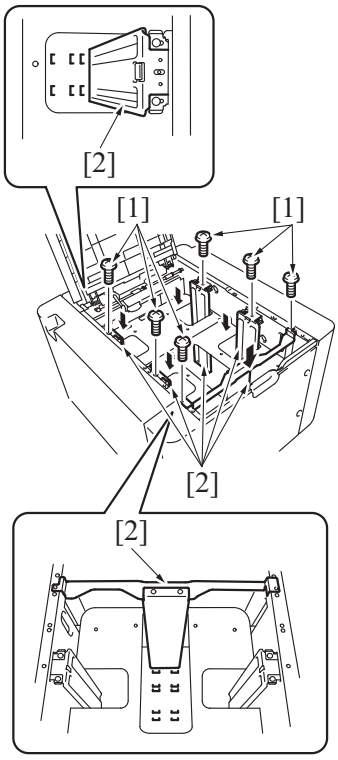
- The user wants to change the size of paper being fed.

(2) Procedure

1. Open the upper door of the paper feed unit.



2. Remove six screws [1] and remove the paper guide side plate [2].



3. Match the paper guide side plate [2] to the size of the loaded paper.
4. Reinstall six screws [1] to attach the paper guide side plate [2].
5. From [Service Mode] -> [System 2] -> [LCT Paper Size Setting], select the tray in which the paper size will be changed and change the paper size.

20.1.2 Centering adjustment of the LCT

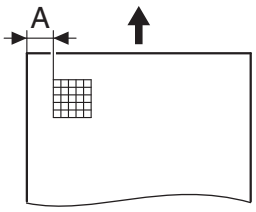
(1) Purpose

This adjustment must be made in the following case:

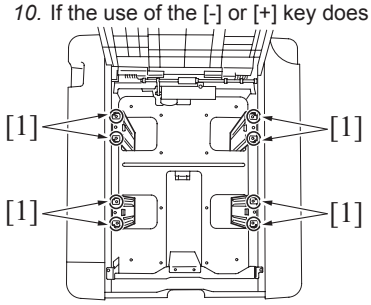
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

(2) Procedure

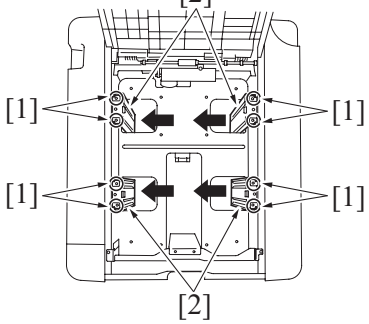
1. Call the Service Mode to the screen.
2. Touch [Machine].
3. Touch [Printer Area].
4. Touch [Printer Image Centering Side 1].
5. Touch [LCT].
6. Press the Start key to let the main body produce a test print.



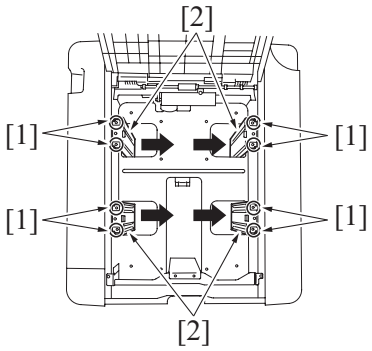
7. Measure the width of printed reference line A. Target A: 3.0 mm ± 1.5 mm
8. If the measured width A falls outside the target, enter the correction value using the [-] or [+] key.
9. Produce another test print and check to see if width A falls within the target.
10. If the use of the [-] or [+] key does not allow the measurement to fall within the target, perform the following steps.



11. Open the upper door of the LCT to loosen eight screws [1].
NOTE
- **During adjustment, in order to keep the same distance between the paper guide side plates, place a sheet of paper between the paper guide side plates with 1.0 mm apart from each of the plates.**



12. When width A is larger than the target. Move the paper guide side plates [2] to the left and tighten eight loosened screws [1].



13. When the width A is smaller than the target. Move the paper guide side plates [2] rightward and tighten eight loosened screws [1].
14. Load paper and let the main body produce another test print. Then, check width A.
15. Make the adjustment until width A falls within the target.

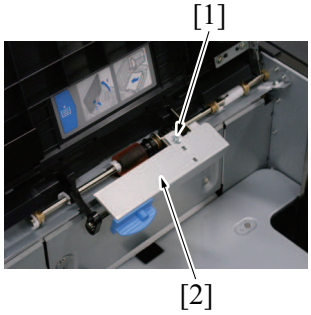
20.1.3 Pick-up roller load adjustment of the LCT

(1) Purpose

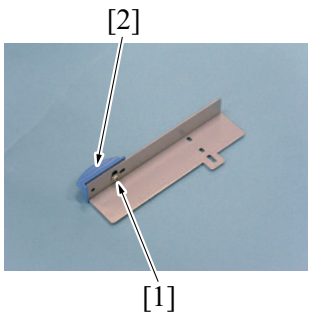
This adjustment must be made in the following case:
- Incase a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure

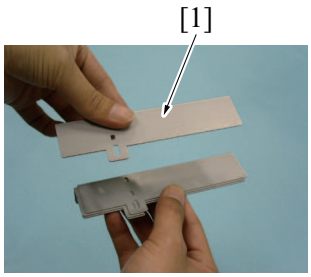
1. Open the upper door.



2. Remove the screw (M3 x 10 mm: V116 0310 03) [1] and remove the paper assist plate assy [2].



3. Remove the screw [1] and remove the assist handle [2].



4. Add one more paper assist plate (A03N 5604 ##) [1] to the original ones.
NOTE
- **Adding only one paper assist plate is allowed and the total needs to be up to four.**

5. Reinstall the assist handle that was removed in step 3, securing it with the screw.
6. Reinstall the paper assist plate assy with a new screw (M3 X 12 mm: V116 0312 03). The screw removed in step 2 (M3 X 10 mm: V116 0310 03) cannot be used to reinstall the assy.
7. Close the upper door.
8. Perform copying/printing to check whether the no feed or the double feed occurs or not.

21. MECHANICAL ADJUSTMENT LU-302

21.1 Paper feed section

21.1.1 Centering adjustment of the LCT

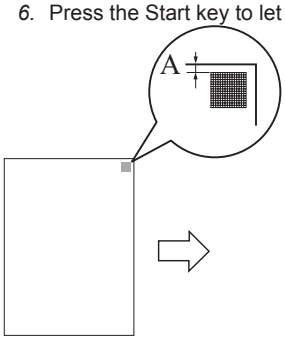
(1) Purpose

This adjustment must be made in the following case:

- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

(2) Procedure

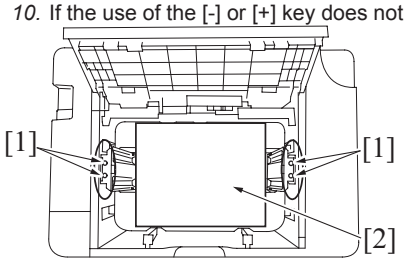
1. Call the Service Mode to the screen.
2. Touch [Machine].
3. Touch [Printer Area].
4. Touch [Centering].
5. Touch [LCT].
6. Press the Start key to let the machine produce a test print.
7. Measure the width of printed reference line A. Target A: 3.0 mm ± 1.0 mm



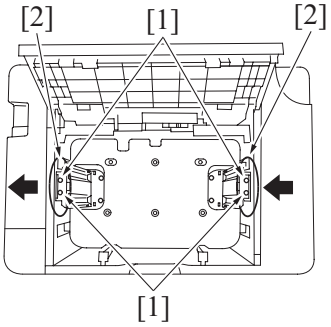
8. If the measured width A falls outside the target, enter the correction value using the [-] or [+] key.
9. Produce another test print and check to see if width A falls within the target.
10. If the use of the [-] or [+] key does not allow the measurement to fall within the target, perform the following steps.
11. Open the upper door on LCT to loosen four screws [1].

    NOTE

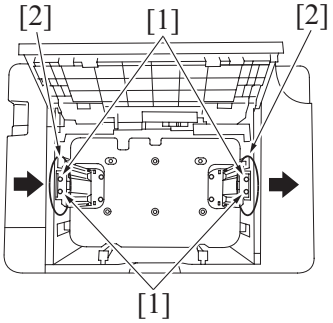
    - **During adjustment, in order to keep the same distance between the paper guide side plates, place a sheet of paper [2] between the paper guide side plates with 1.0 mm apart from each of the plates.**



12. When the width A is larger than the target. Move the paper guide side plates [2] leftward and tighten four loosened screws [1].



13. When the width A is smaller than the target. Move the paper guide side plates [2] rightward and tighten four loosened screws [1].



14. Load paper and let the machine produce another test print. Then, check width A.
15. Make the adjustment until width A falls within the target.

21.1.2 Pick-up roller load adjustment of the LCT

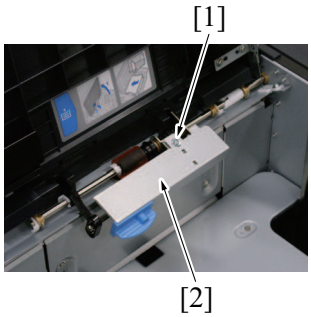
(1) Purpose

This adjustment must be made in the following case:

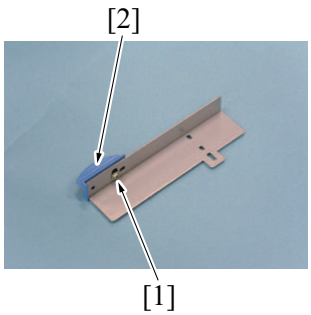
- Incase a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure

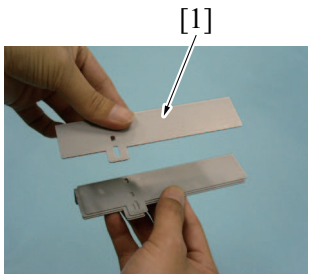
1. Open the upper door.



2. Remove the screw (M3 x 8 mm: V116 0308 03) [1] and remove the paper assist plate assy [2].



3. Remove the screw [1] and remove the assist handle [2].



4. Add one more paper assist plate (A03N 5604 ##) [1] to the original ones.
NOTE
- **Up to four paper assist plates can be added. (Standard: three)**

5. Reinstall the assist handle that was removed in step 3, securing it with the screw.
6. Reinstall the paper assist plate assy with a new screw (M3 X 10 mm: V118 0310 03). The screw removed in step 2 (M3 X 8 mm: V116 0308 03) cannot be used to reinstall the assy.
7. Close the upper door.
8. Perform copying/printing to check whether the no feed or the double feed occurs or not.

22. MECHANICAL ADJUSTMENT PK-519

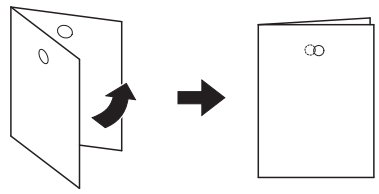
22.1 Punch section

22.1.1 Punch hole deviation correction

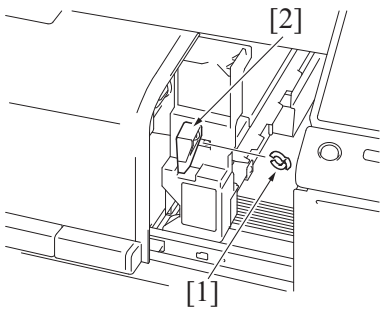
(1) Purpose

This adjustment must be made in the following case:
- The punch holes are on a slanted line.

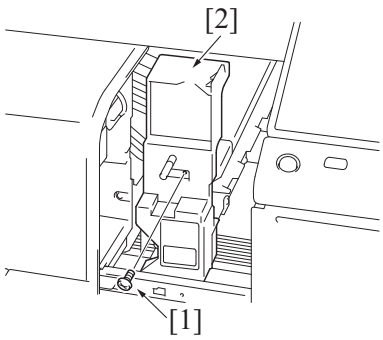
(2) Procedure



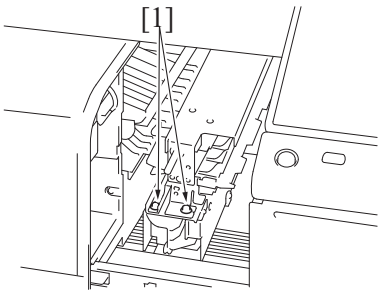
1. Set the mode to Punch mode for printing.
2. Hold the output paper half and check the displacement of the punch hole.
   Target: 0 ± 2.0 mm
3. If the positional deviation of the punch holes is not within the target range, take the following steps.
4. Slide the finisher by pulling its lever.



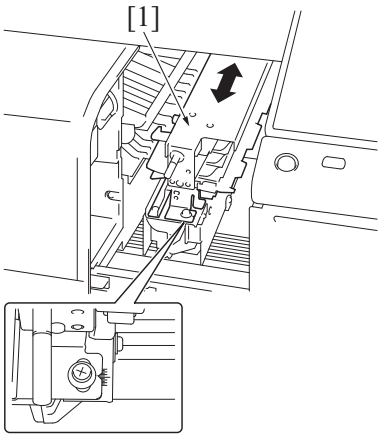
5. Remove the C-clip [1], and remove the lever [2].



6. Remove the screw [1], and remove the cover [2].



7. Loosen two screws [1].



8. Move the punch unit [1] back and forth to adjust its position, referring to the guide lines.

9. To reinstall, reverse the order of removal.
10. Make a copy and check the punch hole positions again.

23. MECHANICAL ADJUSTMENT PK-520

23.1 Punch section

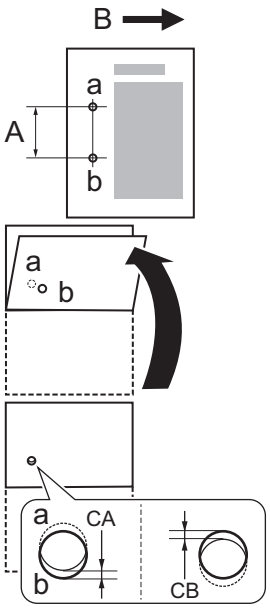
23.1.1 Punch hole deviation correction

(1) Purpose

This adjustment must be made in the following case:

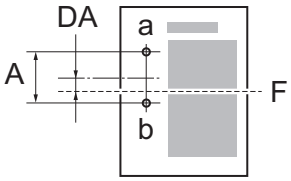
- The punch holes are on a slanted line.

(2) Procedure



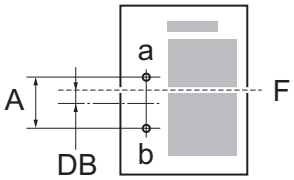
1. Make a 1sided copy sample in the punch mode. Face the printed surface upward.
   - [A]: The distance between holes
   - [B]: Paper feeding direction
   - [a]: Upper punch hole
   - [b]: Lower punch hole
2. Fold the paper in half along the center in the paper feeding direction.
3. Measure the deviation amount [C] between punch holes [a] and [b].
   Target: D = 0 ± 1.0 mm

Ex.1



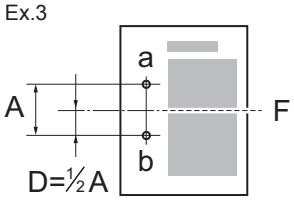
4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 3 mm ÷ 2 = -1.5 mm (hole positions deviate upward)

Ex.2

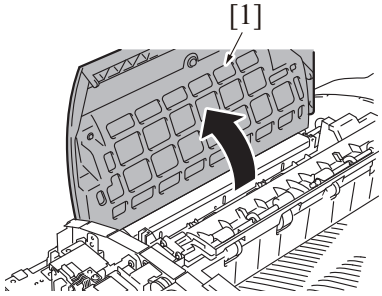


5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 3 mm ÷ 2 = +1.5 mm (hole positions deviate downward)

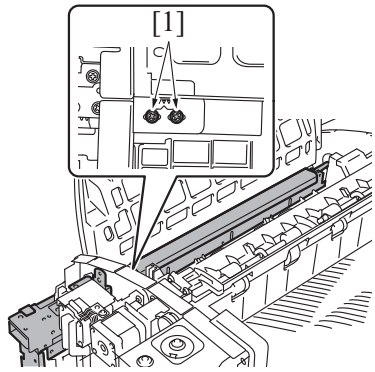
Ex.3



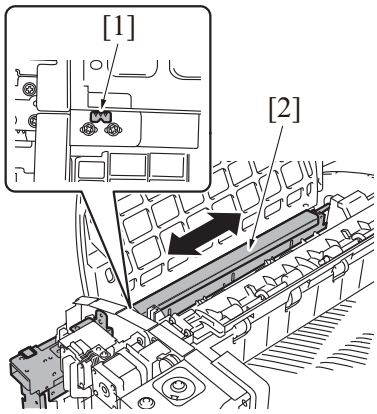
6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±1.0 mm or less).
   Ex.3: Punch hole deviation amount [D] = Measured value [C] 0mm÷2 = 0 (punch hole deviation amount falls within the target)



7. In case the figure exceeds the above mentioned target, follow the procedures shown below.
8. Open the upper cover [1].



9. Loosen two screws [1].



10. Using the triangle marks [1] on the plate as a guide, move the punch unit [2] back and forth to adjust its position.

24. MECHANICAL ADJUSTMENT PK-523

24.1 Punch section

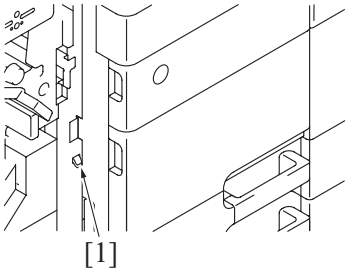
24.1.1 Punch hole deviation correction

(1) Purpose

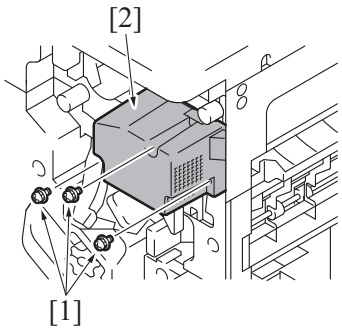
This adjustment must be made in the following case:

- The punch holes are on a slanted line.

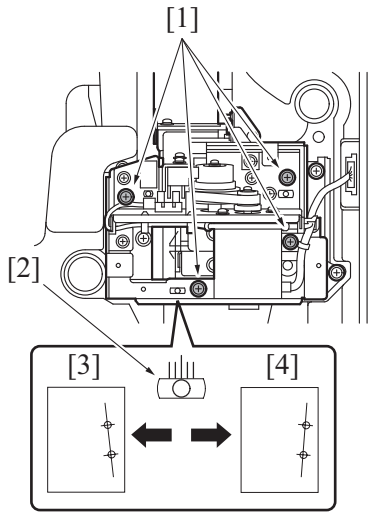
(2) Procedure



1. Insert a piece of paper [1] into the finisher's interlock to turn it ON.
2. Turn ON the Main power switch of the machine, and make sample copies for both the single-side and double-side with any tray in Punch mode.
3. Fold the output paper in half and check whether the punch holes are aligned. If the punch holes are misaligned, make the following adjustment.



4. Remove three screws [1], and remove the punch kit cover [2].



5. Loosen four screws [1] and move the punch kit to the left or right by the amount that needs to be corrected referring to the mark [2].
   - Wider at the rear [3]: Move the punch kit to the left.
   - Wider at the front [4]: Move the punch kit to the right.
6. Make copies in punch mode again and check that punch holes are not on the slanted line.

25. MECHANICAL ADJUSTMENT FS-534SD

25.1 Paper exit section

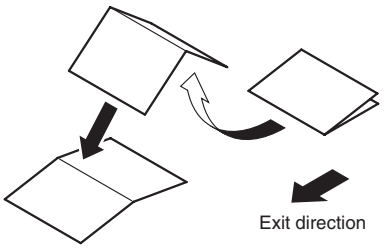
25.1.1 Half-fold skew adjustment

(1) Purpose

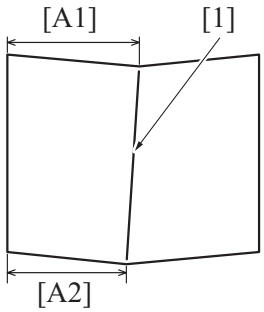
This adjustment must be made in the following case:

- Fold line goes off the tolerance in the half-fold mode.
- When reinstalling the guide plate assy, perform mechanical adjustment.

(2) Procedure

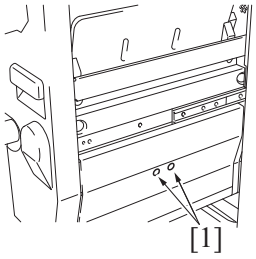


1. Make a copy in the half-fold mode.
2. Unfold the paper that exits the machine and lay the paper with the ridge facing up.

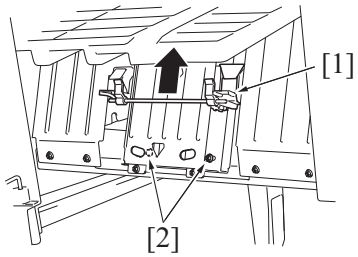


3. Confirm the skew of the fold line [1] of the output copy sample (Widths of A1 and A2)
   Target: A1-A2=±1.0 mm
4. In case the figure exceeds the above mentioned target, follow the adjustment procedures below.

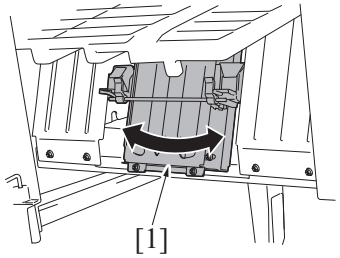
5. Open the front door of the finisher.
6. Pull the saddle unit.



7. Loosen two screws [1].

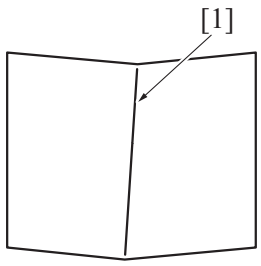


8. Slide the lever unit [1] upward.
9. Loosen two screws [2].



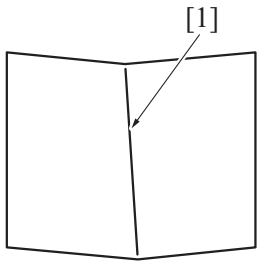
10. Incline the guide plate assy [1] forward or backward according to the deviation of the crease.

In case the cease [1] skews as the right side:



- In case the cease [1] skews as the right side:
  Incline the guide plate assy backward.

In case the cease [1] skews as the left side:



- In case the cease [1] skews as the left side:
  Incline the guide plate assy forward.

11. Make the copy sample again to confirm the cease skew.
12. Reinstall the above parts following the removal steps in reverse.

26. MECHANICAL ADJUSTMENT FD-536SD saddle section

26.1 Paper exit section

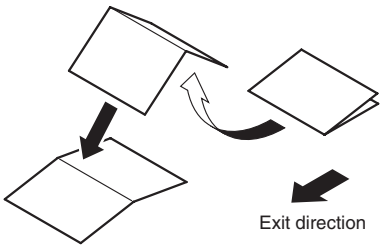
26.1.1 Half-fold skew adjustment

(1) Purpose

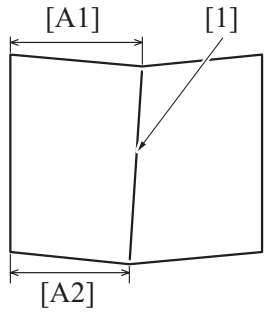
This adjustment must be made in the following case:

- Fold line goes off the tolerance in the half-fold mode.
- When reinstalling the guide plate assy, perform mechanical adjustment.

(2) Procedure

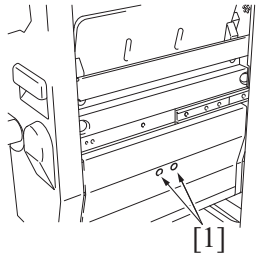


1. Make a copy in the half-fold mode.
2. Unfold the paper that exits the machine and lay the paper with the ridge facing up.

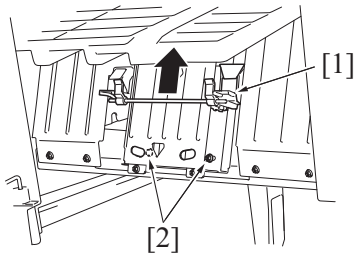


3. Confirm the skew of the fold line [1] of the output copy sample (Widths of A1 and A2)
   Target: A1-A2=±1.0 mm
4. In case the figure exceeds the above mentioned target, follow the adjustment procedures below.

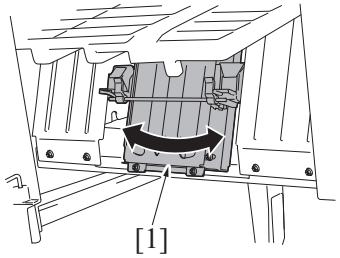
5. Open the front door of the finisher.
6. Pull the saddle unit.



7. Loosen two screws [1].

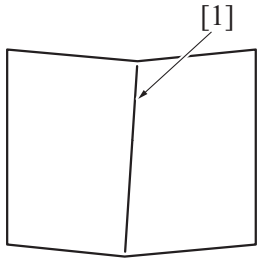


8. Slide the lever unit [1] upward.
9. Loosen two screws [2].



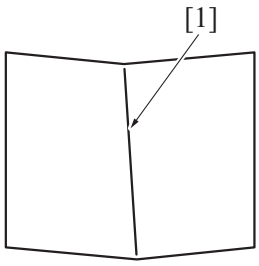
10. Incline the guide plate assy [1] forward or backward according to the deviation of the crease.

In case the cease [1] skews as the right side:



- In case the cease [1] skews as the right side:
  Incline the guide plate assy backward.

In case the cease [1] skews as the left side:



- In case the cease [1] skews as the left side:
  Incline the guide plate assy forward.

11. Make the copy sample again to confirm the cease skew.
12. Reinstall the above parts following the removal steps in reverse.

27. MECHANICAL ADJUSTMENT FS-537SD saddle section

27.1 Paper exit section

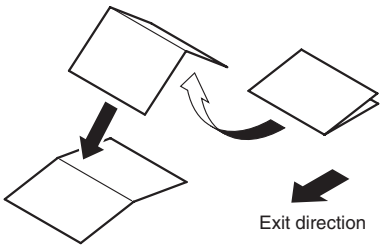
27.1.1 Half-fold skew adjustment

(1) Purpose

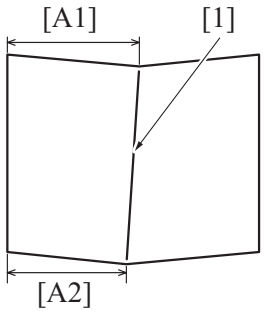
This adjustment must be made in the following case:

- Fold line goes off the tolerance in the half-fold mode.
- When reinstalling the guide plate assy, perform mechanical adjustment.

(2) Procedure

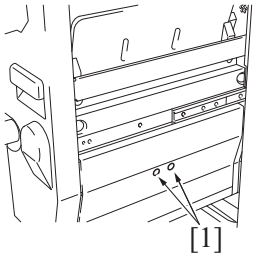


1. Make a copy in the half-fold mode.
2. Unfold the paper that exits the machine and lay the paper with the ridge facing up.

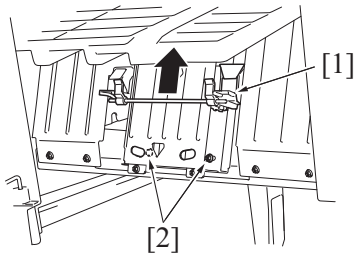


3. Confirm the skew of the fold line [1] of the output copy sample (Widths of A1 and A2)
   Target: A1-A2=±1.0 mm
4. In case the figure exceeds the above mentioned target, follow the adjustment procedures below.

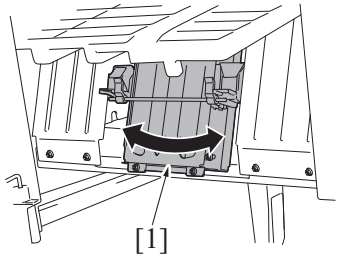
5. Open the front door of the finisher.
6. Pull the saddle unit.



7. Loosen two screws [1].

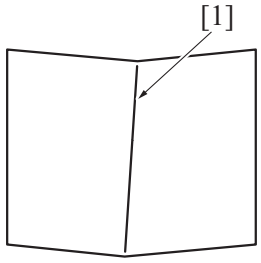


8. Slide the lever unit [1] upward.
9. Loosen two screws [2].



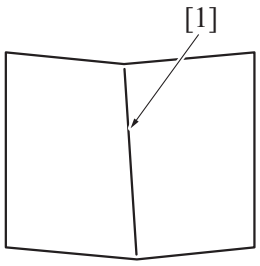
10. Incline the guide plate assy [1] forward or backward according to the deviation of the crease.

In case the cease [1] skews as the right side:



- In case the cease [1] skews as the right side:
  Incline the guide plate assy backward.

In case the cease [1] skews as the left side:



- In case the cease [1] skews as the left side:
  Incline the guide plate assy forward.

11. Make the copy sample again to confirm the cease skew.
12. Reinstall the above parts following the removal steps in reverse.

J REWRITING OF FIRMWARE

1. REWRITING OF FIRMWARE

- There are two ways to update the firmware: One is by directly connecting with the main body using the USB memory device, and the other is by downloading over a network.

NOTE 1

- **The settings in the "Utility" mode and the "Service Mode" will not be changed, when the firmware is updated.**
- **Install the various data such as voice data, or loadable device driver as required in the order shown below in accordance with the rewriting firmware or user's environment.**

1. **Install the various data.**
   [Service Mode] -> [System 2] -> [Install Data]
2. **Install the loadable device driver.**
   [Service Mode] -> [System 2] -> [Driver Install]
3. **Turn OFF and ON the main power switch.**

2. Confirming the firmware version

2.1 Procedure

1. Call the Service Mode to the screen.
2. Select the [Firmware Version].
3. Check the firmware version.

NOTE

- **After conducting firmware updating, check the firmware version No. and confirm that the firmware has been normally updated.**

3. USB memory

3.1 Preparation

3.1.1 System preparation

- PC with USB ports
- USB memory
  - USB flash memory compatible with the USB (1.1/2.0/3.0) interface. The speed is limited to USB2.0 specifications even if using a device that supports USB3.0.
  - The USB memory is formatted in FAT32 format.
  - No security functions such as encryption and password lock have been added (or the USB memory allows its security functions to be turned OFF).
  - A USB memory that is recognized by the computer as two or more drives cannot be used.
  - We recommend that you use a memory device with no more than 32 GB of capacity.

NOTE
- **Possible to be non-operational products.**

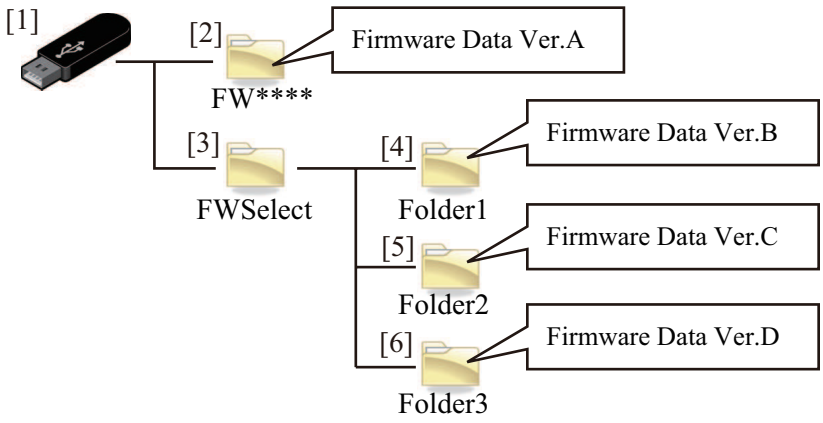
3.1.2 USB memory used to update firmware

1. Uncompress the firmware file.
2. Connect a USB memory to a PC.
3. Copy the rewriting data folder contained in the extracted data to the root directory of the USB memory.

Product name	Rewriting data folder name
bizhub C368/C308/C258	FW0002
bizhub C658/C558/C458	FW0005

NOTE
- **More than one firmware data with a single model can be stored in the USB memory.**
- **In this case, copy the firmware data to the USB memory according to the following procedures.**
  1. Make the folder named "FWSelect" (case-sensitive) to the root directory of the USB memory.
  2. Make a folder with any folder name (one byte alphameric characters, maximum 40 characters) in "FWSelect" folder, and store the firmware data to the folder.

3.1.3 Directory configuration of USB memory



[1]	USB memory	[2]	Rewriting data folder (Required) *1
[3]	Storage folder for a plurality of data (Folder name: FW select (Fixed)) *2	[4]	Storage folder for firmware data B (Folder name: Arbitrary) *2
[5]	Storage folder for firmware data C (Folder name: Arbitrary) *2	[6]	Storage folder for firmware data D (Folder name: Arbitrary) *2

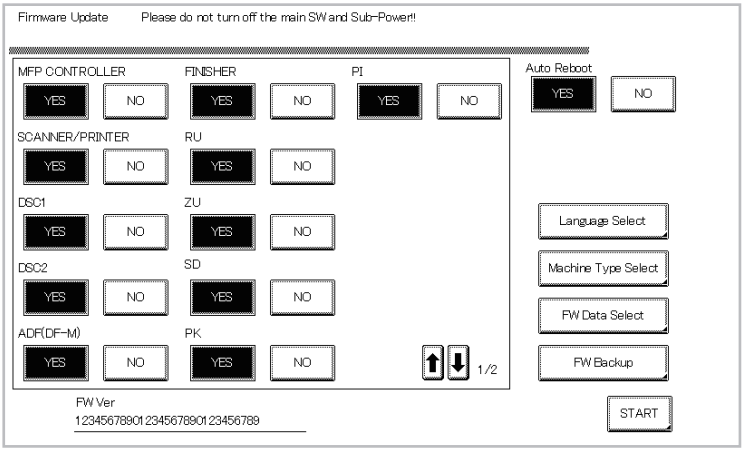
- *1: Required to start the firmware update screen
- *2: Required only when a plurality of data is stored

3.2 Procedure

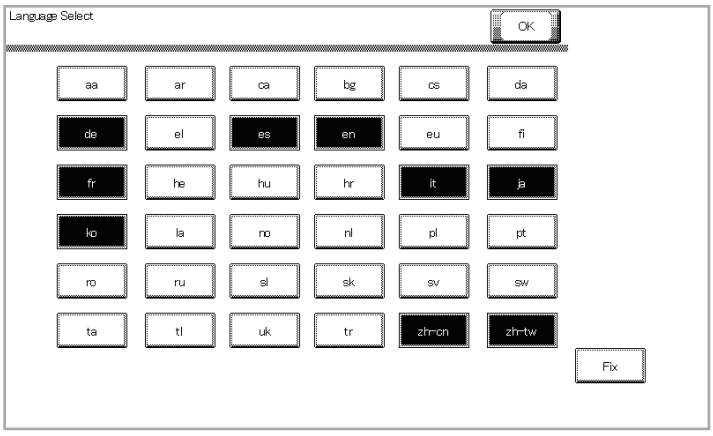
1. Turn OFF the main power switch.
2. Connect the USB memory containing the firmware into the USB port on the right side of the control panel.
   NOTE
   - **USB memory must be connected with the main power switch off.**



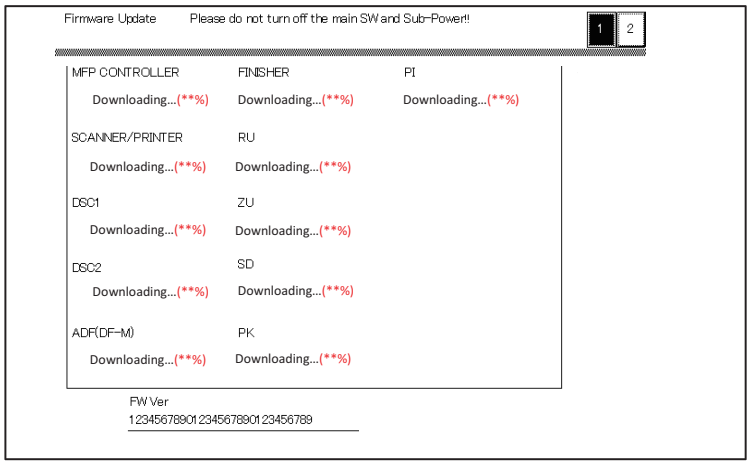
3. Turn the main power switch ON while pressing the Stop key.
   NOTE
   - **When [Administrator Settings] -> [Security Settings] -> [USB Connection Permission setting] -> [External Memory (Service)] -> [FW Update] is set to "Restrict", a message "It is limited by the administrator." will appear, and update of the firmware cannot be executed.**
   - **When [Administrator Settings] -> [Security Settings] -> [FW Update (USB) Perm. Sett.] is set to "Password Priority", it requires to input a password after confirming with the administrator.**
4. Firmware Update selection screen is displayed.
   NOTE
   - **Unless one of the keys on the control panel is pressed, firmware is automatically updated after 30 seconds when the main power switch is turned on.**
   - **Selectable items displayed change depending on equipped options, etc.**



5. Select the firmware data to be updated in the Firmware Update selection screen. If multiple pages is displayed in the selection screen, check all of the pages.
   NOTE
   - **When a plurality of firmware is stored in a USB memory, touch [FW Data Select] to select firmware. In the data selection screen, * is added to the firmware data name in "FW00**" folder contained in the USB memory.**
6. Touch [Language Select].
7. On the Language Select screen, select a language to be displayed on the LCD area of the control panel, then touch [Fix].
   NOTE
   - **The language selected on this screen is displayed on the "Language Selection" screen of Utility.**
   - **Up to 9 languages are selectable. However, Japanese and English are essential options.**



8. Touch [OK] to go back to the firmware update selection screen.
9. Press the [START]. (At this time, the Start key starts blinking red.)
   NOTE
   - **The progress ratio of each board is displayed in writing the program.**



10. Check that the control panel shows the message indicating that the data has been rewritten correctly ([Downloading Completed]). (The Start key lights blue.)
    NOTE
    - **Check all pages, and make sure that no item is under firmware updating (Downloading...).**
11. Turn OFF the main power switch.
12. Remove the USB memory.
13. Turn ON the main power switch.
14. Call the Service Mode to the screen.
15. Select the [Firmware Version].
16. Make sure if the version of firmware is updated.

3.3 Action when data transfer fails

- If “NG” appears on the control panel, indicating that rewriting has been unsuccessful (in which case the Start key lights up red), take the following steps.
  1. Perform the data rewriting procedure again.
  2. If the procedure is abnormally terminated, change the USB memory for a new one and try another rewriting sequence.
  3. If the procedure is still abnormally terminated, change the board that has caused “NG” and carry out data rewriting procedure.

F/W to be updated	Appropriate board	Remark
MFP CONTROLLER	eMMC board (eMMC)	-
SCANNER/PRINTER	MFP board (MFPB)	-
DSC1	DSC board/1 (DSCB/1)	Only when SC-508 is mounted
DSC2	DSC board/2 (DSCB/2)	Only when SC-508 is mounted
ADF (DF-M)	DF control board (DFCB)	Only when the DF is mounted
FINISHER	FS control board (FSCB)	Only when FS-533, FS-534/534SD, FS-536/536SD, or FS-537/FS-537SD is mounted
SD	-	Only when FS-534SD, FS-536SD, or FS-537SD is mounted
PK	Punch control board (PKCB)	Only when PC-523 is mounted
PI	PI drive board (PIDB)	Only when PI-507 is mounted
FAX BOARD CONTROLLER1	Fax board/1 (FAX/1)	Only when FK-514 is mounted
FAX BOARD CONTROLLER2	Fax board/2 (FAX/2)	Only when FK-514 is mounted
FAX BOARD CONTROLLER3	Fax board/3 (FAX/3)	Only when FK-515 is mounted
FAX BOARD CONTROLLER4	Fax board/4 (FAX/4)	Only when FK-515 is mounted

4. Internet ISW

4.1 Outline

- The "Internet ISW" is a system used by the main unit to retrieve firmware from a program server on the Internet and update the firmware.
- This executes when the command is received from the operation panel or CS Remote Care, or at a previously specified timing.

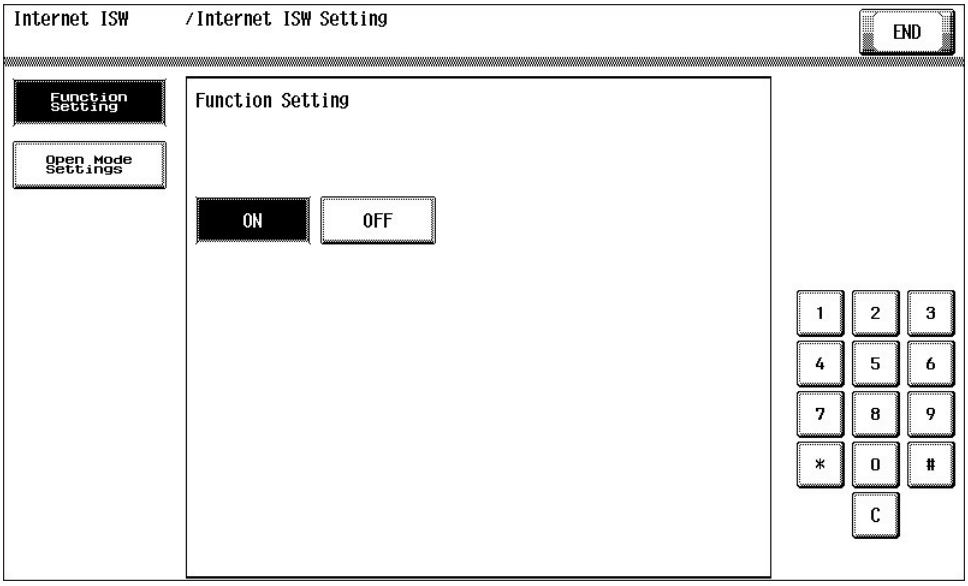
4.2 Service environment

- The following conditions are necessary for using the Internet ISW function.
  - The main body is connected to such a network environment that the firmware can be downloaded on the internet using the ftp or http protocol.
- The “Internet ISW” will not operate under the following conditions.
  - Main power switch is set to OFF.
  - Sub power auto power off mode enabled
  - When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.
  - Machine is operating, or there are jobs present (including appointed jobs).
  - Machine is in idle with suspended job.
  - Paper jam has occurred.
  - Image file is in the memory.
  - Model or the circuit board of the program does not match.

4.3 Preparations for firmware rewriting

4.3.1 Internet ISW Set

1. Call the Service Mode to the screen.
2. Touch [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].



3. Select [ON] in [Function Setting], and touch [END].

NOTE

- **Settings such as server setting, etc. will be available by selecting “ON” on this setting.**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, “ON” cannot be selected on this setting.**
- **To allow the administrator to rewrite firmware, press [Open Mode Settings] and select [Set].**

4.3.2 Protocol setting

- It performs the setting concerning the protocol (http or ftp) for connecting to the Internet ISW.

(1) Connecting by http

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Data input setting
   - Touch [HTTP Setting], and select [ON].
3. Connection Time-Out
   - Select [Connection Time-Out], and set the time for the connection time out between 30 and 300 seconds.

NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting]. The settings of the proxy used in Internet ISW communications is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(2) Connecting by ftp

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Data input setting
   - Touch [FTP Setting], and select [ON].
3. Connection Setting
   - Perform the setting for accessing FTP server.

1. Select [Port Number], and set the port number for FTP server from 1 through 65535.
2. Select [Connection Time Out], and set the time for the connection time out from 1 through 60.
3. When connecting in PASV mode, select [PASV Mode], and select [ON].

NOTE

• PASV Mode:

This mode is for transferring the file with FTP under the condition where communication is restricted such as inside the firewall. Since with PASV mode, the client with restriction sets the port number, data transmission port can be secured to enable the file transmission.

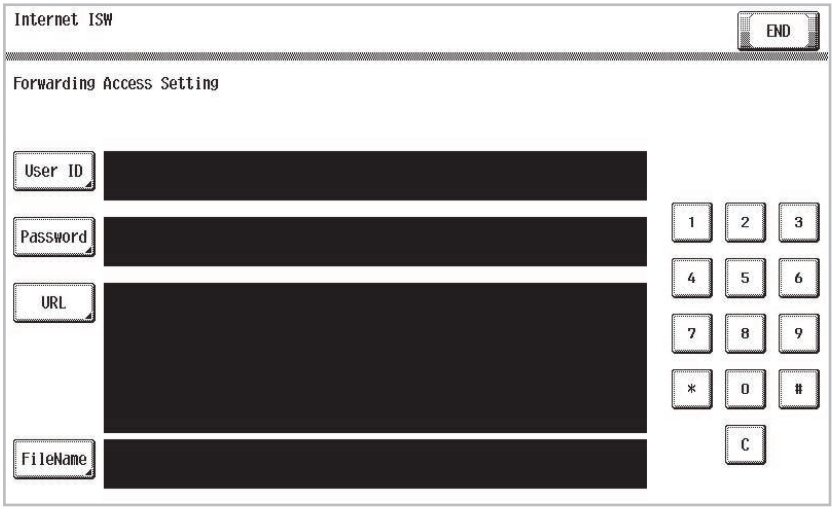
NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting]. The settings of the proxy used in Internet ISW communications is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [FTP Server Settings].**

4.3.3 Forwarding Access Setting

- To make the access setting for the program server which stores the firmware data.

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Touch [Forwarding Access Setting].



3. Select [User ID], and enter the user ID which is necessary for connecting to the program server, and touch [END].
4. Select [Password], and enter the password which is necessary for connecting to the program server, and touch [END].
5. Select [URL], and enter the program server address and the directory which stores the firmware by URL method, and touch [END].

   NOTE

   - **Enter the URL which matches to the protocol to be used.**
     For details of the URL, refer to J Table : URL.
6. Select [File Name], and enter the file name of the firmware data to be downloaded, and touch [END].
7. Touch [OK] to finish setting.

Table : URL

When connecting to http	**http:///(host name or IP address)/directory name or https:///(host name or IP address)/directory name**
When connecting to ftp	**ftp:///(host name or IP address)/directory name**

4.3.4 Update Start Time Settings

- Configure settings on the timing to update firmware.

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Press [Update Time Settings].
3. Select either [Do] or [Cancel].
4. If [Do] is selected, enter the time to update firmware on the ten-key.
5. Touch [OK].

4.4 Making the firmware data

4.4.1 Outline

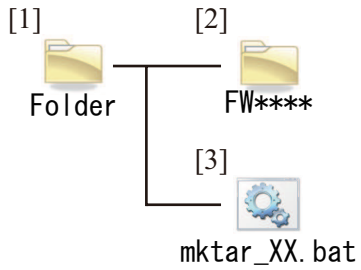
- It is necessary to convert the firmware data and save it in the target directory of the Internet ISW server for upgrading the firmware via Internet ISW.

4.4.2 Procedure

1. Uncompress the firmware file.
2. Drag and drop the folder "FW****" [2] containing the firmware in the uncompressed folder [1] onto "mktar_XX.bat" [3] in the same folder.

   NOTE

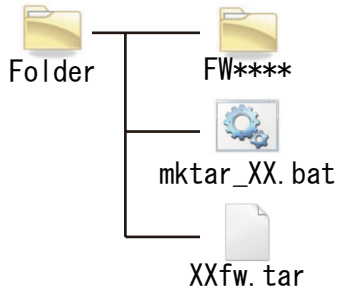
   - **For the folder name [2] and file name [3], refer to Table : Folder name, File name.**



3. Windows command prompt runs and file generation starts.
4. The command prompt closes automatically when the processing completes.
5. "XXfw.tar" file is created in the same directory.

NOTE

- **For file name, refer to Table : Folder name, File name.**



6. Copy the "XXfw.tar" file to the predetermined directory of the Internet ISW program server.

Table : Folder name, File name

Product name	Firmware data folder name	File name (.bat)	File name (.tar)
bizhub C368/C308/C258	FW0002	mktar_A7PU.bat	A7PUfw.tar
bizhub C658/C558/C458	FW0005	mktar_A79J.bat	A79Jfw.tar

4.5 Firmware rewriting from the control panel

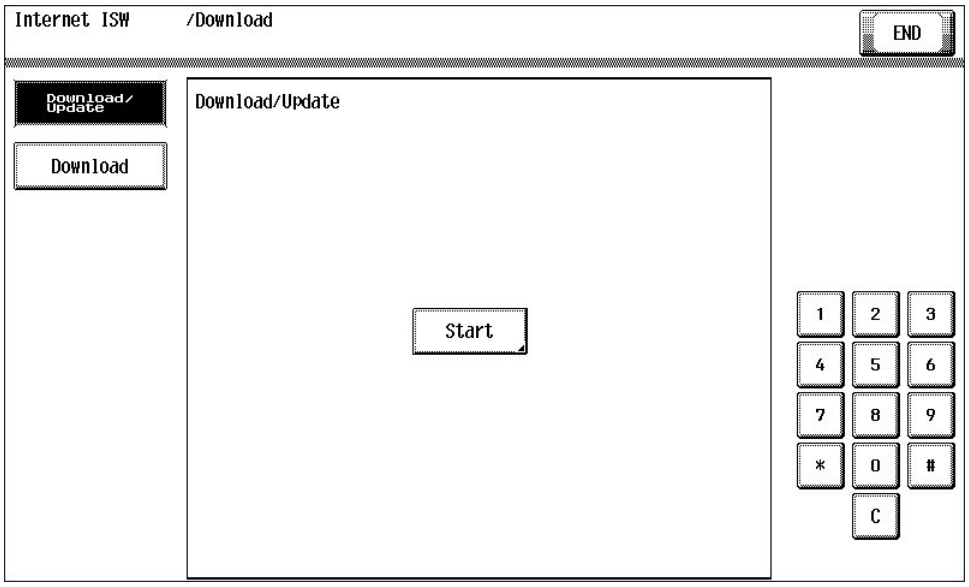
4.5.1 Firmware rewriting from the control panel

NOTE

- **When performing the Internet ISW, ask the administrator for permission beforehand.**
- **DO NOT turn OFF the main power switch while downloading.**
- **When IP address of MFP is assigned by DHCP, the firmware rewriting will be failed by using [Download/Update] button. Use [Download] button in such case.**
- **The Static IP address of MFP is necessary to execute the firmware rewriting by CS Remote Care or PageScope Enterprise Suite remotely.**
- **Updates cannot be performed via the [Download/Update] button when connected over Wi-Fi. Use the [Download] button in such cases.**

(1) Conducting commands from the control panel

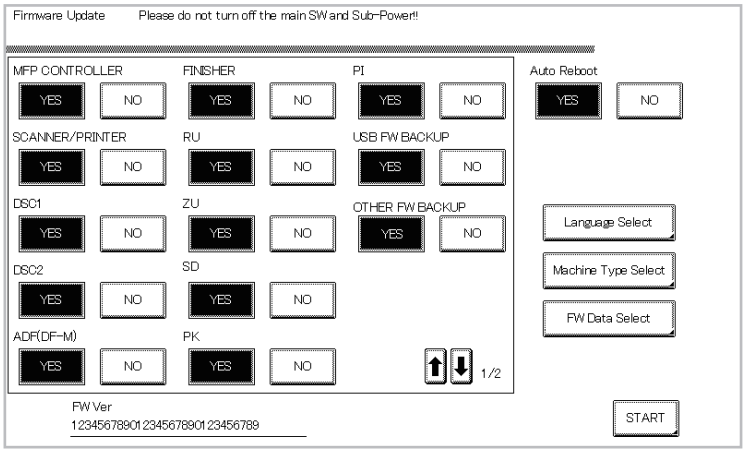
1. Touch [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Download].
2. To download and update firmware data, select [Download/Update]. To only download firmware data and update it later, select [Download].
3. Touch [Start].



4. Main body accesses the server and starts downloading the firmware data.
5. To download and update firmware data, select the types of firmware data to be written and replaced with a newer version in the Firmware Update screen and press [START].

NOTE

- **Unless one of the keys on the control panel is pressed, firmware is updated after 30 seconds when the unit has restarted.**
- **The display item varies by the configuration of optional parts installed on this machine.**
- **If multiple pages is displayed in the selection screen, check all of the pages.**



(2) During firmware updating

1. After pressing [Start], the main unit connects to the server and starts the download.
2. The message to indicate the status will be displayed on the screen while connecting or transferring data.

(3) Completed or failed

(a) Firmware updated normally

1. When the Firmware is normally updated, restart the main body in auto or manual mode to display the outcome, and touch [OK] to return to the main screen.

(b) Failing to update the firmware due to the network trouble

1. When updating failed to complete due to the trouble on connecting to the network, an error code and the message will be displayed.
2. Restart the main body in auto or manual mode, and touch [OK]. It can be used with the firmware version before conducting updating.
3. Check the settings for the network by error codes, and try updating again.

(c) Failure to update firmware after starting the update process

1. Once firmware updating has started, the ROM in the main body will be deleted. When it failed right after updating has started, restart the main body, and shift to the standby screen to retry downloading.
2. When updating on the control panel, touch [settings] on the standby screen, and check the Network settings again. Touch [Download], and restart the Internet ISW.

NOTE

- **Return to the standby screen without fail after turning the main power switch OFF/ON if the firmware is not updated.**
- **Firmware can be updated with the USB memory.**

4.6 Firmware rewriting from the CS Remote Care

- For detailed error information relating to CS Remote Care, refer to “CS Remote Care (Outline)”

- For the firmware update procedure using CS Remote Care, refer to CS Remote Care Center Manual.

5. Auto Update setting

5.1 Firmware rewriting by the Auto Update function

- The main body access the program server periodically through the network to obtain a new firmware, then rewrites it automatically.

6. Distribution Server Function (Relay server)

6.1 Firmware rewriting by the Relay server function

- “Relay Server” is the function, which shares the firmware files (relay data) obtained from the network with the other MFP, and works as the program server of the firmware “Auto Update” function.

NOTE

- **This function is disabled when the Marketing Area of the service mode is set to US or Others5.**

7. How to install the i-Option data

7.1 Available function for i-Option

i-Option	Functions	Data location	How to recover when replacing or formatting HDD
LK-102 v3	PDF processing	In the Standard firmware	[Service Mode] -> [System 2] -> [Install Data]
LK-104 v3	Voice guidance	In the Standard firmware	
LK-105 v4	Searchable PDF	In the Standard firmware	
LK-106	Barcode font	In the Standard firmware	n/a
LK-107	Unicode font	In the Standard firmware	LK-107/LK-108 font data installation procedure
LK-108	OCR font	In the Standard firmware	
LK-110 v2	High functional Image Processing	In the Standard firmware	[Service Mode] -> [System 2] -> [Install Data]
LK-111	Enhancing external linkage (supported by ThinPrint)	In the Standard firmware	n/a
LK-114	Ubiquitous Printing	In the Standard firmware	
LK-115 v2	TPM (Trusted Platform Module)	In the Standard firmware	

7.2 LK-107/LK-108 font data installation procedure

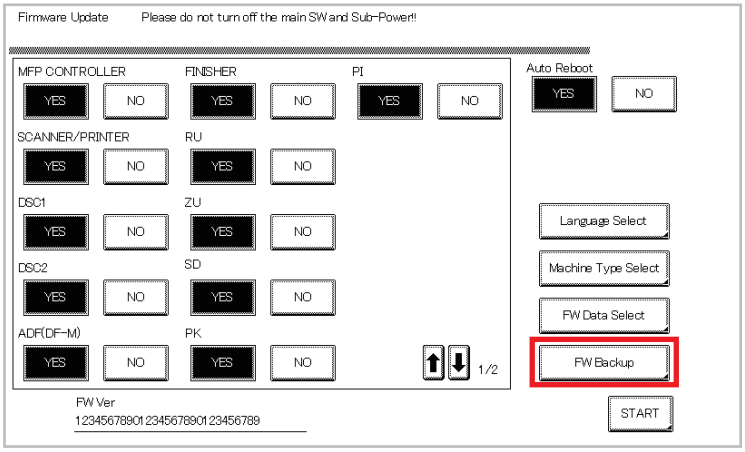
1. Prepare an USB memory.
2. Copy the font data to the root directory of the USB memory.
   - OCR font: download_OCRA-0.pdf
   - Unicode font: download_Andale_J-0.pdf, download_Andale_K-0.pdf, download_Andale_S-0.pdf, download_Andale_T-0.pdf
3. Turn ON the main power switch, and connect the USB memory to the USB port on the side of the control panel.
4. The message “Print a document from External Memory” will be displayed on the control panel, and select it.
5. The font data in the USB memory will be displayed, and select these data to print out.
6. The message “Document Printing Failed” will be displayed, and touch [OK].
7. Print out a PCL font list, and confirm that the font data are registered as following names.
   - LK-107: Andale Mono WT J, Andale Mono WT K, Andale Mono WT S, Andale Mono WT T
   - LK-108: OCR-A

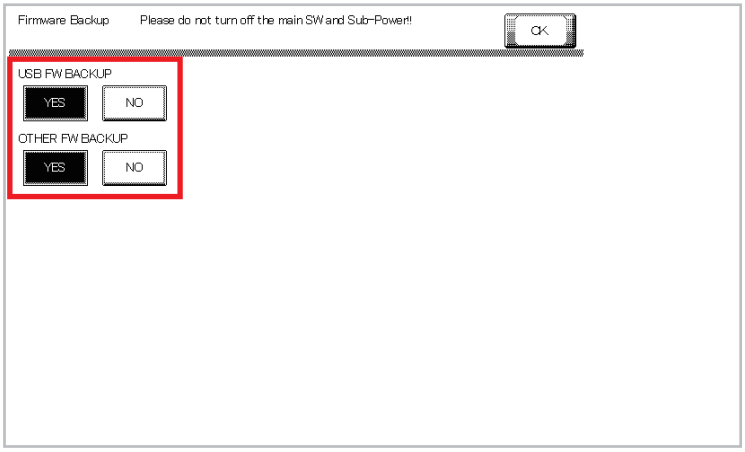
8. Creating back up files when updating firmware

- Enabling backup makes the firmware that is being updated possible to be backed up on the HDD while performing firmware update.
- This enables you to restore the backed up firmware (rollback) if an error occurs when updating the firmware.
- If backup data already exists in the HDD, the old backup data is deleted and new firmware is backed up.
- To roll back the firmware, select [Service Mode] -> [Machine Update Settings] -> [Firmware Rollback].

8.1 Procedure

1. The firmware update screen is displayed when updating the firmware.
2. Select [FW Backup] -> [USB FW BACKUP] and [OTHER FW BACKUP] in the firmware update selection screen.
   - [USB FW BACKUP]: Select to execute backup when updating the firmware on the USB flash memory.
   - [OTHER FW BACKUP]: Select to execute backup when updating the firmware by non-USB Internet ISW or automatic update feature.





3. Update the firmware.
   NOTE
   - **The update process takes a few more minutes when creating a backup than when not creating a backup.**

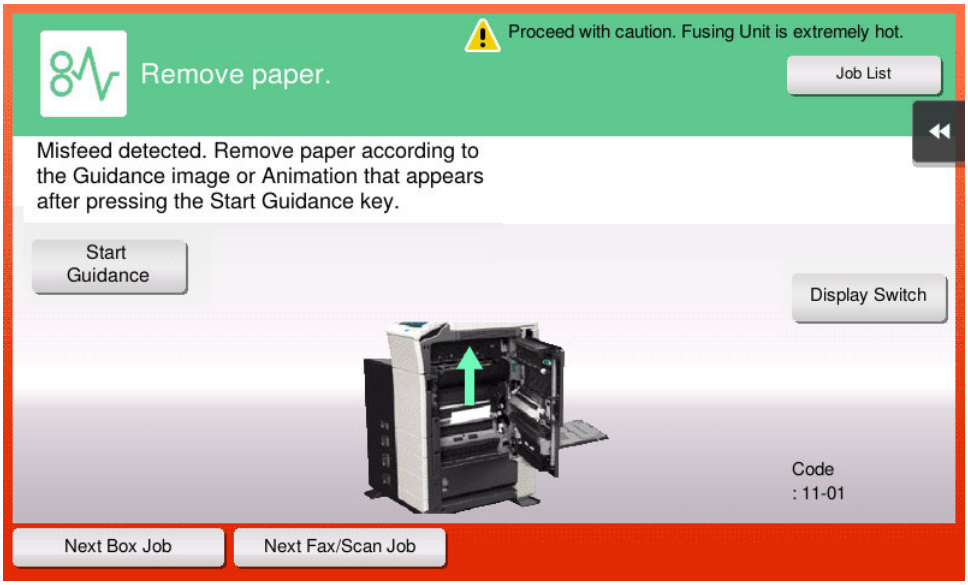
K TROUBLESHOOTING

1. JAM CODE

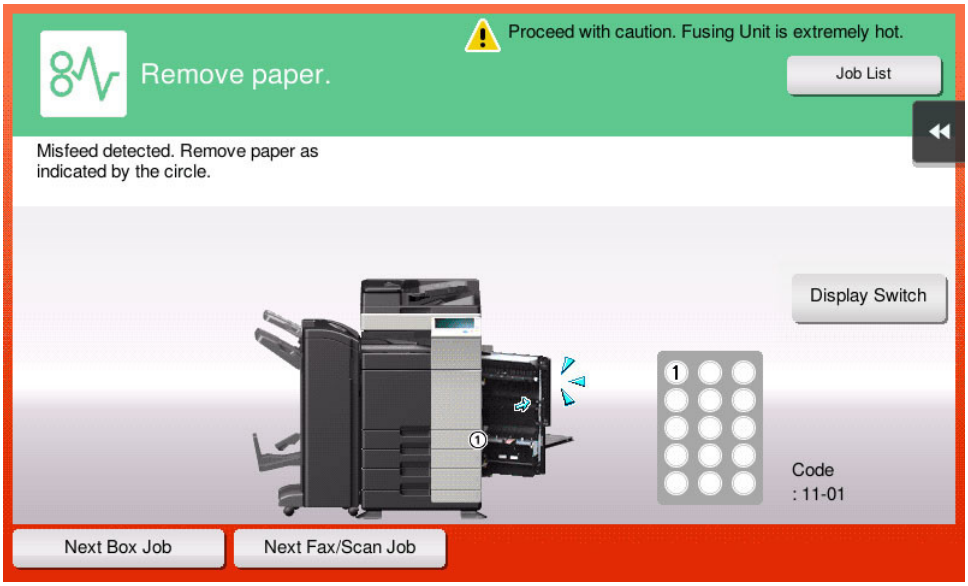
1.1 JAM display

1.1.1 Display procedure

- When the paper jam occurred, the message, the jam clear procedure, the position jam occurred (number lights up), position of the remaining paper (number lights up), and the JAM code are displayed.
- Touch [Display Switch] to switch the screen showing the jam clear procedure or the jam occurring position.
  Screen showing jam clear procedure

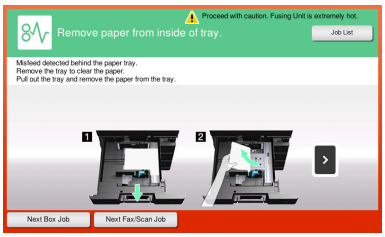


Screen showing the jam occurring position



NOTE

- **JAM code is displayed on the jam warning screen only when [Service Mode] -> [System 2] -> [JAM Code Display Setting] is set to "Display."**
- **To change the initial display when jam occurred to the screen showing the jam occurring position, set [Utility] -> [User Settings] -> [Custom Display Settings] -> [Paper jam release procedure display settings] to "OFF." When [Paper jam release procedure display settings] is set to "OFF," the "screen showing jam clear procedure" cannot be displayed.**
- **When a tray life-up failure (trouble code) occurred, for the trouble that can be cleared by removing the tray, the following screen is displayed showing users how to remove jammed paper and how to load paper properly. Therefore, for remaining paper jam, the screen will disappear.**
  Warning of improper tray setting



- **A trouble code (C-02XX) will be displayed if the tray lift-up failure cannot be cleared even when action has been taken by following the Guidance.**

1.1.2 Misfeed display resetting procedure

1. Open the corresponding door, clear the sheet of paper misfed, and close the door.
2. Touch “OK” displayed on the touch panel.

1.2 List of the JAM code (bizhub C368/C308/C258)

JAM code	JAM type
10-01	Misfeed at manual bypass feed section
10-02	
10-40	
11-01	Misfeed at tray 1 feed section
11-02	
11-40	
12-01	Misfeed at tray 2 feed section
12-40	
13-01	Misfeed at tray 3 feed section
13-40	
14-01	Misfeed at tray 4 feed section
14-40	
15-01	Misfeed at external LCT paper feed section
15-40	
16-01	Misfeed at transfer LCT feed/vertical transport section
16-40	
17-20	Misfeed at external LCT transport section
20-01	Misfeed at vertical transport section
20-02	
20-21	
20-22	
30-03	Misfeed at 2nd transfer section
32-01	Misfeed at fusing/paper exit section
32-05	
66-01	Misfeed at DF turnover section <When DF-629 is installed>
66-11	
66-21	
66-02	Misfeed at DF paper feed section <When DF-629 or DF-704 is installed>
66-12	
66-03	Misfeed at DF transport section <When DF-629 or DF-704 is installed>
66-13	
66-23	
66-33	
66-04	Misfeed at DF paper exit section <When DF-629 or DF-704 is installed>
66-14	
66-24	Misfeed at DF paper exit section <When DF-629 is installed>
66-34	
66-05	Misfeed at DF image reading section <When DF-629 or DF-704 is installed>
66-06	
66-15	Misfeed at DF image reading section <When DF-629 is installed>
66-07	Misfeed at DF paper feed/transport/image reading/turnover/paper exit section <When DF-629 or DF-704 is installed>
72-14	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-15	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-16	Misfeed at FS transport section <When FS-534, FS-534SD, FS-533 or FS-533+PK-519 is installed>
72-17	Misfeed at FS transport section <When FS-534, FS-534SD or FS-533 is installed>
72-18	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-19	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-21	Misfeed at FS transport section <When FS-534, FS-534SD or FS-533 is installed>
72-22	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-23	Misfeed at FS transport section <When FS-534 or FS-534SD is installed>
72-25	Misfeed at SD paper exit section <When FS-534SD is installed>
72-26	Misfeed at SD paper exit section <When FS-534SD is installed>
72-43	Misfeed at PK JAM <When FS-534+PK-520, FS-534SD+PK-520 or FS-533+PK-519 is installed>
72-70	Misfeed at PK JAM <When FS-533+PK-519 is installed>
72-81	Misfeed at FS staple section <When FS-533 is installed>

JAM code	JAM type
72-85	Misfeed at SD transport section <When FS-534SD is installed>
72-86	Misfeed at SD transport section <When FS-534SD is installed>
72-87	Misfeed at SD transport section <When FS-534SD is installed>
75-42	Misfeed at RU section <When FS-534 or FS-534SD is installed>
75-43	Misfeed at RU section <When FS-534 or FS-534SD is installed>
92-01	Misfeed at duplex pre-registration section
92-02	
92-40	
93-10	Misfeed at duplex transport section
99-01	Controller JAM (paper size error)
99-02	Controller JAM (controller forced stop command)
99-03	Controller JAM (image processing)
99-04	Controller JAM (finisher pre-drive is not completed)
99-05	Controller JAM (main body not starting a job)
99-06	Controller JAM (finisher internal processing error)
99-07	Controller JAM (main body not completing a job)
99-08	Controller JAM (finisher not starting a job)
99-09	Controller JAM (finisher not completing a job)

1.3 List of the JAM code (bizhub C658/C558/C458)

JAM code	JAM type
10-01	Misfeed at manual bypass feed section
10-02	
10-04	
10-40	
11-01	Misfeed at tray 1 feed section
11-02	
11-04	
11-40	
11-44	
12-01	Misfeed at tray 2 feed section
12-40	
13-01	Misfeed at tray 3 feed section
13-40	
14-01	Misfeed at tray 4 feed section
14-40	
15-01	Misfeed at external LCT paper feed section
15-40	
16-01	Misfeed at transfer LCT feed/vertical transport section
16-40	
20-01	Misfeed at vertical transport section
20-02	
20-04	
20-21	
20-22	
30-03	Misfeed at 2nd transfer section
32-01	Misfeed at fusing/paper exit section
32-05	
32-30	
66-02	Misfeed at DF paper feed section
66-12	
66-03	Misfeed at DF transport section
66-13	
66-23	
66-33	
66-04	Misfeed at DF paper exit section

JAM code	JAM type
66-14	
66-05	Misfeed at DF image reading section
66-06	
66-08	Double feed detection jam
66-54	DF controller jam
72-11	Misfeed at FS transport section (When FS-537 or FS-537SD is installed)
72-14	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-15	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-16	Misfeed at FS transport section (When FS-533, FS-533+PK-519, FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-17	Misfeed at FS transport section (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-18	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-19	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-21	Misfeed at FS transport section (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-22	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-23	Misfeed at FS transport section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-25	Misfeed at SD paper exit section (When FS-536SD or FS-537SD is installed)
72-26	Misfeed at SD paper exit section (When FS-536SD or FS-537SD is installed)
72-31	Misfeed at JS exit section (When FS-537+JS-602 or FS-537SD+JS-602 is installed)
72-34	Misfeed at JS exit section (When FS-537+JS-602 or FS-537SD+JS-602 is installed)
72-35	Misfeed at PI section (When FS-537+PI-507 or FS-537SD+PI-507 is installed)
72-40	Misfeed at ZU section (When FS-537+ZU-609 or FS-537SD+ZU-609 is installed)
72-41	Misfeed at ZU section (When FS-537+ZU-609 or FS-537SD+ZU-609 is installed)
72-43	Misfeed at PK JAM (When FS-533+PK-519, FS-536+PK-520, FS-536SD+PK-520, FS-537+PK-523, or FS-537SD +PK-523 is installed)
72-49	Misfeed at PI section (When FS-537+PI-507 or FS-537SD+PI-507 is installed)
72-50	Misfeed at PI section (When FS-537+PI-507 or FS-537SD+PI-507 is installed)
72-51	Misfeed at PI section (When FS-537+PI-507 or FS-537SD+PI-507 is installed)
72-70	Misfeed at PK JAM <When FS-533+PK-519 is installed>
72-81	Misfeed at FS staple section (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)
72-84	Misfeed at SD staple section (When FS-536SD or FS-537SD is installed)
72-85	Misfeed at SD transport section (When FS-536SD or FS-537SD is installed)
72-86	Misfeed at SD transport section (When FS-536SD or FS-537SD is installed)
72-87	Misfeed at SD transport section (When FS-536SD or FS-537SD is installed)
75-42	Misfeed at RU section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
75-43	Misfeed at RU section (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
92-01	Misfeed at duplex pre-registration section
92-02	
92-04	
92-40	
93-10	Misfeed at duplex transport section
99-01	Controller JAM (paper size error)
99-02	Controller JAM (controller forced stop command)
99-03	Controller JAM (image processing)
99-04	Controller JAM (a job reservation in the main body is not released)
99-05	Controller JAM (main body not starting a job)
99-06	Controller JAM (print control on the main body is not completed)
99-07	Controller JAM (main body not completing a job)
99-08	Controller JAM (finisher not starting a job)
99-09	Controller JAM (finisher not completing a job)

1.4 JAM that do not display the JAM code

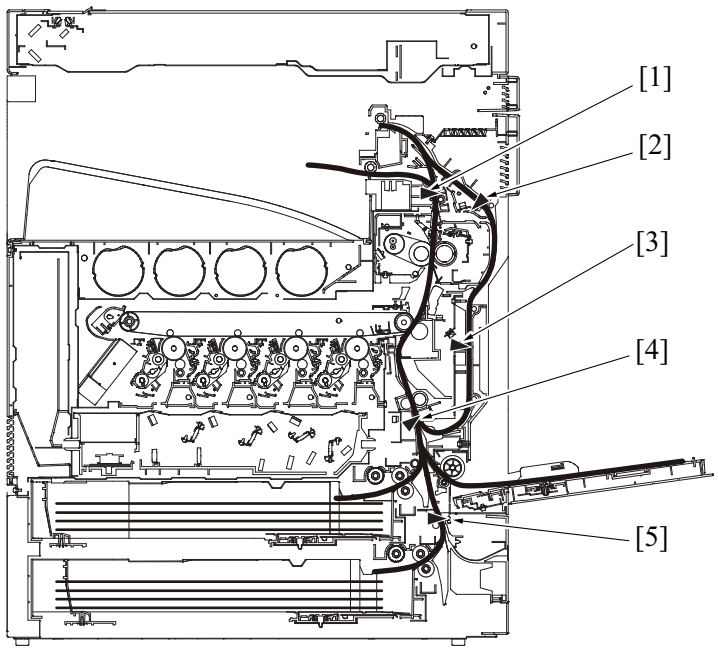
JAM type	JAM detection timing	Ref. page
Misfeed at tray 2 feed section	Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS19) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.3 12-01, 12-40 K.1.9.3 12-01, 12-40

JAM type	JAM detection timing	Ref. page
	Paper jam of a sheet of paper left at the tray 2 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at tray 3 feed section	Paper jam of a sheet of paper left at the tray 3 feed section results, if the tray 3 vertical transport sensor (PS113) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.4 13-01, 13-40 K.1.9.4 13-01, 13-40
	Paper jam of a sheet of paper left at the tray 3 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at tray 4 feed section	Paper jam of a sheet of paper left at the tray 4 feed section results, if the tray 4 vertical transport sensor (PS123) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.5 14-01, 14-40 K.1.9.5 14-01, 14-40
	Paper jam of a sheet of paper left at the tray 4 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at external LCT paper feed section	Paper jam of a sheet of paper left at the external LCT feed section results, if the LU paper feed sensor (PS3) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.6 15-01, 15-40 K.1.9.6 15-01, 15-40
	Paper jam of a sheet of paper left at the external LCT feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at transfer LCT feed/vertical transport section	Paper jam of a sheet of paper left at the transfer LCT transport section results, if the vertical transport sensor (PS133) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.7 16-01, 16-40 K.1.9.7 16-01, 16-40
	Paper jam of a sheet of paper left at the transfer LCT transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at external LCT transport section	Paper jam of a sheet of paper left at the external LCT transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.8 17-20
Misfeed at vertical transport section	Paper jam of a sheet of paper left at the vertical transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.10.2 20-21 K.1.10.3 20-22 K.1.11.2 20-21 K.1.11.3 20-22
Misfeed at 2nd transfer section	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS1) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.12.1 30-03 K.1.13.1 30-03
	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor 2 (PS72) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset. (bizhub C658/C558 only)	
	Paper jam of a sheet of paper left at the 2nd transfer section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at exit section	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS3) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.12.2 32-01, 32-05 K.1.13.2 32-01, 32-05, 32-30
	Paper jam of a sheet of paper left at the exit section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed at DF paper feed section (bizhub C658/C558/C458)	Paper jam of a sheet of paper left at the DF paper feed section results, if the after separate sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.15.1 66-02, 66-12
Misfeed at DF transport section (bizhub C658/C558/C458)	Paper jam of a sheet of paper left at the DF transfer section results, if the registration sensor (PS5) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.15.2 66-03, 66-13, 66-23, 66-33
Misfeed at DF paper exit section (bizhub C658/C558/C458)	Paper jam of a sheet of paper left at the DF exit section results, if the paper exit sensor (PS7) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.15.3 66-04, 66-14

JAM type	JAM detection timing	Ref. page
Misfeed at DF image reading section (bizhub C658/C558/C458)	Paper jam of a sheet of paper left at the DF image reading section results, if the before read sensor (PS6) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.15.4 66-05, 66-06
Misfeed at PK section residual paper jam (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	Paper jam of a sheet of paper left at the PK section results, when the main power switch is turned ON, and the paper is detected by the paper size detect board (PSDTB).	K.1.17.15 72-43
Misfeed at duplex pre-registration section	Paper jam of a sheet of paper left at the duplex pre-registration section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.19.1 92-01, 92-02, 92-04, 92-40 K.1.18.1 92-01, 92-02, 92-40
Misfeed at duplex transport section	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/1 (PS40) is turned ON (unblocked) or the ADU paper passage sensor/2 (PS41) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.18.2 93-10 K.1.19.2 93-10
	Paper jam of a sheet of paper left at the duplex transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	

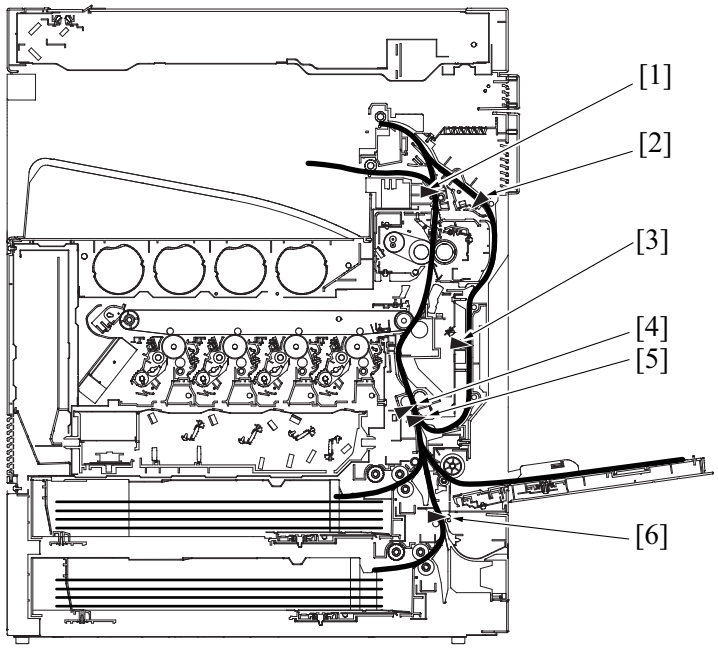
1.5 Sensor layout

1.5.1 bizhub C368/C308/C258



[1]	Paper exit sensor (PS3)	[2]	ADU paper passage sensor/1 (PS40)
[3]	ADU paper passage sensor/2 (PS41)	[4]	Registration sensor (PS1)
[5]	Tray 2 vertical transport sensor (PS19)	-	-

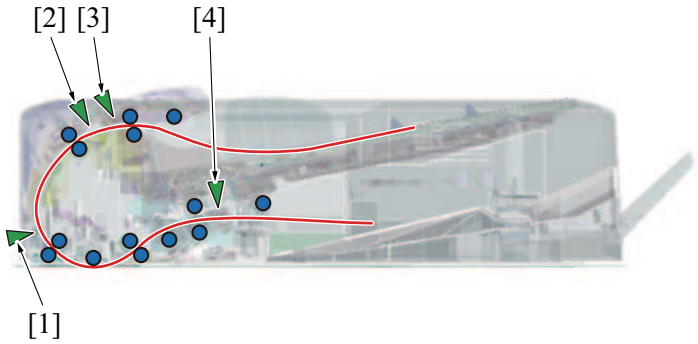
1.5.2 bizhub C658/C558/C458



[1]	Paper exit sensor (PS3)	[2]	ADU paper passage sensor1 (PS40)
[3]	ADU paper passage sensor2 (PS41)	[4]	Registration sensor1 (PS1)
[5]	Registration sensor2 (PS72) *	[6]	Tray 2 vertical transport sensor (PS19)

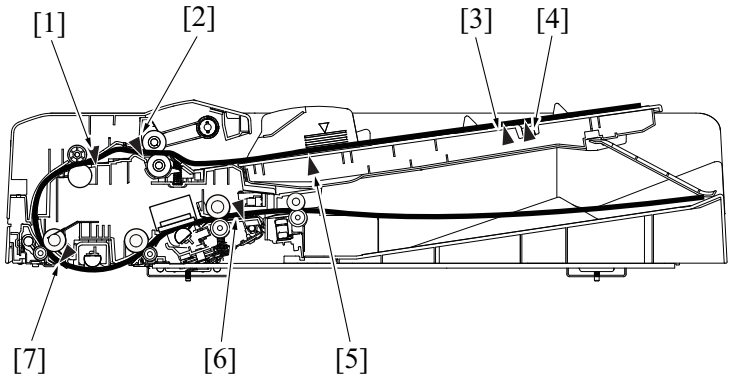
- *: bizhub C658/C558 only

1.5.3 Dual scan document feeder



[1]	Before read sensor (PS6)	[2]	Registration sensor (PS5)
[3]	After separate sensor (PS4)	[4]	Exit sensor (PS7)

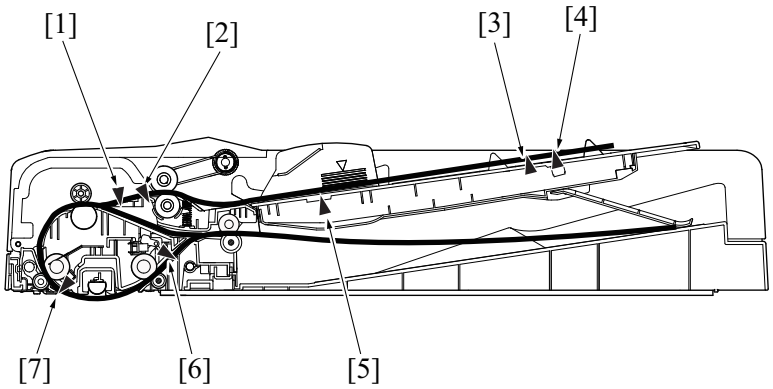
1.5.4 DF-704



[1]	Registration sensor (PS3)	[2]	After separate sensor (PS2)

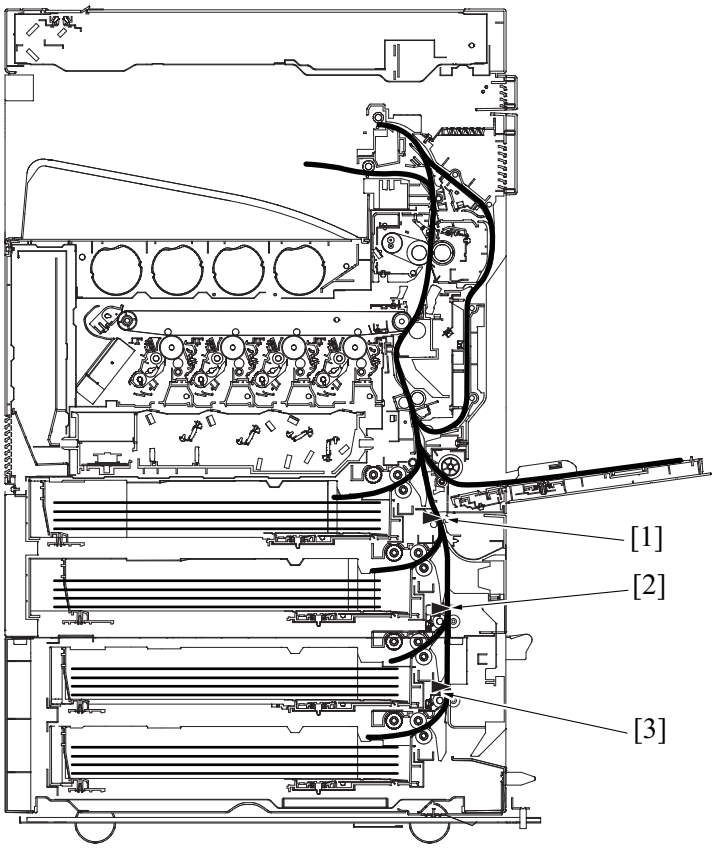
[3]	Document length sensor/1 (PS8)	[4]	Document length sensor/2 (PS9)
[5]	Document width size sensor (VR1)	[6]	Document exit sensor (PS5)
[7]	Document reading sensor (PS6)	-	-

1.5.5 DF-629



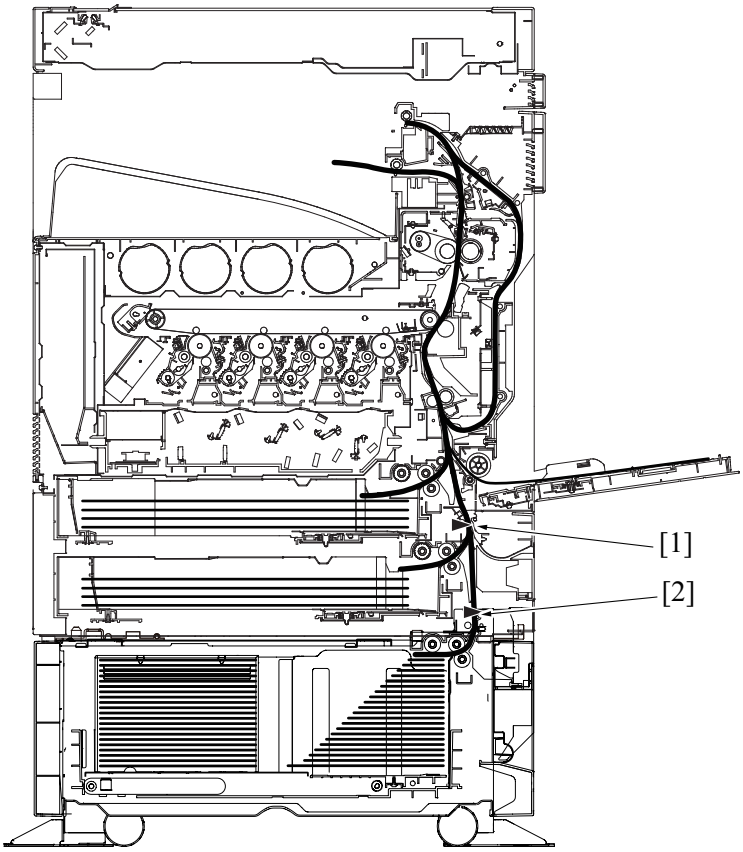
[1]	Document registration sensor (PS3)	[2]	After separate sensor (PS2)
[3]	Document length size sensor/1 (PS6)	[4]	Document length size sensor/2 (PS7)
[5]	Document width size sensor (VR1)	[6]	Document exit sensor (PS5)
[7]	Document reading sensor (PS4)	-	-

1.5.6 PC-110/PC-115/PC-210/PC-215



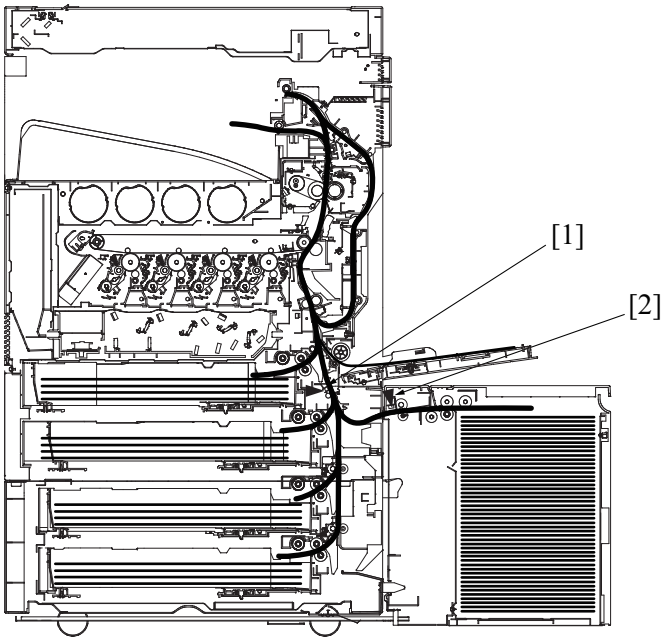
[1]	Tray 2 vertical transport sensor (PS19): Main body	[2]	Tray 3 vertical transport sensor (PS113)
[3]	Tray 4 vertical transport sensor (PS123)	-	-

1.5.7 PC-410/PC-415



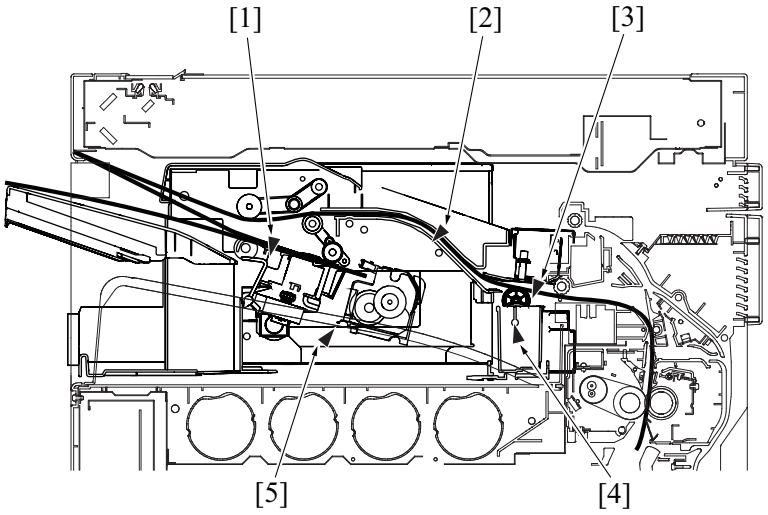
[1]	Tray 2 vertical transport sensor (PS19): Main body	[2]	Vertical transport sensor (PS133)

1.5.8 LU-207/LU-302



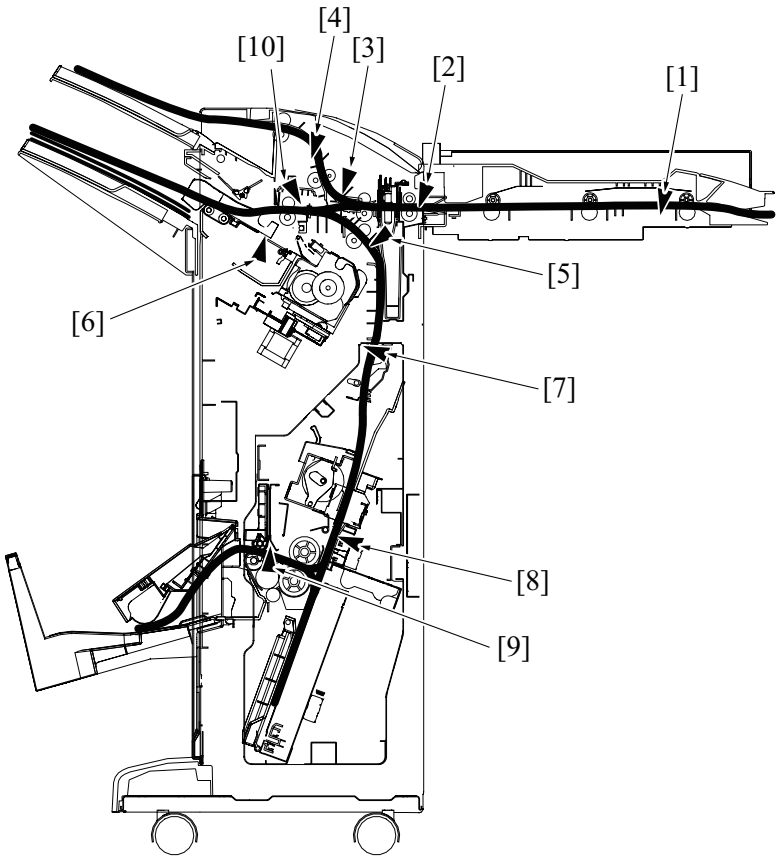
[1]	Tray 2 vertical transport sensor (PS19): Main body	[2]	Paper feed sensor (PS3)

1.5.9 FS-533/PK-519



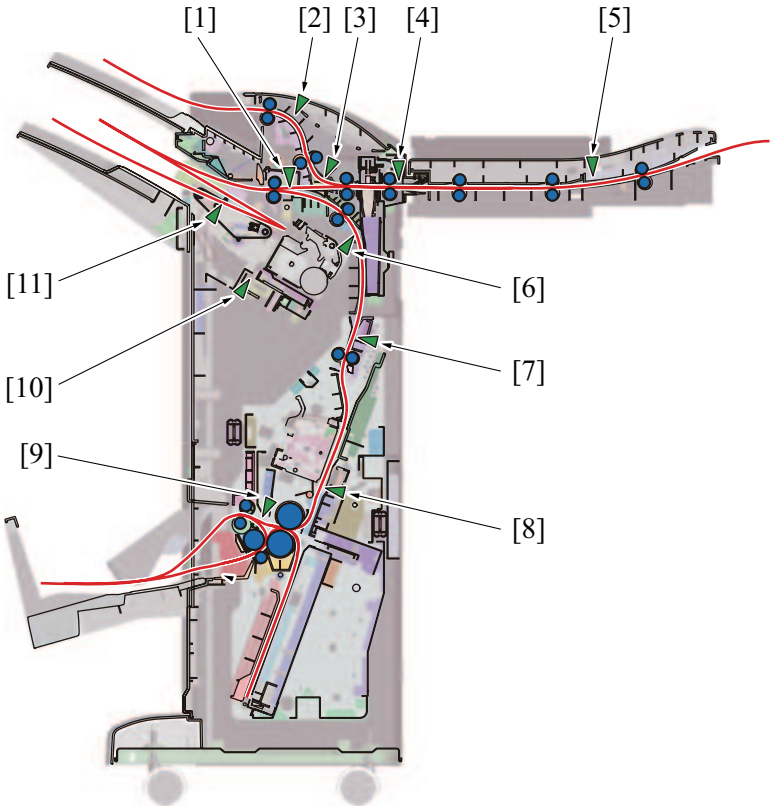
[1]	Paper surface detect sensor/1 (PS102)	[2]	Paper feed sensor (PS101)
[3]	Paper feed sensor (PS201)	[4]	Punch motor sensor (PS202)
[5]	Stapler home sensor (PS110)	-	-

1.5.10 FS-534/FS-534SD/PK-520



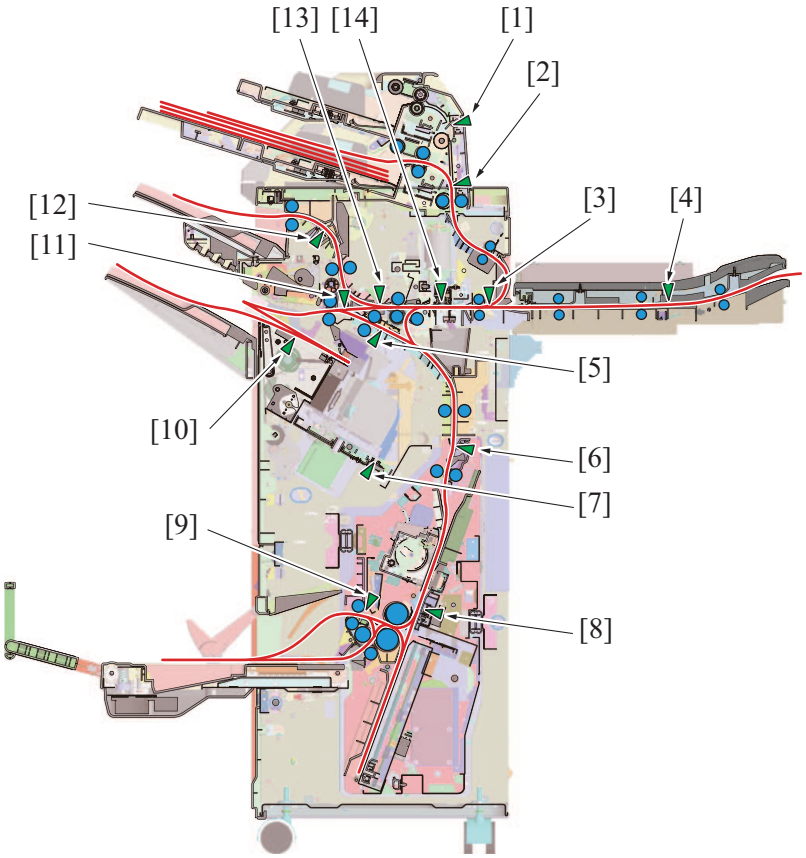
[1]	RU entrance sensor (PS2)	[2]	FNS entrance sensor (PS4)
[3]	Punch position sensor (PS2)	[4]	Sub tray exit sensor (PS8)
[5]	Saddle exit sensor (PS5)	[6]	Staple stacker paper detection sensor (PS31)
[7]	SD entrance sensor (PS1)	[8]	Center staple/fold stacker paper detect sensor (PS3)
[9]	Fold exit sensor (PS12)	[10]	Main tray exit sensor (PS16)

1.5.11 FS-536/FS-536SD/PK-520



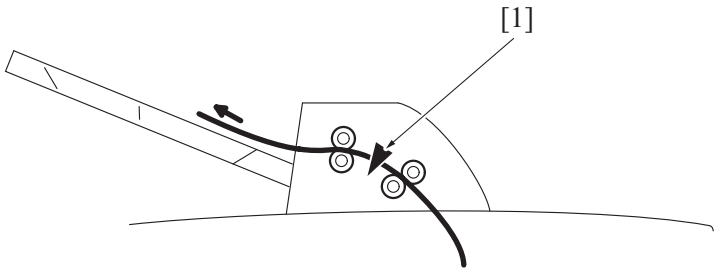
[1]	Main tray exit sensor (PS16)	[2]	Sub tray exit sensor (PS8)
[3]	Punch position sensor (PS2)	[4]	FNS entrance sensor (PS4)
[5]	RU transport sensor (PS60)	[6]	Saddle exit sensor (PS5)
[7]	SD entrance sensor (PS1)	[8]	Center staple/fold stacker paper detect sensor (PS3)
[9]	Fold exit sensor (PS12)	[10]	Stapler position sensor (center) (PS24)
[11]	Staple stacker paper detection sensor (PS31)	-	-

1.5.12 FS-537/FS-537SD/PK-523/PI-507/ZU-609



[1]	Paper entrance sensor /up (PS201)	[2]	Paper entrance sensor /lw (PS206)
[3]	FNS entrance sensor (PS34)	[4]	RU transport sensor (PS60)
[5]	SD discharge sensor (PS35)	[6]	SD entrance sensor (PS1)
[7]	Stapler position sensor (center) (PS20)	[8]	Center staple/fold stacker paper detect sensor (PS3)
[9]	Fold exit sensor (PS12)	[10]	Alignment plate paper detection sensor (PS32)
[11]	Main tray exit sensor (PS37)	[12]	Sub tray exit sensor (PS24)
[13]	FNS middle sensor (PS36)	[14]	PK punch home sensor/1 (PS301)

1.5.13 JS-602



[1]	Job tray paper exit sensor (PS402)	-	-

1.6 Initial check items

- When a paper misfeed occurs, first perform the following initial check items.

Check item	Action
Does paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper. Instruct user on proper paper storage.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path or replace the part on the paper path if necessary.
Are rolls or rollers dirty, deformed, or worn?	Clean the defective roll or roller. Replace the defective roll or roller.
Are the paper size and the detected paper size by the edge guide are matching?	Adjust the edge guide to match the paper size.
Are the actuators operating correctly?	Correct the defective actuator. Replace the defective actuator.

1.7 Jam when thin or thick paper is fed

1.7.1 Paper jam for thin paper

If paper jams occur while feeding thin paper (52 g/m^2 (13 13/16 lb)) from the tray 1 or the tray 2, adjust the paper pick-up pressure of the tray 1 or the tray 2 to apply the pick-up pressure for thin paper to the tray. However, if the pick-up pressure is changed to the one for thin paper, jam may occur especially when thick paper is used.
bizhub C368/C308/C258: I.11.2.2 Pick-up pressure adjustment of the tray 1/2
bizhub C658/C558/C458: I.12.2.2 Pick-up pressure adjustment of the tray 1/2

1.7.2 Paper jam for thick paper

If paper jams occur while feeding thick paper from the manual bypass, adjust the separator roller pressure of the manual bypass to apply the separator roller pressure for thick paper to the tray. However, if the separator roller pressure is changed to the one for thick paper, jam may occur especially when thin paper is used.
bizhub C368/C308/C258: I.11.2.3 Separator roller pressure adjustment of the bypass tray
bizhub C658/C558/C458: I.12.2.3 Separator roller pressure adjustment of the bypass tray

1.8 1#-## (bizhub C368/C308/C258)

1.8.1 10-01, 10-02, 10-40

(1) Contents

JAM type	Misfeed at manual bypass feed section	
JAM code	10-01, 10-02, 10-40	
JAM detection timing	10-01	The leading edge of the paper is not turned ON (unblocked) the registration sensor (PS1) even after the lapse of a given period of time after the manual bypass tray starts to feed paper.

	10-02	For paper fed from the manual bypass tray, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	10-40	For paper fed from the manual bypass tray, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
Misfeed processing location	Right door	
Relevant parts	• Transport motor (M1) • Registration clutch (CL4) • Bypass paper feed clutch (CL7) • Bypass pick-up solenoid (SD1) • Registration sensor (PS1) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	FRB CN8-3 (ON)	6-L
3	CL4 operation check	FRB CN8-7 (CL4_24V)	5-L
4	CL7 operation check	MFPB CN18E-8 (ON)	22-J
5	SD1 operation check	MFPB CN18E-10 (ON)	22-J
6	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
7	MFPB ICP2E, ICP4E conduction check	-	-
8	Replace FRB.	-	-
9	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.8.2 11-01, 11-02, 11-40

(1) Contents

JAM type	Misfeed at tray 1 feed section	
JAM code	11-01, 11-02, 11-40	
JAM detection timing	11-01	The leading edge of the paper is not turned ON (unblocked) the registration sensor (PS1) even after the lapse of a given period of time after the tray 1 starts to feed paper.
	11-02	For paper fed from the tray 1, due to a delay in paper arrival, loop forming in front of the registration roller is not complete before the rise timing of the transport motor (M1).
	11-40	For paper fed from the tray 1, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
Misfeed processing location	• Right door • Tray 1	
Relevant parts	• Transport motor (M1) • Tray 1 paper feed clutch (CL3) • Registration clutch (CL4) • Registration sensor (PS1) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	FRB CN8-3 (ON)	6-L
3	CL3 operation check	MFPB CN26E-8 (ON)	25-C
4	CL4 operation check	FRB CN8-7 (CL4_24V)	5-L
5	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
6	MFPB ICP2E, ICP4E conduction check	-	-
7	Replace FRB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.8.3 12-01, 12-40

(1) Contents

JAM type	Misfeed at tray 2 feed section	
JAM code	12-01, 12-40	
JAM detection timing	12-01	The leading edge of the paper does not turn ON the tray 2 vertical transport sensor (PS19) even after the lapse of a given period of time after the tray 2 starts to feed paper.
	12-40	For paper fed from the tray 2, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS19) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 2 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 2	
Relevant parts	• Transport motor (M1) • Tray 2 paper feed clutch (CL1) • Tray 2 vertical transport clutch (CL2) • Tray 2 vertical transport sensor (PS19) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS19 I/O check, sensor check	MFPB CN23E-2 (ON)	27-C
3	CL1 operation check	MFPB CN23E-14 (ON)	28-C
4	CL2 operation check	MFPB CN23E-16 (ON)	28-C
5	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
6	MFPB ICP2E conduction check	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.8.4 13-01, 13-40

(1) Contents

JAM type	Misfeed at tray 3 feed section	
JAM code	13-01, 13-40	
JAM detection timing	13-01	The leading edge of the paper is not turned ON the tray 3 vertical transport sensor (PS113) even after the lapse of a given period of time after the tray 3 starts to feed paper.
	13-40	For paper fed from the tray 3, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 3 feed section results, if the tray 3 vertical transport sensor (PS113) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 3 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 3	
Relevant parts	• Tray 3 paper feed motor (M111) • Tray 3 vertical transport motor (M112) • Tray 3 vertical transport sensor (PS113) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-110/PC-210 5-C
3	M111 operation check	PCCB CN5-1 to 8	PC-110/PC-210 4-C
4	M112 operation check	PCCB CN5-9 to 16	PC-110/PC-210 3 to 4-C
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.3 PC-110)
- Link to the wiring diagram (N.4.5 PC-210)

1.8.5 14-01, 14-40

(1) Contents

JAM type	Misfeed at tray 4 feed section	
JAM code	14-01, 14-40	
JAM detection timing	14-01	The leading edge of the paper is not turned ON the tray 4 vertical transport sensor (PS123) even after the lapse of a given period of time after the tray 4 starts to feed paper.
	14-40	For paper fed from the tray 4, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 4 feed section results, if the tray 4 vertical transport sensor (PS123) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 4 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 4	
Relevant parts	• Tray 4 paper feed motor (M121) • Tray 4 vertical transport motor (M122) • Tray 4 vertical transport sensor (PS123) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS123 I/O check, sensor check	PCCB CN18-5 (ON)	PC-210 7-K
3	M121 operation check	PCCB CN9-1 to 8	PC-210 6-K
4	M122 operation check	PCCB CN9-9 to 16	PC-210 6-K
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.5 PC-210)

1.8.6 15-01, 15-40

(1) Contents

JAM type	Misfeed at external LCT paper feed section	
JAM code	15-01, 15-40	
JAM detection timing	15-01	The leading edge of the paper is not turned ON the LU paper feed sensor (PS3) even after the lapse of a given period of time after the external LCT starts to feed paper.
	15-40	For paper fed from the external LCT, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the external LCT feed section results, if the LU paper feed sensor (PS3) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the external LCT feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Lower right door	
Relevant parts	• LU paper feed motor (M2) • LU paper feed sensor (PS3) • LU drive board (LUDB) • MFP board (MFPB) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	LUDB CN5-8 (ON)	LU-302 4-G
3	M2 operation check	LUDB CN4-5 to 8	LU-302 3-G
4	Replace LUDB.	-	-
5	MFPB ICP10E conduction check	-	-
6	Replace MFPB.	-	-
7	Replace PCCB. (PC-110/PC-210 / PC-410)	-	-

- Link to the wiring diagram (N.4.10 LU-302)

1.8.7 16-01, 16-40

(1) Contents

JAM type	Misfeed at transfer LCT feed/transport section	
JAM code	16-01, 16-40	
JAM detection timing	16-01	The leading edge of the paper is not turned ON the vertical transport sensor (PS133) even after the lapse of a given period of time after the transfer LCT starts to feed paper.
	16-40	For paper fed from the transfer LCT, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the transfer LCT transport section results, if the vertical transport sensor (PS133) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the transfer LCT transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Paper feed motor (M131) • Vertical transport motor (M132) • Vertical transport sensor (PS133) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS133 I/O check, sensor check	PCCB CN4-14 (ON)	PC-410 7-J
3	M131 operation check	PCCB CN5-1 to 8	PC-410 5-J
4	M132 operation check	PCCB CN5-9 to 16	PC-410 4-J
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.7 PC-410)

1.8.8 17-20

(1) Contents

JAM type	Misfeed at external LCT transport section	
JAM code	17-20	
JAM detection timing	17-20	The tray 2 vertical transport sensor (PS19) is not turn ON even after the set period of time has elapsed after the LU paper feed sensor (PS3) turns ON.
	-	Paper jam of a sheet of paper left at the external LCT transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Lower right door	
Relevant parts	• LU transport motor (M3) • LU paper feed sensor (PS3) • Tray 2 vertical transport sensor (PS19) • LU drive board (LUDB) • PC control board (PCCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	LUDB CN5-8 (ON)	LU-302 4-G
3	PS19 I/O check, sensor check	MFPB CN23E-2 (ON)	27-C
4	M3 operation check	LUDB CN4-1 to 4	LU-302 3-G
5	Replace LUDB.	-	-
6	Replace PCCB. (PC-110/PC-210 /PC-410)	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.10 LU-302)

1.9 1#-## (bizhub C658/C558/C458)

1.9.1 10-01, 10-02, 10-04, 10-40

(1) Contents

JAM type	Misfeed at manual bypass feed section	
JAM code	10-01, 10-02, 10-04, 10-40	
JAM detection timing	10-01	The leading edge of the paper is not turned ON (unblocked) the registration sensor1 (PS1) even after the lapse of a given period of time after the manual bypass tray starts to feed paper.
	10-02	For paper fed from the manual bypass tray, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	10-04	The leading edge of the paper is not turned ON the registration sensor2 (PS72) even after the lapse of a given period of time after the manual bypass tray starts to feed paper. (bizhub C658/C558 only)
	10-40	For paper fed from the manual bypass tray, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
Misfeed processing location	Right door	
Relevant parts	• bizhub C558/C458: Transport motor (M1) • bizhub C658: Registration motor (M24) • Paper feed motor (M22) • bizhub C558/C458: Registration clutch (CL4) • Bypass paper feed clutch (CL7) • Bypass pick-up solenoid (SD1) • Registration sensor1 (PS1) • bizhub C658/C558: Registration sensor2 (PS72) • Expansion control board (EXCB) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	EXCB CN6-3 (ON)	26-P
3	PS72 I/O check, sensor check	EXCB CN6-5 (ON)	26-P
4	CL4 operation check	FRB CN8-7 (CL4_24V)	4-K
5	CL7 operation check	MFPB CN19E-7 (CL7_24V)	22-J
6	SD1 operation check	MFPB CN19E-9 (SD1_24V)	22-J
7	M1 operation check	MFPB CN14E-3 (REM) MFPB CN14E-6 (LOCK)	1-C
8	M22 operation check	EXCB CN7-5 to 8	25-P
9	M24 operation check	EXCB CN7-1 to 4	26-P
10	Replace FRB.	-	-
11	Replace EXCB.	-	-
12	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.9.2 11-01, 11-02, 11-04, 11-40, 11-44

(1) Contents

JAM type	Misfeed at tray 1 feed section	
JAM code	11-01, 11-02, 11-04, 11-40, 11-44	
JAM detection timing	11-01	The leading edge of the paper is not turned ON (unblocked) the registration sensor1 (PS1) even after the lapse of a given period of time after the tray 1 starts to feed paper.
	11-02	For paper fed from the tray 1, due to a delay in paper arrival, loop forming in front of the registration roller is not complete before the rise timing of the transport motor (M1) or registration motor (M24).
	11-04	The leading edge of the paper is not turned ON (unblocked) the registration sensor2 (PS72) even after the lapse of a given period of time after the tray 1 starts to feed paper. (bizhub C658/C558 only)
	11-40	For paper fed from the tray 1, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	11-44	Registration sensor1 (PS1) or registration sensor2 (PS72) is ON (unblocked) at the start of a paper take-up retry sequence.
Misfeed processing location	• Right door • Tray 1	

Relevant parts	• bizhub C558/C458: Transport motor (M1) • Paper feed motor (M22) • bizhub C658: Registration motor (M24) • bizhub C558/C458: Registration clutch (CL4) • Registration sensor1 (PS1) • bizhub C658/C558: Registration sensor2 (PS72) • Expansion control board (EXCB) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	EXCB CN6-3 (ON)	26-P
3	PS72 I/O check, sensor check	EXCB CN6-5 (ON)	26-P
4	CL4 operation check	FRB CN8-7 (CL4_24V)	4-K
5	M1 operation check	MFPB CN14E-3 (REM) MFPB CN14E-6 (LOCK)	1-C
6	M22 operation check	EXCB CN7-5 to 8	25-P
7	M24 operation check	EXCB CN7-1 to 4	26-P
8	Replace FRB.	-	-
9	Replace EXCB.	-	-
10	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.9.3 12-01, 12-40

(1) Contents

JAM type	Misfeed at tray 2 feed section	
JAM code	12-01, 12-40	
JAM detection timing	12-01	The leading edge of the paper does not turn ON the tray 2 vertical transport sensor (PS19) even after the lapse of a given period of time after the tray 2 starts to feed paper.
	12-40	For paper fed from the tray 2, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS19) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 2 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 2	
Relevant parts	• Paper feed motor (M22) • Tray 2 vertical transport motor (M23) • Tray 2 paper feed clutch (CL1) • Tray 2 vertical transport sensor (PS19) • Expansion control board (EXCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS19 I/O check, sensor check	MFPB CN34E<A>-2 (ON)	26-J
3	CL1 operation check	MFPB CN34E<A>-14 (ON)	27-J
4	M22 operation check	EXCB CN7-5 to 8	25-P
5	M23 operation check	EXCB CN7-9 to 12	25-P
6	Replace EXCB.	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.9.4 13-01, 13-40

(1) Contents

JAM type	Misfeed at tray 3 feed section
JAM code	13-01, 13-40

JAM detection timing	13-01	The leading edge of the paper is not turned ON the tray 3 vertical transport sensor (PS113) even after the lapse of a given period of time after the tray 3 starts to feed paper.
	13-40	For paper fed from the tray 3, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 3 feed section results, if the tray 3 vertical transport sensor (PS113) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 3 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 3	
Relevant parts	• Tray 3 paper feed motor (M111) • Tray 3 vertical transport motor (M112) • Tray 3 vertical transport sensor (PS113) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-115/PC-215 5-C
3	M111 operation check	PCCB CN5-1 to 8	PC-115/PC-215 4-C
4	M112 operation check	PCCB CN5-9 to 16	PC-115/PC-215 3 to 4-C
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.4 PC-115)
- Link to the wiring diagram (N.4.6 PC-215)

1.9.5 14-01, 14-40

(1) Contents

JAM type	Misfeed at tray 4 feed section	
JAM code	14-01, 14-40	
JAM detection timing	14-01	The leading edge of the paper is not turned ON the tray 4 vertical transport sensor (PS123) even after the lapse of a given period of time after the tray 4 starts to feed paper.
	14-40	For paper fed from the tray 4, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 4 feed section results, if the tray 4 vertical transport sensor (PS123) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the tray 4 feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Right door • Tray 4	
Relevant parts	• Tray 4 paper feed motor (M121) • Tray 4 vertical transport motor (M122) • Tray 4 vertical transport sensor (PS123) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS123 I/O check, sensor check	PCCB CN18C-5 (ON)	PC-215 7-K
3	M121 operation check	PCCB CN9C-1 to 8	PC-215 6-K
4	M122 operation check	PCCB CN9C-9 to 16	PC-215 6-K
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.6 PC-215)

1.9.6 15-01, 15-40

(1) Contents

JAM type	Misfeed at external LCT paper feed section	
JAM code	15-01, 15-40	
JAM detection timing	15-01	The leading edge of the paper is not turned ON the LU paper feed sensor (PS3) even after the lapse of a given period of time after the external LCT starts to feed paper.

	15-40	For paper fed from the external LCT, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the external LCT feed section results, if the paper feed sensor (PS3) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the external LCT feed section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Lower right door	
Relevant parts	• LU paper feed motor (M2) • LU paper feed sensor (PS3) • LU drive board (LUDB) • MFP board (MFPB) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	LUDB CN5-8 (ON)	LU-207/LU-302 4-G
3	M2 operation check	LUDB CN4-5 to 8	LU-207/LU-302 3-G
4	Replace LUDB. (LU-207 / LU-302)	-	-
5	Replace MFPB.	-	-
6	Replace PCCB. (PC-115/PC-215 / PC-415)	-	-

- Link to the wiring diagram (N.4.9 LU-207)
- Link to the wiring diagram (N.4.10 LU-302)

1.9.7 16-01, 16-40

(1) Contents

JAM type	Misfeed at transfer LCT feed/vertical transport section	
JAM code	16-01, 16-40	
JAM detection timing	16-01	The leading edge of the paper is not turned ON the vertical transport sensor (PS133) even after the lapse of a given period of time after the transfer LCT starts to feed paper.
	16-40	For paper fed from the transfer LCT, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the transfer LCT transport section results, if the vertical transport sensor (PS133) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the transfer LCT transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Paper feed motor (M131) • Vertical transport motor (M132) • Vertical transport sensor (PS133) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS133 I/O check, sensor check	PCCB CN4-14 (ON)	PC-415 6-J
3	M131 operation check	PCCB CN5-1 to 8	PC-415 4-J
4	M132 operation check	PCCB CN5-9 to 16	PC-415 4-J
5	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.8 PC-415)

1.10 2#-## (bizhub C368/C308/C258)

1.10.1 20-01, 20-02

(1) Contents

JAM type	Misfeed at vertical transport section
JAM code	20-01, 20-02

JAM detection timing	20-01	The registration sensor (PS1) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON the tray 2 vertical transport sensor (PS19).
	20-02	For paper fed from the tray 2, tray 3, tray 4, or LCT, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
Misfeed processing location	Right door	
Relevant parts	• Transport motor (M1) • Tray 2 vertical transport clutch (CL2) • Registration clutch (CL4) • Registration sensor (PS1) • Tray 2 vertical transport sensor (PS19) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	FRB CN8-3 (ON)	6-L
3	PS19 I/O check, sensor check	MFPB CN23E-2 (ON)	27-C
4	CL2 operation check	MFPB CN23E-16 (ON)	28-C
5	CL4 operation check	FRB CN8-7 (CL4_24V)	5-L
6	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
7	Replace FRB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.10.2 20-21

(1) Contents

JAM type	Misfeed at vertical transport section (tray 3)		
JAM code	20-21		
JAM detection timing	20-21	<When PC-110 or PC-210 is installed>	The tray 2 vertical transport sensor (PS19) is not turned ON even after the lapse of a given period of time after the tray 3 vertical transport sensor (PS113) has been blocked by a paper.
		<When PC-410 is installed>	The tray 2 vertical transport sensor (PS19) is not turned ON even after the lapse of a given period of time after the vertical transport sensor (PS133) has been blocked by a paper.
	-	Paper jam of a sheet of paper left at the vertical transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed processing location	Right door		
Relevant parts	<When PC-110 or PC-210 is installed>	• Transport motor (M1) • Tray 3 vertical transport motor (M112) • Tray 2 vertical transport clutch (CL2) • Tray 2 vertical transport sensor (PS19) • Tray 3 vertical transport sensor (PS113) • MFP board (MFPB) • PC control board (PCCB)	
	<When PC-410 is installed>	• Transport motor (M1) • Vertical transport motor (M132) • Tray 2 vertical transport clutch (CL2) • Tray 2 vertical transport sensor (PS19) • Vertical transport sensor (PS133) • MFP board (MFPB) • PC control board (PCCB)	

(2) Procedure

(a) When PC-110 or PC-210 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-110/PC-210 5-C
3	PS19 I/O check, sensor check	MFPB CN23E-2 (ON)	27-C
4	CL2 operation check	MFPB CN23E-16 (ON)	28-C
5	M112 operation check	PCCB CN5-9 to 16	PC-110/PC-210 3 to 4-C

Step	Action	Control signal	Location of electrical component
6	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
7	Replace MFPB.	-	-
8	Replace PCCB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.3 PC-110)
- Link to the wiring diagram (N.4.5 PC-210)

(b) When PC-410 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS133 I/O check, sensor check	PCCB CN4-14 (ON)	PC-410 7-J
3	PS19 I/O check, sensor check	MFPB CN23E-2 (ON)	27-C
4	CL2 operation check	MFPB CN23E-16 (ON)	28-C
5	M132 operation check	PCCB CN5-9 to 16	PC-410 4-J
6	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
7	Replace MFPB.	-	-
8	Replace PCCB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.7 PC-410)

1.10.3 20-22

(1) Contents

JAM type	Misfeed at vertical transport section (tray 4)	
JAM code	20-22	
JAM detection timing	20-22	The tray 3 vertical transport sensor (PS113) is not turned ON even after the lapse of a given period of time after the tray 4 vertical transport sensor (PS123) has been blocked by a paper.
	-	Paper jam of a sheet of paper left at the vertical transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Tray 3 vertical transport motor (M112) • Tray 4 vertical transport motor (M122) • Tray 3 vertical transport sensor (PS113) • Tray 4 vertical transport sensor (PS123) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS123 I/O check, sensor check	PCCB CN18-5 (ON)	PC-210 7-K
3	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-210 5-C
4	M122 operation check	PCCB CN9-9 to 16	PC-210 6-K
5	M112 operation check	PCCB CN5-9 to 16	PC-210 3 to 4-C
6	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.5 PC-210)

1.11 2#-## (bizhub C658/C558/C458)

1.11.1 20-01, 20-02, 20-04

(1) Contents

JAM type	Misfeed at vertical transport section	
JAM code	20-01, 20-02, 20-04	
JAM detection timing	20-01	The registration sensor1 (PS1) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON the tray 2 vertical transport sensor (PS19).
	20-02	For paper fed from the tray 2, tray 3, tray 4, or LCT, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.

	20-04	The registration sensor2 (PS72) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON the tray 2 vertical transport sensor (PS19). (bizhub C658/C558 only)
Misfeed processing location	Right door	
Relevant parts	• bizhub C558/C458: Transport motor (M1) • Tray 2 vertical transport motor (M23) • bizhub C658: Registration motor (M24) • bizhub C558/C458: Tray2 vertical transport clutch (CL2) • Registration clutch (CL4) • Registration sensor1 (PS1) • bizhub C658/C558: Registration sensor2 (PS72) • Tray 2 vertical transport sensor (PS19) • Expansion control board (EXCB) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	EXCB CN6-3 (ON)	26-P
3	PS72 I/O check, sensor check	EXCB CN6-5 (ON)	26-P
4	PS19 I/O check, sensor check	MFPB CN34E<A>-2 (ON)	26-J
5	CL4 operation check	FRB CN8-7 (CL4_24V)	4-K
6	M1 operation check	MFPB CN14E-3 (REM) MFPB CN14E-6 (LOCK)	1-C
7	M23 operation check	EXCB CN7-9 to 12	25-P
8	M24 operation check	EXCB CN7-1 to 4	26-P
9	Replace FRB.	-	-
10	Replace EXCB.	-	-
11	MFPB F1E conduction check	-	-
12	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.11.2 20-21

(1) Contents

JAM type	Misfeed at vertical transport section (tray 3)		
JAM code	20-21		
JAM detection timing	20-21	<When PC-115 or PC-215 is installed>	The tray 2 vertical transport sensor (PS19) is not turned ON even after the lapse of a given period of time after the tray 3 vertical transport sensor (PS113) has been blocked by a paper.
		<When PC-415 is installed>	The tray 2 vertical transport sensor (PS19) is not turned ON even after the lapse of a given period of time after the vertical transport sensor (PS133) has been blocked by a paper.
	-	Paper jam of a sheet of paper left at the vertical transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
Misfeed processing location	Right door		
Relevant parts	<When PC-115 or PC-215 is installed>	• Tray 2 vertical transport motor (M23) • Tray 3 vertical transport motor (M112) • Tray 2 vertical transport sensor (PS19) • Tray 3 vertical transport sensor (PS113) • Expansion control board (EXCB) • MFP board (MFPB) • PC control board (PCCB)	
	<When PC-415 is installed>	• Tray 2 vertical transport motor (M23) • Vertical transport motor (M132) • Tray 2 vertical transport sensor (PS19) • Vertical transport sensor (PS133) • Expansion control board (EXCB) • MFP board (MFPB) • PC control board (PCCB)	

(2) Procedure

(a) When PC-115 or PC-215 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-115/PC-215 5-C
3	PS19 I/O check, sensor check	MFPB CN34E<A>-2 (ON)	26-J
4	M112 operation check	PCCB CN5-9 to 16	PC-115/PC-215 3 to 4-C
5	M23 operation check	EXCB CN7-9 to 12	25-P
6	Replace EXCB.	-	-
7	MFPB F1E conduction check	-	-
8	Replace MFPB.	-	-
9	Replace PCCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.4 PC-115)
- Link to the wiring diagram (N.4.6 PC-215)

(b) When PC-415 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS133 I/O check, sensor check	PCCB CN4-14 (ON)	PC-415 6-J
3	PS19 I/O check, sensor check	MFPB CN34E<A>-2 (ON)	26-J
4	M132 operation check	PCCB CN5-9 to 16	PC-415 4-J
5	M23 operation check	EXCB CN7-9 to 12	25-P
6	Replace EXCB.	-	-
7	MFPB F1E conduction check	-	-
8	Replace MFPB.	-	-
9	Replace PCCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.8 PC-415)

1.11.3 20-22

(1) Contents

JAM type	Misfeed at vertical transport section (tray 4)	
JAM code	20-22	
JAM detection timing	20-22	The tray 3 vertical transport sensor (PS113) is not turned ON even after the lapse of a given period of time after the tray 4 vertical transport sensor (PS123) has been blocked by a paper.
	-	Paper jam of a sheet of paper left at the vertical transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Tray 3 vertical transport motor (M112) • Tray 4 vertical transport motor (M122) • Tray 3 vertical transport sensor (PS113) • Tray 4 vertical transport sensor (PS123) • PC control board (PCCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS123 I/O check, sensor check	PCCB CN18C-5 (ON)	PC-215 7-K
3	PS113 I/O check, sensor check	PCCB CN4-14 (ON)	PC-215 5-C
4	M122 operation check	PCCB CN9C-9 to 16	PC-215 6-K
5	M112 operation check	PCCB CN5-9 to 16	PC-215 3 to 4-C
6	Replace PCCB.	-	-

- Link to the wiring diagram (N.4.6 PC-215)

1.12 3#-## (bizhub C368/C308/C258)

1.12.1 30-03

(1) Contents

JAM type	Misfeed at 2nd transfer section
JAM code	30-03

JAM detection timing	30-03	• The leading edge of paper is not turned ON (unblocked) the paper exit sensor (PS3) since the paper feeding is started. • The fusing loop sensor (PS2) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) registration sensor (PS1).
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS1) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Transport motor (M1) • Fusing motor (M3) • Registration clutch (CL4) • Registration sensor (PS1) • Fusing loop sensor (PS2) • Paper exit sensor (PS3) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	FRB CN8-3 (ON)	6-L
3	PS2 I/O check, sensor check	MFPB CN17E-16 (ON)	5-C
4	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	5-C
5	CL4 operation check	FRB CN8-7 (CL4_24V)	5-L
6	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
7	M3 operation check	MFPB CN8E-9 (REM) MFPB CN8E-12 (LOCK)	2-C
8	Replace FRB.	-	-
9	Replace MFPB.	-	-

• Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.12.2 32-01, 32-05

(1) Contents

JAM type	Misfeed at fusing/paper exit section	
JAM code	32-01, 32-05	
JAM detection timing	32-01	The ADU paper passage sensor/1 (PS40) is not turned ON (unblocked) even after the lapse of a given period of time after the reverse sequence is started.
	32-05	• The paper exit sensor (PS3) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) fusing loop sensor (PS2). • The paper exit sensor (PS3) is not turned OFF (blocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) PS3.
	-	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS3) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the exit section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Fusing motor (M3) • Reverse motor (M4) • ADU transport motor (M5) • Paper exit clutch (CL8) • Fusing loop sensor (PS2) • Paper exit sensor (PS3) • ADU paper passage sensor/1 (PS40) • Gate switch solenoid (SD3) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	MFPB CN17E-16 (ON)	5-C
3	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	5-C
4	PS40 I/O check, sensor check	MFPB CN17E-10 (ON)	5-C
5	CL8 operation check	MFPB CN15EA-15 (ON)	8-C
6	SD3 operation check	MFPB CN15EA-9 (ON)	7-C
7	M3 operation check	MFPB CN8E-9 (REM) MFPB CN8E-12 (LOCK)	2-C
8	M4 operation check	MFPB CN15EA-1 to 4	6-C
9	M5 operation check	MFPB CN17E-1 to 4	4-C
10	Replace FRB.	-	-
11	MFPB ICP3E conduction check	-	-
12	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.13 3#-## (bizhub C658/C558/C458)

1.13.1 30-03

(1) Contents

JAM type	Misfeed at 2nd transfer section	
JAM code	30-03	
JAM detection timing	30-03	• The leading edge of paper is not turned ON (unblocked) the paper exit sensor (PS3) since the paper feeding is started. • The fusing loop sensor (PS2) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) registration sensor (PS1).
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor1 (PS1) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor2 (PS72) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset. (bizhub C658/C558 only)
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• bizhub C558/C458: Transport motor (M1) • Fusing motor (M3) • bizhub C658: Registration motor (M24) • bizhub C558/C458: Registration clutch (CL4) • Paper exit clutch (CL8) • Registration sensor1 (PS1) • Fusing loop sensor (PS2) • bizhub C658/C558: Registration sensor2 (PS72) • Paper exit sensor (PS3) • Expansion control board (EXCB) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	EXCB CN6-3 (ON)	26-P
3	PS2 I/O check, sensor check	MFPB CN17E-16 (ON)	C658/C558 7-C C458 8-C
4	PS72 I/O check, sensor check	EXCB CN6-5 (ON)	26-P
5	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	C658/C558 7-C C458 8-C
6	CL4 operation check	FRB CN8-7 (CL4_24V)	4-K
7	CL8 operation check	EXCB CN8<A>-6 (CL8_REM)	24-T
8	M1 operation check	MFPB CN14E-3 (REM) MFPB CN14E-6 (LOCK)	1-C
9	M3 operation check	MFPB CN14E-9 (REM)	2-C

Step	Action	Control signal	Location of electrical component
		MFPB CN14E-12 (LOCK)	
10	M24 operation check	EXCB CN7-1 to 4	26-P
11	Replace FRB.	-	-
12	Replace EXCB.	-	-
13	MFPB F2E conduction check	-	-
14	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.13.2 32-01, 32-05, 32-30

(1) Contents

JAM type	Misfeed at fusing/paper exit section	
JAM code	32-01, 32-05, 32-30	
JAM detection timing	32-01	The ADU paper passage sensor1 (PS40) is not turned ON (unblocked) even after the lapse of a given period of time after the reverse sequence is started.
	32-05	• The paper exit sensor (PS3) is not turned ON (unblocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) fusing loop sensor (PS2). • The paper exit sensor (PS3) is not turned OFF (blocked) even after the lapse of a given period of time after the paper has turned ON (unblocked) PS3.
	32-30	A trouble of the heating roller assy's failure to turn has been detected during a print cycle.
	-	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS3) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the exit section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Fusing unit • Fusing motor (M3) • Reverse motor (M4) • ADU transport motor1 (M5) • Paper exit clutch (CL8) • Fusing loop sensor (PS2) • Paper exit sensor (PS3) • ADU paper passage sensor1 (PS40) • Gate switch solenoid (SD3) • Expansion control board (EXCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	MFPB CN17E-16 (ON)	C658/C558 7-C C458 8-C
3	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	C658/C558 7-C C458 8-C
4	PS40 I/O check, sensor check	MFPB CN17E-10 (ON)	C658/C558 7-C C458 8-C
5	CL8 operation check	EXCB CN8<A>-6 (CL8_REM)	24-T
6	SD3 operation check	MFPB CN15E<B>-3 (SD3_24V)	C658/C558 17-C C458 21-C
7	M3 operation check	MFPB CN14E-9 (REM) MFPB CN14E-12 (LOCK)	2-C
8	M4 operation check	MFPB CN15E<A>-3 to 6	C658/C558 15-C C458 19-C
9	M5 operation check	MFPB CN17E-1 to 4	C658/C558 6-C C458 8-C
10	Replace the fusing unit. (bizhub C658/C558 / bizhub C458)	-	-
11	Replace EXCB.	-	-
12	MFPB F6E conduction check	-	-
13	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.14 6#-## (bizhub C368/C308/C258)

1.14.1 66-01, 66-11, 66-21

(1) Contents

JAM type	Misfeed at DF turnover section		
JAM code	66-01, 66-11, 66-21		
JAM detection timing	66-01	<When DF-629 is installed>	The document registration sensor (PS3) is not turned ON (unblocked) by the paper even after the set period of time has elapsed after the reverse registration operation started.
	66-11	<When DF-629 is installed>	The document registration sensor (PS3) is not turned OFF (blocked) after the set period of time after PS3 is turned ON (unblocked) after the switchback registration started.
	66-21	<When DF-629 is installed>	The document reading sensor (PS4) is not turned ON after a lapse of a given time after the document registration sensor (PS3) is turned ON (unblocked).
Misfeed processing location	• Left cover • Re-feeding opening		
Relevant parts	• Document reading motor (M1) • Registration motor (M3) • Document registration sensor (PS3) • Document reading sensor (PS4) • DF control board (DFCB)		

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	DFCB J10-3 (ON)	DF-629 2-G
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-629 5-G
4	M1 operation check	DFCB J7-1 to 4	DF-629 2-B
5	M3 operation check	DFCB J6-1 to 4	DF-629 3-B
6	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

1.14.2 66-02, 66-12

(1) Contents

JAM type	Misfeed at DF paper feed section		
JAM code	66-02, 66-12		
JAM detection timing	66-02	<When DF-629 or DF-704 is installed>	The after separate sensor (PS2) is not turned ON (blocked) after a lapse of a given time after the document feed motor (M2) is turned ON.
	66-12	<When DF-629 or DF-704 is installed>	The size of the original on the tray detected by DF does not match the size of the original detected by the main body.
Misfeed processing location	Left cover		
Relevant parts	<When DF-629 is installed>		• Document feed motor (M2) • After separate sensor (PS2) • Document length size sensor/1 (PS6) • Document length size sensor/2 (PS7) • Document width size sensor (VR1) • DF control board (DFCB)
	<When DF-704 is installed>		• Document feed motor (M2) • After separate sensor (PS2) • Document length sensor/1 (PS8) • Document length sensor/2 (PS9) • Document width sensor (VR1) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	DFCB J14-8 (ON)	DF-629 6-G
3	PS6 I/O check, sensor check	DFCB J12-6 (ON)	DF-629 4-G
4	PS7 I/O check, sensor check	DFCB J12-5 (ON)	DF-629 4-G
5	VR1 I/O check, sensor check	DFCB J12-3 (ON)	DF-629 4-G

Step	Action	Control signal	Location of electrical component
6	M2 operation check	DFCB J5-1 to 4	DF-629 2-B
7	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	DFCB J14-8 (ON)	DF-704 6-G
3	PS8 I/O check, sensor check	DFCB J12-6 (ON)	DF-704 3 to 4-G
4	PS9 I/O check, sensor check	DFCB J12-5 (ON)	DF-704 3-G
5	VR1 I/O check, sensor check	DFCB J12-3 (ON)	DF-704 4-G
6	M2 operation check	DFCB J5-1 to 4	DF-704 1 to 2-B
7	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.2 DF-704)

1.14.3 66-03, 66-13, 66-23, 66-33

(1) Contents

JAM type	Misfeed at DF transport section		
JAM code	66-03, 66-13, 66-23, 66-33		
JAM detection timing	66-03	<When DF-629 or DF-704 is installed>	The after separate sensor (PS2) is not turned OFF (unblocked) after a lapse of a given time after PS2 is turned ON (blocked).
	66-13	<When DF-629 is installed>	The document registration sensor (PS3) is not turned ON (unblocked) after a lapse of a given time after the after separate sensor (PS2) is turned ON (blocked).
		<When DF-704 is installed>	The registration sensor (PS3) is not turned ON (unblocked) after a lapse of a given time after the after separate sensor (PS2) is turned ON (blocked).
	66-23	<When DF-629 is installed>	The document registration sensor (PS3) is not turned OFF (blocked) after a lapse of given time after PS3 is turned ON (unblocked).
		<When DF-704 is installed>	The registration sensor (PS3) is not turned OFF (blocked) after a lapse of given time after PS3 is turned ON (unblocked).
	66-33	<When DF-629 is installed>	The document reading sensor (PS4) is not turned ON after a lapse of a given time after the document registration sensor (PS3) is turned ON (unblocked).
		<When DF-704 is installed>	The document reading sensor (PS6) is not turned ON after a lapse of a given time after the registration sensor (PS3) is turned ON (unblocked).
Misfeed processing location	Left cover		
Relevant parts	<When DF-629 is installed>		• Document reading motor (M1) • Document feed motor (M2) • Registration motor (M3) • After separate sensor (PS2) • Document registration sensor (PS3) • Document reading sensor (PS4) • DF control board (DFCB)
	<When DF-704 is installed>		• Document reading motor (M1) • Document feed motor (M2) • Registration motor (M3) • After separate sensor (PS2) • Registration sensor (PS3) • Document reading sensor (PS6) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	DFCB J14-8 (ON)	DF-629 6-G
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-629 5-G
4	PS4 I/O check, sensor check	DFCB J10-3 (ON)	DF-629 2-G
5	M1 operation check	DFCB J7-1 to 4	DF-629 2-B
6	M2 operation check	DFCB J5-1 to 4	DF-629 2-B

Step	Action	Control signal	Location of electrical component
7	M3 operation check	DFCB J6-1 to 4	DF-629 3-B
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	DFCB J14-8 (ON)	DF-704 6-G
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-704 4-G
4	PS6 I/O check, sensor check	DFCB J10-3 (ON)	DF-704 2-G
5	M1 operation check	DFCB J7-1 to 4	DF-704 1-B
6	M2 operation check	DFCB J5-1 to 4	DF-704 1 to 2-B
7	M3 operation check	DFCB J6-1 to 4	DF-704 2-B
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.2 DF-704)

1.14.4 66-04, 66-14, 66-24, 66-34

(1) Contents

JAM type	Misfeed at DF paper exit section		
JAM code	66-04, 66-14, 66-24, 66-34		
JAM detection timing	66-04	<When DF-629 is installed>	The document exit sensor (PS5) is not turned ON (blocked) after a lapse of a given time after the document reading sensor (PS4) is turned ON.
		<When DF-704 is installed>	The document exit sensor (PS5) is not turned ON (blocked) after a lapse of a given time after the document reading sensor (PS6) is turned ON.
	66-14	<When DF-629 is installed>	The document exit sensor (PS5) is not turned OFF (unblocked) after a lapse of a given time after the document reading sensor (PS4) is turned OFF.
		<When DF-704 is installed>	The document exit sensor (PS5) is not turned OFF (unblocked) after a lapse of a given time after the document reading sensor (PS6) is turned OFF.
	66-24	<When DF-629 is installed>	The document exit sensor (PS5) is not turned ON (blocked) after a lapse of a given time after the document reading sensor (PS4) is turned ON.
	66-34	<When DF-629 is installed>	The document exit sensor (PS5) is not turned OFF (unblocked) after the laps of give time after the document reading sensor (PS4) turned OFF after the switchback exit operation started.
Misfeed processing location	• Left cover • Opening and closing guide		
Relevant parts	<When DF-629 is installed>		• Document reading motor (M1) • Document reading sensor (PS4) • Document exit sensor (PS5) • DF control board (DFCB)
	<When DF-704 is installed>		• Document reading motor (M1) • Document exit sensor (PS5) • Document reading sensor (PS6) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	DFCB J10-3 (ON)	DF-629 2-G
3	PS5 I/O check, sensor check	DFCB J15-6 (ON)	DF-629 3-G
4	M1 operation check	DFCB J7-1 to 4	DF-629 2-B
5	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-

Step	Action	Control signal	Location of electrical component
2	PS6 I/O check, sensor check	DFCB J10-3 (ON)	DF-704 2-G
3	PS5 I/O check, sensor check	DFCB J15-6 (ON)	DF-704 3-G
4	M1 operation check	DFCB J7-1 to 4	DF-704 1-B
5	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.2 DF-704)

1.14.5 66-05, 66-06, 66-15

(1) Contents

JAM type	Misfeed at DF image reading section		
JAM code	66-05, 66-06, 66-15		
JAM detection timing	66-05	<When DF-629 is installed>	The document reading sensor (PS4) is not turned OFF after a lapse of a given time after the document registration sensor (PS3) is turned OFF (blocked).
		<When DF-704 is installed>	The document reading sensor (PS6) is not turned OFF after a lapse of a given time after the registration sensor (PS3) is turned OFF (blocked).
	66-06	<When DF-629 is installed>	The document reading sensor (PS4) is turned ON earlier than a given time after PS4 is turned OFF during original transportation.
		<When DF-704 is installed>	The document reading sensor (PS6) is turned ON earlier than a given time after PS6 is turned OFF during original transportation.
	66-15	<When DF-629 is installed>	The document reading sensor (PS4) does not turn OFF after the laps of given time after the document registration sensor (PS3) is turned OFF (blocked) after the switchback read operation started.
Misfeed processing location	Left cover		
Relevant parts	<When DF-629 is installed>		• Document reading motor (M1) • Reading roll release motor (M5) • Document registration sensor (PS3) • Document reading sensor (PS4) • DF control board (DFCB)
	<When DF-704 is installed>		• Document reading motor (M1) • Reading roller release motor (M4) • Registration sensor (PS3) • Document reading sensor (PS6) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-629 5-G
4	PS4 I/O check, sensor check	DFCB J10-3 (ON)	DF-629 2-G
5	M1 operation check	DFCB J7-1 to 4	DF-629 2-B
6	M5 operation check	DFCB J18-4 to 5	DF-629 2-G
7	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-704 4-G
4	PS6 I/O check, sensor check	DFCB J10-3 (ON)	DF-704 2-G
5	M1 operation check	DFCB J7-1 to 4	DF-704 1-B
6	M4 operation check	DFCB J18-4 to 5	DF-704 1-G
7	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.2 DF-704)

1.14.6 66-07

(1) Contents

JAM type	Misfeed at DF paper feed/transport/image reading/turnover/paper exit section		
JAM code	66-07		
JAM detection timing	66-07	<When DF-629 or DF-704 is installed>	Due to a remaining sheet of paper that has not been detected by sensors, before the start of a job, a sensor detects the sheet at an unexpected timing.
Misfeed processing location	Left cover		
Relevant parts	<When DF-629 is installed>		• Document registration sensor (PS3) • Document reading sensor (PS4) • Document exit sensor (PS5) • DF control board (DFCB)
	<When DF-704 is installed>		• Registration sensor (PS3) • Document exit sensor (PS5) • Document reading sensor (PS6) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-629 5-G
4	PS4 I/O check, sensor check	DFCB J10-3 (ON)	DF-629 2-G
5	PS5 I/O check, sensor check	DFCB J15-6 (ON)	DF-629 3-G
6	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS3 I/O check, sensor check	DFCB J14-12 (ON)	DF-704 4-G
4	PS5 I/O check, sensor check	DFCB J15-6 (ON)	DF-704 3-G
5	PS6 I/O check, sensor check	DFCB J10-3 (ON)	DF-704 2-G
6	Replace DFCB.	-	-

- Link to the wiring diagram (N.4.2 DF-704)

1.15 6#-## (bizhub C658/C558/C458)

1.15.1 66-02, 66-12

(1) Contents

JAM type	Misfeed at DF paper feed section	
JAM code	66-02, 66-12	
JAM detection timing	66-02	The after separate sensor (PS4) is not turned ON after a lapse of a given time after the take-up motor (M1) is turned ON.
	66-12	A StreetPass communication occurs between the DF and the controller.
	-	Paper jam of a sheet of paper left at the DF paper feed section results, if the after separate sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Take-up motor (M1) • After separate sensor (PS4) • DF control board (DFCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF 7-J
3	M1 operation check	DFCB CN3-1 to 4	PKCB 12-C

Step	Action	Control signal	Location of electrical component
4	DFCB ICP2 or ICP10 conduction check.	-	-
5	Replace DFCB.	-	-
6	Replace MFPB.	-	-

- Link to the wiring diagram (N.3 Dual scan document feeder)

1.15.2 66-03, 66-13, 66-23, 66-33

(1) Contents

JAM type	Misfeed at DF transport section	
JAM code	66-03, 66-13, 66-23, 66-33	
JAM detection timing	66-03	The after separate sensor (PS4) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
	66-13	The registration sensor (PS5) is not turned ON even after the lapse of a given period of time after the paper has turned ON the after separate sensor (PS4).
	66-23	The registration sensor (PS5) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the after separate sensor (PS4).
	66-33	The before read sensor (PS6) is not turned ON after a lapse of a given time after a loop is formed and the registration motor (M2) is activated.
	-	Paper jam of a sheet of paper left at the DF transfer section results, if the registration sensor (PS5) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Registration motor (M2) • Take-up motor (M1) • Registration sensor (PS5) • After separate sensor (PS4) • Before read sensor (PS6) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
3	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF 11-C
4	PS6 I/O check, sensor check	DFCB CN11-2 (ON)	DF 1-C
5	M1 operation check	DFCB CN3-1 to 4	DF 12-C
6	M2 operation check	DFCB CN3-5 to 8	DF 11-C
7	DFCB ICP3 or ICP15 conduction check.	-	-
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.3 Dual scan document feeder)

1.15.3 66-04, 66-14

(1) Contents

JAM type	Misfeed at DF paper exit section	
JAM code	66-04, 66-14	
JAM detection timing	66-04	The paper exit sensor (PS7) is not turned ON (unblocked) even after the set period of time has elapsed after the before read sensor (PS6) is turned ON by the paper.
	66-14	The paper exit sensor (PS7) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the before read sensor (PS6).
	-	Paper jam of a sheet of paper left at the DF exit section results, if the paper exit sensor (PS7) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Paper feed motor (M4) • Before read sensor (PS6) • Paper exit sensor (PS7) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-

Step	Action	Control signal	Location of electrical component
2	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
3	PS7 I/O check, sensor check	DFCB CN13-3 (ON)	DF 7-C
4	M4 operation check	DFCB CN15-1 to 4	DF 11-C
5	DFCB ICP8 conduction check.	-	-
6	Replace DFCB.	-	-

- Link to the wiring diagram (N.3 Dual scan document feeder)

1.15.4 66-05, 66-06

(1) Contents

JAM type	Misfeed at DF image reading section	
JAM code	66-05, 66-06	
JAM detection timing	66-05	The after separate sensor (PS6) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the registration sensor (PS6).
	66-06	The before read sensor (PS6) is turned ON earlier than a given period of time after the paper has turned OFF the before read sensor (PS6) during original transportation.
	-	Paper jam of a sheet of paper left at the DF image reading section results, if the before read sensor (PS6) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Reading motor (M3) • Reading roller pressure/retraction motor (M6) • Registration sensor (PS5) • Before read sensor (PS6) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
4	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
5	M3 operation check	DFCB CN2-1 to 6	DF 12-C
6	M6 operation check	DFCB CN4-1 to 2	DF 10-C
7	DFCB ICP1 or ICP16 conduction check.	-	-
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.3 Dual scan document feeder)

1.15.5 66-08

(1) Contents

JAM type	Double feed detection jam	
JAM code	66-08	
JAM detection timing	66-08	Remained paper is found at the multi feed detection.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Multi feed detection board/1 (transmitter) (MFDB/1) • Multi feed detection board/2 (receiver) (MFDB/2) • Sensor control board (SCB) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Replace MFDB/1.	-	-
3	Replace MFDB/2	-	-
4	Replace SCB.	-	-
5	DFCB ICP11 conduction check.	-	-
6	Replace DFCB.	-	-

1.15.6 66-54

(1) Contents

JAM type	DF controller jam	
JAM code	66-54	
JAM detection timing	66-54	The lift up lower sensor (PS3) is not blocked after a lapse of a given time after the last sheet of original is fed out.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Take-up motor (M1) • Registration motor (M2) • Reading motor (M3) • Paper feed motor (M4) • Reading roller pressure/retraction motor (M6) • After separate sensor (PS4) • Registration sensor (PS5) • Before read sensor (PS6) • Paper exit sensor (PS7) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF 11-C
3	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
4	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
5	PS7 I/O check, sensor check	DFCB CN13-3 (ON)	DF 7-C
6	M1 operation check	DFCB CN3-1 to 4	DF 12-C
7	M2 operation check	DFCB CN3-5 to 8	DF 11-C
8	M3 operation check	DFCB CN2-1 to 6	DF 12-C
9	M4 operation check	DFCB CN15-1 to 4	DF 11-C
10	M6 operation check	DFCB CN4-1 to 2	DF 10-C
11	Replace DFCB.	-	-

- Link to the wiring diagram (N.3 Dual scan document feeder)

1.16 7#-## (bizhub C368/C308/C258)

1.16.1 72-14

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-14		
JAM detection timing	72-14	<When FS-534 or FS-534SD is installed>	The staple stacker paper detection sensor (PS31) is not turned ON even after the set period of time has elapsed after the saddle exit sensor (PS5) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	• Saddle exit sensor (PS5) • Staple stacker paper detection sensor (PS31) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-534 10-K
3	PS31 I/O check, sensor check	FSCB J12-11 (ON)	FS-534 6-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.2 72-15

(1) Contents

JAM type	Misfeed at FS transport section
JAM code	72-15

JAM detection timing	72-15	<When FS-534 or FS-534SD is installed>	The staple stacker paper detection sensor (PS31) is not turned OFF even after the set period of time has elapsed after it is turned ON.
Misfeed processing location	Front door		
Relevant parts	• Staple stacker paper detection sensor (PS31) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS31 I/O check, sensor check	FSCB J12-11 (ON)	FS-534 6-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.3 72-16

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-16		
JAM detection timing	72-16	<When FS-533 is installed>	The paper feed sensor (PS101) is not turned ON even after the set period of time has elapsed after the main body's paper exit sensor (PS3) is turned OFF (unblocked) by the paper.
		<When FS-533+PK-519 is installed>	The paper feed sensor (PS101) is not turned ON even after the set period of time has elapsed after the paper feed sensor (PS201) is turned ON by the paper.
		<When FS-534 or FS-534SD is installed>	The FNS entrance sensor (PS4) is not turned ON even after the set period of time has elapsed after the RU entrance sensor (PS2) is turned ON (blocked) by the paper.
Misfeed processing location	• Finisher paper feed section (When FS-533 is installed) • Horizontal transport cover (When FS-534 or FS-534SD is installed)		
Relevant parts	<When FS-533 is installed>	• Paper conveyance motor (M101) • Paper exit sensor (PS3) • Paper feed sensor (PS101) • FS control board (FSCB) • MFP board (MFPB)	
	<When FS-533+PK-519 is installed>	• Paper conveyance motor (M101) • Paper feed sensor (PS101) • Paper feed sensor (PS201) • FS control board (FSCB) • MFP board (MFPB)	
	<When FS-534 or FS-534SD is installed>	• RU entrance sensor (PS2) • FNS entrance sensor (PS4) • FS control board (FSCB)	

(2) Procedure

(a) When FS-533 or FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	5-C
3	PS101 I/O check, sensor check	FSCB CN111	FS-533 7-D to E
4	PS201 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
5	M101 operation check	FSCB CN101	FS-533 6-J
6	FSCB CP101 conduction check	-	-
7	Replace FSCB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-534 6-K
3	PS4 I/O check, sensor check	FSCB J7-13 (ON)	FS-534 8-K

Step	Action	Control signal	Location of electrical component
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.4 72-17

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-17		
JAM detection timing	72-17	<When FS-533 is installed>	The paper feed sensor (PS101) is not turn OFF even after the set period of time has elapsed after it turns ON.
		<When FS-534 or FS-534SD is installed>	The FNS entrance sensor (PS4) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	• Finisher paper feed section (When FS-533 is installed) • Front door (When FS-534 or FS-534SD is installed)		
Relevant parts	<When FS-533 is installed>		• Paper conveyance motor (M101) • Paper feed sensor (PS101) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed>		• FNS entrance sensor (PS4) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS101 I/O check, sensor check	FSCB CN111	FS-533 7-D to E
3	M101 operation check	FSCB CN101	FS-533 6-J
4	FSCB CP101 conduction check	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J7-13 (ON)	FS-534 8-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.5 72-18

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-18		
JAM detection timing	72-18	<When FS-534 or FS-534SD is installed>	• The saddle exit sensor (PS5) is not turned ON even after the set period of time has elapsed after the FNS entrance sensor (PS4) is turned ON by the paper. • While the buffer is controlled, the saddle exit sensor (PS5) is not tuned ON even after the set period of time has elapsed after the reverse rotation drive is started.
Misfeed processing location	Front door		
Relevant parts	• FNS entrance sensor (PS4) • Saddle exit sensor (PS5) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J7-13 (ON)	FS-534 8-K
3	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-534 10-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (FS-534)

1.16.6 72-19

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-19		
JAM detection timing	72-19	<When FS-534 or FS-534SD is installed>	The saddle exit sensor (PS5) is not turned OFF even after the set period of time has elapsed after it is turned ON.
Misfeed processing location	Front door		
Relevant parts	• Saddle exit sensor (PS5) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-534 10-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (FS-534)

1.16.7 72-21

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-21		
JAM detection timing	72-21	<When FS-533 is installed>	The paper surface detect sensor/1 (PS102) is not turned OFF (unblocked) after the paper exit.
		<When FS-534 or FS-534SD is installed>	The main tray exit sensor (PS16) is not turn OFF even after the set period of time has elapsed after the start of exiting paper.
Misfeed processing location	• Finisher paper exit section (When FS-533 is installed) • Front door (When FS-534 or FS-534SD is installed)		
Relevant parts	<When FS-533 is installed>	• Paper exit motor (M102) • Paper surface detect sensor/1 (PS102) • FS control board (FSCB)	
	<When FS-534 or FS-534SD is installed>	• Main tray exit sensor (PS16) • FS control board (FSCB)	

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS102 I/O check, sensor check	FSCB CN102	FS-533 6-J
3	M102 operation check	FSCB CN109	FS-533 8 to 9-D to E
4	FSCB CP102 conduction check	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS16 I/O check, sensor check	FSCB J9<B>-2 (ON)	FS-534 9-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.8 72-22

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-22		
JAM detection timing	72-22	<When FS-534 or FS-534SD is installed>	The sub tray exit sensor (PS8) is not turned ON (blocked) even after the set period of time has elapsed after the paper reaches the paper transport acceleration point.
Misfeed processing location	Front door		

Relevant parts	• Sub tray exit sensor (PS8) • FS control board (FSCB)

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS8 I/O check, sensor check	FSCB J9<B>-6 (ON)	FS-534 9-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.9 72-23

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-23		
JAM detection timing	72-23	<When FS-534 or FS-534SD is installed>	The sub tray exit sensor (PS8) is not turned OFF (unblocked) even after the set period of time has elapsed after it is turned ON (blocked).
Misfeed processing location	Front door		
Relevant parts	• Sub tray exit sensor (PS8) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS8 I/O check, sensor check	FSCB J9<B>-6 (ON)	FS-534 9-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.10 72-25

(1) Contents

JAM type	Misfeed at SD paper exit section		
JAM code	72-25		
JAM detection timing	72-25	<When FS-534SD is installed>	The fold exit sensor (PS12) is not turned ON by the paper even after the set period of time has elapsed after the half-fold exit operation started.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	• Fold exit sensor (PS12) • SD drive board (SDDB) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	SDDB J9-2 (ON)	SD-511 5-G
3	Replace SDDB.	-	-
4	Replace FSCB.	-	-

- Link to the wiring diagram (SD-511)

1.16.11 72-26

(1) Contents

JAM type	Misfeed at SD paper exit section		
JAM code	72-26		
JAM detection timing	72-26	<When FS-534SD is installed>	The fold exit sensor (PS12) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	• Fold exit sensor (PS12)		

	• SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

(a) When FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	SDDB J9-2 (ON)	SD-511 5-G
3	Replace SDDB.	-	-
4	Replace FSCB.	-	-

- Link to the wiring diagram (SD-511)

1.16.12 72-43

(1) Contents

JAM type	Misfeed at PK JAM		
JAM code	72-43		
JAM detection timing	72-43	<When FS-533+PK-519 is installed>	The punch motor sensor (PS202) does not detect rotation of the punch motor after the laps of given time after the punch motor (M201) started operating.
		<When FS-534+PK-520 or FS-534SD+PK-520 is installed>	The punch position sensor (PS2) is not turned OFF (unblocked) after a lapse of a given time after the punch drive motor (M1) starts rotating.
Misfeed processing location	• Finisher punch section (When FS-533+PK-519 is installed) • Front door (When FS-534+PK-520 or FS-534SD+PK-520 is installed)		
Relevant parts	<When FS-533+PK-519 is installed>		• Punch motor (M201) • Punch motor sensor (PS202) • PK control board (PKCB) • FS control board (FSCB)
	<When FS-534+PK-520 or FS-534SD +PK-520 is installed>		• Punch drive motor (M1) • Punch position sensor (PS2) • FS control board (FSCB)

(2) Procedure

(a) When FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS202 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
3	M201 operation check	PKCB CN203-1 to 2	FS-533 (PK-519) 4-C
4	Replace PKCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534+PK-520 or FS-534SD+PK-520 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J7-2 (ON)	FS-534 (PK-520) 6-K
3	M1 operation check	FSCB J7-7 to 8	FS-534 (PK-520) 7-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.16.13 72-70

(1) Contents

JAM type	Misfeed at PK JAM		
JAM code	72-70		
JAM detection timing	72-70	<When FS-533+PK-519 is installed>	The paper feed sensor (PS201) is not turned OFF even after the set period of time has elapsed after it is turned ON.
Misfeed processing location	Finisher punch section		
Relevant parts	• Fusing motor (M3) • Paper conveyance motor (M101) • Paper feed sensor (PS201) • FS control board (FSCB)		

(2) Procedure

(a) When FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
3	M3 operation check	MFPB CN8E-9 (REM) MFPB CN8E-12 (LOCK)	2-C
4	M101 operation check	FSCB CN101	FS-533 6-J
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.11 FS-533)

1.16.14 72-81

(1) Contents

JAM type	Misfeed at FS staple section		
JAM code	72-81		
JAM detection timing	72-81	<When FS-533 is installed>	The stapler home sensor (PS110) is not turned ON (blocked) after the stapler motor is energized.
Misfeed processing location	Finisher staple section		
Relevant parts	• Stapler home sensor (PS110) • Stapler unit • Stapler relay board (STREYB) • FS control board (FSCB)		

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS110 I/O check, sensor check	FSCB CN110	FS-533 8-D to E
3	Replace the stapler unit.	-	-
4	Replace STREYB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

1.16.15 72-85

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-85		
JAM detection timing	72-85	<When FS-534SD is installed>	The SD entrance sensor (PS1) is not turned ON (blocked) even after the set period of time has elapsed after the staple stacker paper detection sensor (PS31) is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	• SD entrance sensor (PS1) • Staple stacker paper detection sensor (PS31) • SD drive board (SDDB) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS31 I/O check, sensor check	FSCB J12-11 (ON)	FS-534 6-C
3	PS1 I/O check, sensor check	SDDB J4-8 (ON)	SD-511 4-B
4	Replace SDDB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)
- Link to the wiring diagram (SD-511)

1.16.16 72-86

(1) Contents

JAM type	Misfeed at SD transport section		
Misfeed at JAM code	72-86		
JAM detection timing	72-86	<When FS-534SD is installed>	The SD entrance sensor (PS1) is not turned OFF (unblocked) even after the set period of time has elapsed after it is turned ON (blocked). When paper discharge control motor abnormality occurs during paper trailing edge control movement.
Misfeed processing location	Front door		
Relevant parts	• SD entrance sensor (PS1) • Paper discharge control motor (M2) • SD drive board (SDDB) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDDB J4-8 (ON)	SD-511 4-B
3	M2 operation check	SDDB J5-4 to 7	SD-511 3-B
4	Replace SDDB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (SD-511)

1.16.17 72-87

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-87		
JAM detection timing	72-87	<When FS-534SD is installed>	The center staple/fold stacker paper detect sensor (PS3) is not turned ON even after the set period of time has elapsed after the SD entrance sensor (PS1) is turned ON (blocked) by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	• SD entrance sensor (PS1) • Center staple/fold stacker paper detect sensor (PS3) • SD drive board (SDDB) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDDB J4-8 (ON)	SD-511 4-B
3	PS3 I/O check, sensor check	SDDB J7-12 (ON)	SD-511 5-F
4	Replace SDDB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (SD-511)

1.16.18 75-42

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-42		
JAM detection timing	75-42	<When FS-534 or FS-534SD is installed>	The RU entrance sensor (PS2) is not turned ON (blocked) even after the set period of time has elapsed after the copier's paper exit sensor (PS3) is turned OFF (unblocked) by the paper.
Misfeed processing location	Horizontal transport cover		
Relevant parts	• Paper exit sensor (PS3) • RU entrance sensor (PS2) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	5-C
3	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-534 6-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.4.12 FS-534)

1.16.19 75-43

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-43		
JAM detection timing	75-43	<When FS-534 or FS-534SD is installed>	The RU entrance sensor (PS2) is not turned OFF (unlocked) even after the set period of time has elapsed after it is turned ON (blocked).
Misfeed processing location	Horizontal transport cover		
Relevant parts	• RU entrance sensor (PS2) • FS control board (FSCB)		

(2) Procedure

(a) When FS-534 or FS-534SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-534 6-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.12 FS-534)

1.17 7#-## (bizhub C658/C558/C458)

1.17.1 72-11

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-11		
JAM detection timing	72-11	<When FS-537 or FS-537SD is installed>	The FNS middle sensor (PS36) is not turned ON even after the set period of time has elapsed after the FNS entrance sensor (PS34) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-537 or FS-537SD is installed>		• FNS entrance sensor (PS34) • FNS middle sensor (PS36) • FS control board (FSCB)

(2) Procedure

(a) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
3	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.2 72-14

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-14		
JAM detection timing	72-14	<When FS-536 or FS-536SD is installed>	The saddle exit sensor (PS5) is not turned ON even after the set period of time has elapsed after the main tray exit sensor (PS16) is turned ON by the paper.

		<When FS-537 or FS-537SD is installed>	The SD discharge sensor (PS35) is not turned ON even after the set period of time has elapsed after the main tray exit sensor (PS37) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Saddle exit sensor (PS5) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• SD discharge sensor (PS35) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.3 72-15

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-15		
JAM detection timing	72-15	<When FS-536 or FS-536SD is installed>	The saddle exit sensor (PS5) is not turned OFF even after the set period of time has elapsed after it is turned ON.
		<When FS-537 or FS-537SD is installed>	The SD discharge sensor (PS35) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Saddle exit sensor (PS5) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• SD discharge sensor (PS35) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.4 72-16

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-16		
JAM detection timing	72-16	<When FS-533 is installed>	The paper feed sensor (PS101) is not turned ON even after the set period of time has elapsed after the main body's paper exit sensor (PS3) is turned OFF (unblocked) by the paper.
		<When FS-533+PK-519 is installed>	The paper feed sensor (PS101) is not turned ON even after the set period of time has elapsed after the paper feed sensor (PS201) is turned ON by the paper.
		<When FS-536 or FS-536SD is installed>	The FNS entrance sensor (PS4) is not turned ON even after the set period of time has elapsed after the RU entrance sensor (PS2) is turned ON (blocked) by the paper.
		<When FS-537 or FS-537SD is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the RU entrance sensor (PS2) is turned ON (blocked) by the paper.
Misfeed processing location	• Finisher paper feed section (When FS-533 is installed) • Horizontal conveyance cover (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)		
Relevant parts	<When FS-533 or FS-533+PK-519 is installed>		• Paper conveyance motor (M101) • Paper exit sensor (PS3) • Paper feed sensor (PS101) • FS control board (FSCB) • MFP board (MFPB)
	<When FS-536 or FS-536SD is installed>		• RU entrance sensor (PS2) • FNS entrance sensor (PS4) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• RU entrance sensor (PS2) • FNS entrance sensor (PS34) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 or FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	5-C
3	PS101 I/O check, sensor check	FSCB CN111	FS-533 7-D to E
4	PS201 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
5	M101 operation check	FSCB CN101	FS-533 6-J
6	FSCB CP101 conduction check	-	-
7	Replace FSCB	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
3	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J8<B>-11 (ON)	FS-537/FS-537SD 9-D
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.5 72-17

(1) Contents

JAM type	Misfeed at FS transport section

JAM code	72-17		
JAM detection timing	72-17	<When FS-533 is installed>	The paper feed sensor (PS101) is not turn OFF even after the set period of time has elapsed after it turns ON.
		<When FS-536 or FS-536SD is installed>	The FNS entrance sensor (PS4) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
		<When FS-537 or FS-537SD is installed>	The FNS entrance sensor (PS34) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	• Finisher paper feed section (When FS-533 is installed) • Front door (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)		
Relevant parts	<When FS-533 is installed>		• Paper conveyance motor (M101) • Paper feed sensor (PS101) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>		• FNS entrance sensor (PS4) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• FNS entrance sensor (PS34) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS101 I/O check, sensor check	FSCB CN111	FS-533 7-D to E
3	M101 operation check	FSCB CN101	FS-533 6-J
4	FSCB CP101 conduction check	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.6 72-18

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-18		
JAM detection timing	72-18	<When FS-536 or FS-536SD is installed>	• The main tray exit sensor (PS16) is not turned ON even after the set period of time has elapsed after the FNS entrance sensor (PS4) is turned ON by the paper. • While the buffer is controlled, the main tray exit sensor (PS16) is not tuned ON even after the set period of time has elapsed after the reverse rotation drive is started.
		<When FS-537 or FS-537SD is installed>	The Main tray exit sensor (PS37) is not turned ON even after the set period of time has elapsed after the FNS middle sensor (PS36) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• FNS entrance sensor (PS4) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• FNS middle sensor (PS36) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
3	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
3	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.7 72-19

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-19		
JAM detection timing	72-19	<When FS-536 or FS-536SD is installed>	The main tray exit sensor (PS16) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
		<When FS-537 or FS-537SD is installed>	The main tray exit sensor (PS37) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 16-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.8 72-21

(1) Contents

JAM type	Misfeed at FS transport section		
JAM CODE	72-21		
JAM detection timing	72-21	<When FS-533 is installed>	The paper surface detect sensor/1 (PS102) is not turned OFF (unblocked) after the paper exit.
		<When FS-536 or FS-536SD is installed>	The staple stacker paper detection sensor (PS31) is not turn OFF even after the set period of time has elapsed after the start of exiting paper.
		<When FS-537 or FS-537SD is installed>	The alignment plate paper detection sensor (PS32) is not turn OFF even after the set period of time has elapsed after the start of exiting paper.
Misfeed processing location	• Finisher paper exit section (When FS-533 is installed) • Front door (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)		

Relevant parts	<When FS-533 is installed>	• Paper exit motor (M102) • Paper surface detect sensor/1 (PS102) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Staple stacker paper detection sensor (PS31) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Alignment plate paper detection sensor (PS32) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS102 I/O check, sensor check	FSCB CN102	FS-533 6-J
3	M102 operation check	FSCB CN109	FS-533 8 to 9-D to E
4	FSCB CP102 conduction check	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS31 I/O check, sensor check	FSCB J12-11 (ON)	FS-536/FS-536SD 6-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS32 I/O check, sensor check	FSCB J21-12 (ON)	FS-537/FS-537SD 5-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.9 72-22

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-22		
JAM detection timing	72-22	<When FS-536 or FS-536SD is installed>	The sub tray exit sensor (PS8) is not turned ON (blocked) even after the set period of time has elapsed after the paper reaches the paper transport acceleration point.
		<When FS-537 or FS-537SD is installed>	The sub tray exit sensor (PS24) is not turned ON (blocked) even after the set period of time has elapsed after the paper reaches the paper transport acceleration point.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Sub tray exit sensor (PS8) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Sub tray exit sensor (PS24) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS8 I/O check, sensor check	FSCB J9<B>-8 (ON)	FS-536/FS-536SD 11-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS24 I/O check, sensor check	FSCB J15-3 (ON)	FS-537/FS-537SD 16-K to L

Step	Action	Control signal	Location of electrical component
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.10 72-23

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-23		
JAM detection timing	72-23	<When FS-536 or FS-536SD is installed>	The sub tray exit sensor (PS8) is not turned OFF (unblocked) even after the set period of time has elapsed after it is turned ON (blocked).
		<When FS-537 or FS-537SD is installed>	The sub tray exit sensor (PS24) is not turned OFF (unblocked) even after the set period of time has elapsed after PS24 turns ON (block).
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Sub tray exit sensor (PS8) • FNS entrance sensor (PS4) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Sub tray exit sensor (PS24) • FNS entrance sensor (PS34) • FNS middle sensor (PS36) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Clean the sensor of paper path.	-	-
3	PS8 I/O check, sensor check	FSCB J9<B>-8 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Clean the sensor of paper path.	-	-
3	PS24 I/O check, sensor check	FSCB J15-3 (ON)	FS-537/FS-537SD 16-K to L
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.11 72-25, 72-26

(1) Contents

JAM type	Misfeed at SD paper exit section		
JAM code	72-25, 72-26		
JAM detection timing	72-25	<When FS-536SD or FS-537SD is installed>	The fold exit sensor (PS12) is not turned ON by the paper even after the set period of time has elapsed after the half-fold exit operation started.
	72-26	<When FS-536SD or FS-537SD is installed>	The fold exit sensor (PS12) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• Fold exit sensor (PS12) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	SDCB J9-2 (ON)	FS-536/FS-536SD 5-P FS-537/FS-537SD 4-P
3	Replace SDCB. (FS-536SD / FS-537SD)	-	-

Step	Action	Control signal	Location of electrical component
4	Replace FSCB. (FS-536SD / FS-537SD)	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.12 72-31, 72-34

(1) Contents

JAM type	Misfeed at JS exit section		
JAM code	72-31, 72-34		
JAM detection timing	72-31	<When FS-537+JS-602 or FS-537SD+JS-602 is installed>	The job tray paper exit sensor (PS402) is not turned ON (unblocked) even after the set period of time has elapsed after the route change gate home sensor (PS21) turns OFF (unblock) by the paper.
	72-34	<When FS-537+JS-602 or FS-537SD+JS-602 is installed>	The job tray paper exit sensor (PS402) is not turned OFF (unblocked) even after the set period of time has elapsed after PS402 turns ON (block) by a paper.
Misfeed processing location	Separator cover		
Relevant parts	<When FS-537+JS-602 or FS-537SD +JS-602 is installed>	• Job tray paper exit sensor (PS402) • FS control board (FSCB)	

(2) Procedure

(a) When FS-537+JS-602 or FS-537SD+JS-602 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS402 I/O check, sensor check	FSCB J10-6 (ON)	FS-537/FS-537SD 9-M
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.13 72-35

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-35		
JAM detection timing	72-35	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	When a paper is fed from the upper tray, the paper entrance sensor / Lw (PS206) is not turned ON (unblocked) even after the set period of time has elapsed after the transfer clutch /Up (CL201) turns ON by a paper. When a paper is fed from the lower tray, The paper entrance sensor / Lw (PS206) is not turned ON (unblocked) even after the set period of time has elapsed after the transfer clutch /Lw (CL202) turns ON by a paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>	• Transfer clutch /Up (CL201) • Transfer clutch /Lw (CL202) • Paper entrance sensor /Lw (PS206) • PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

(a) When FS-537+PI-507 or FS-537SD+PI-507 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS206 I/O check, sensor check	PIDB CN53<A>-5 (ON)	PI-507 10-C
3	CL201 operation check	PIDB CN54-3 (ON)	PI-507 6-C
4	CL202 operation check	PIDB CN56-1 (ON)	PI-507 9-C
5	PIDB ICP4 conduction check.	-	-
6	Replace PIDB.	-	-
7	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.19 PI-507)

1.17.14 72-40, 72-41

(1) Contents

JAM type	Misfeed at ZU section

JAM code	72-40, 72-41		
JAM detection timing	72-40	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The FNS middle sensor (PS36) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
	71-41	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	When the second fold is started in Z-fold mode, the FNS middle sensor (PS36) is not switched from ON to OFF by the paper after the set period of time has elapsed.
Misfeed processing location	Front door		
Relevant parts	<When FS-537+ZU-609 or FS-537SD +ZU-609 is installed>		• ZU transport motor (M500) • Folding guide motor (M501) • FNS middle sensor (PS36) • ZU drive board (ZUDB) • FS control board (FSCB)

(2) Procedure

(a) When FS-537+ZU-609 or FS-537SD+ZU-609 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
3	M500 operation check	ZUDB CN6-1 to 6	ZU-609 1 to 2-B
4	M501 operation check	ZUDB CN6-9 to 12	ZU-609 2-B
5	ZUDB ICP1 or ICP2 conduction check.	-	-
6	Replace ZUDB.	-	-
7	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)
- Link to the wiring diagram (N.4.18 ZU-609)

1.17.15 72-43

(1) Contents

JAM type	Misfeed at PK JAM		
JAM code	72-43		
JAM detection timing	72-43	<When FS-533+PK-519 is installed>	The punch motor sensor (PS202) does not detect rotation of the punch motor after the laps of given time after the punch motor (M201) started operating.
		<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	The punch position sensor (PS2) is not turned ON (unblocked) after a lapse of a given time after the punch drive motor (M1) starts rotating.
		<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The PK punch home sensor/2 (PS301) is not turned ON (unblocked) after a lapse of a given time after the punch drive motor (M301) starts rotating.
	-	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	Paper jam of a sheet of paper left at the PK section results, when the main power switch is turned ON, and the paper is detected by the paper size detect board (PSDTB).
Misfeed processing location	• Finisher punch section (When FS-533+PK-519 is installed) • Front door (When FS-536+PK-520, FS-536SD+PK-520, FS-537+PK-523, or FS-537SD+PK-523 is installed)		
Relevant parts	<When FS-533+PK-519 is installed>		• Punch motor (M201) • Punch motor sensor (PS202) • PK control board (PKCB) • FS control board (FSCB)
	<When FS-536+PK-520 or FS-536SD +PK-520 is installed>		• Punch drive motor (M1) • Punch position sensor (PS2) • FS control board (FSCB)
	<When FS-537+PK-523 or FS-537SD +PK-523 is installed>		• Punch drive motor (M301) • PK punch home sensor/2 (PS301) • Punch control board (PKCB) • FS control board (FSCB)
	Residual paper jam		• Paper size detect board (PSDTB) • FS control board (FSCB)

(2) Procedure

(a) When FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-

Step	Action	Control signal	Location of electrical component
2	PS202 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
3	M201 operation check	PKCB CN203-1 to 2	FS-533 (PK-519) 4-C
4	Replace PKCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536+PK-520 or FS-536SD+PK-520 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J7-2 (ON)	FS-536/FS-536SD (PK-520) 13-K
3	M1 operation check	FSCB J7-7 to 8	FS-536/FS-536SD (PK-520) 13-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537+PK-523 or FS-537SD+PK-523 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS301 I/O check, sensor check	PKCB CN36-5 (ON)	PK-523 3-C
3	M301 operation check	PKCB CN35-1 to 3	PK-523 2-C
4	Replace PKCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.17 PK-523)

(d) Residual paper jam (When FS-537+PK-523 or FS-537SD+PK-523 is installed)

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Adjust the sensitivity (light intensity) by selecting [Finisher] -> [FS-FN adjustment] -> [Punch F. Sensor Intensity Adj.]. After adjustment, open and then close the front door, and check if the residual paper jam indication disappears. To turn off the main power switch, wait for more than 10 seconds until the residual paper jam indication disappears	-	-
3	Replace PSDTB.	-	-
4	Replace FSCB.	-	-

1.17.16 72-49

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-49		
JAM detection timing	72-49	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The paper entrance sensor /Up (PS201) is not turned ON (unblocked) after a lapse of a given time after the transfer clutch /Up is turned ON.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Transfer clutch /Up (CL201) • Paper entrance sensor /Up (PS201) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

(a) When FS-537+PI-507 or FS-537SD+PI-507 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PIDB CN53<A>-2 (ON)	PI-507 10-C
3	CL201 operation check	PIDB CN54-3 (ON)	PI-507 6-C
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.19 PI-507)

1.17.17 72-50

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-50		
JAM detection timing	72-50	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the paper entrance sensor /Up (PS201) turns ON (unblock) by a paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Paper entrance sensor /Up (PS201) • FNS entrance sensor (PS34) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

(a) When FS-537+PI-507 or FS-537SD+PI-507 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PIDB CN53<A>-2 (ON)	PI-507 10-C
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.19 PI-507)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.18 72-51

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-51		
JAM detection timing	72-51	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the paper entrance sensor /Lw (PS206) is turned ON by the paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Paper entrance sensor /Lw (PS206) • FNS entrance sensor (PS34) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

(a) When FS-537+PI-507 or FS-537SD+PI-507 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS206 I/O check, sensor check	PIDB CN53<A>-5 (ON)	PI-507 10-C
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.19 PI-507)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.19 72-70

(1) Contents

JAM type	Misfeed at PK JAM		
JAM code	72-70		
JAM detection timing	72-70	<When FS-533+PK-519 is installed>	The paper feed sensor (PS201) is not turned OFF even after the set period of time has elapsed after it is turned ON.
Misfeed processing location	Finisher punch section		
Relevant parts	• Fusing motor (M3) • Paper conveyance motor (M101) • Paper feed sensor (PS201)		

	• FS control board (FSCB)

(2) Procedure

(a) When FS-533+PK-519 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PKCB CN204	FS-533 (PK-519) 5-C
3	M3 operation check	MFPB CN14E-9 (REM) MFPB CN41E-12 (LOCK)	2-C
4	M101 operation check	FSCB CN101	FS-533 6-J
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.11 FS-533)

1.17.20 72-81

(1) Contents

JAM type	Misfeed at FS staple section		
JAM code	72-81		
JAM detection timing	72-81	<When FS-533 is installed>	The stapler home sensor (PS110) is not turned ON (blocked) after the stapler motor is energized.
		<When FS-536 or FS-536SD is installed>	The stapler position sensor (center) (PS24) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the side stapler movement motor (M13) turned ON.
		<When FS-537 or FS-537SD is installed>	The stapler position sensor (center) (PS20) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the stapler movement motor (M19) turned ON.
Misfeed processing location	• Finisher staple section (When FS-533 is installed) • Front door (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)		
Relevant parts	<When FS-533 is installed>	• Stapler home sensor (PS110) • Stapler unit • Stapler relay board (STREYB) • FS control board (FSCB)	
	<When FS-536 or FS-536SD is installed>	• Side stapler movement motor (M13) • Stapler position sensor (Center) (PS24) • FS control board (FSCB)	
	<When FS-537 or FS-537SD is installed>	• Stapler movement motor (M19) • Stapler position sensor (Center) (PS20) • FS control board (FSCB)	

(2) Procedure

(a) When FS-533 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS110 I/O check, sensor check	FSCB CN110	FS-533 8-D to E
3	Replace the stapler unit.	-	-
4	Replace STREYB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	M13 operation check	FSCB J11<A>-1 to 4	FS-536/FS-536SD 4-C
3	PS24 I/O check, sensor check	FSCB J11<B>-6 (ON)	FS-536/FS-536SD 5-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	M19 operation check	FSCB J17-10 to 13	FS-537/FS-537SD 14-D
3	PS20 I/O check, sensor check	FSCB J16-5 (ON)	FS-537/FS-537SD 15-D

Step	Action	Control signal	Location of electrical component
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.21 72-84

(1) Contents

JAM type	Misfeed at SD staple section		
JAM code	72-84		
JAM detection timing	72-84	<When FS-536SD or FS-537SD is installed>	The stapler home position sensor/R does not turn ON even after the set period of time has elapsed after the staple operation started.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• Staple unit • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Replace the staple unit. (FS-536SD / FS-537SD)	-	-
3	Replace SDCB. (FS-536SD / FS-537SD)	-	-
4	Replace FSCB. (FS-536SD / FS-537SD)	-	-

1.17.22 72-85

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-85		
JAM detection timing	72-85	<When FS-536SD is installed>	The SD entrance sensor (PS1) is not turned ON (blocked) even after the set period of time has elapsed after the saddle exit sensor (PS5) is turned ON by the paper.
		<When FS-537SD is installed>	The SD entrance sensor (PS1) is not turned ON (blocked) even after the set period of time has elapsed after the SD discharge sensor (PS35) is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD is installed>		• SD entrance sensor (PS1) • Saddle exit sensor (PS5) • SD control board (SDCB) • FS control board (FSCB)
	<When FS-537SD is installed>		• SD entrance sensor (PS1) • SD discharge sensor (PS35) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-536/FS-536SD 5-L
4	Replace SDCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-537/FS-537SD 4-K
4	Replace SDCB.	-	-

Step	Action	Control signal	Location of electrical component
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.23 72-86

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-86		
JAM detection timing	72-86	<When FS-536SD or FS-537SD is installed>	The SD entrance sensor (PS1) is not turned OFF (unblocked) even after the set period of time has elapsed after it is turned ON (blocked).
Misfeed processing location	Front door		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• SD entrance sensor (PS1) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-536/FS-536SD 5-L FS-537/FS-537SD 4-K
3	Replace SDCB. (FS-536SD / FS-537SD)	-	-
4	Replace FSCB. (FS-536SD / FS-537SD)	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.24 72-87

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-87		
JAM detection timing	72-87	<When FS-536SD or FS-537SD is installed>	The center staple/fold stacker paper detect sensor (PS3) is not turned ON even after the set period of time has elapsed after the SD entrance sensor (PS1) is turned ON (blocked) by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• SD entrance sensor (PS1) • Center staple/fold stacker paper detect sensor (PS3) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDCB J4-3 (ON)	FS-536/FS-536SD 4-K FS-537/FS-537SD 5-L
3	PS3 I/O check, sensor check	SDCB J9-2 (ON)	FS-536/FS-536SD 5-P FS-537/FS-537SD 5-P
4	Replace SDCB. (FS-536SD / FS-537SD)	-	-
5	Replace FSCB. (FS-536SD / FS-537SD)	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.25 75-42

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-42		
JAM detection timing	75-42	<When FS-536 or FS-536SD is installed> <When FS-537 or FS-537SD is installed>	The RU entrance sensor (PS2) is not turned ON (blocked) even after the set period of time has elapsed after the main body's paper exit sensor (PS39) is turned ON (unblocked) by the paper.

Misfeed processing location	Horizontal transport cover	
Relevant parts	<When FS-536 or FS-536SD is installed> <When FS-537 or FS-537SD is installed>	• Paper exit sensor (PS3) • RU entrance sensor (PS2) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	C658/C558 7-C C458 8-C
3	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	MFPB CN17E-7 (ON)	C658/C558 7-C C458 8-C
3	PS2 I/O check, sensor check	FSCB J8<B>-15 (ON)	FS-537/FS-537SD 9-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.17.26 75-43

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-43		
JAM detection timing	75-43	<When FS-536, FS-536SD, FS-537, or FS-537SD is installed>	The RU entrance sensor (PS2) is not turned OFF (unlocked) even after the set period of time has elapsed after it is turned ON (blocked).
Misfeed processing location	Horizontal transport cover		
Relevant parts	<When FS-536, FS-536SD, FS-537, or FS-537SD is installed>	• RU entrance sensor (PS2) • FS control board (FSCB)	

(2) Procedure

(a) When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J8<B>-15 (ON)	FS-537/FS-537SD 9-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

1.18 9#-## (bizhub C368/C308/C258)

1.18.1 92-01, 92-02, 92-40

(1) Contents

JAM type	Misfeed at duplex pre-registration section
JAM code	92-01, 92-02, 92-40

JAM detection timing	92-01	The registration sensor (PS1) is not turned ON (unblocked) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	92-02	For the second-side feed of paper in the duplex mode, loop forming has not been complete before the second side of a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	92-40	For the second-side feed of paper in the duplex mode, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the duplex pre-registration section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Transport motor (M1) • ADU transport clutch (CL6) • Registration sensor (PS1) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	FRB CN8-3 (ON)	6-L
3	CL6 operation check	MFPB CN15EA-13 (ON)	7-C
4	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
5	Replace FRB.	-	-
6	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.18.2 93-10

(1) Contents

JAM type	Misfeed at duplex transport section	
JAM code	93-10	
JAM detection timing	93-10	The ADU paper passage sensor/2 (PS41) is not turned ON (blocked) even after the set period of time has elapsed after the ADU paper passage sensor/1 (PS40) is turned ON (unblocked) by the paper.
	-	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/1 (PS40) is turned ON (unblocked) or the ADU paper passage sensor/2 (PS41) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the duplex transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• Transport motor (M1) • ADU transport motor (M5) • ADU transport clutch (CL6) • ADU paper passage sensor/1 (PS40) • ADU paper passage sensor/2 (PS41) • Front side board (FRB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS40 I/O check, sensor check	MFPB CN17E-10 (ON)	5-C
3	PS41 I/O check, sensor check	MFPB CN17E-13 (ON)	5-C
4	CL6 operation check	MFPB CN15EA-13 (ON)	7-C
5	M1 operation check	MFPB CN8E-3 (REM) MFPB CN8E-6 (LOCK)	2-C
6	M5 operation check	MFPB CN17E-1 to 4	4-C
7	MFPB ICP2E conduction check	-	-
8	Replace FRB.	-	-

Step	Action	Control signal	Location of electrical component
9	Replace MFPB.	-	-

- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

1.18.3 99-01

(1) Contents

JAM type	Controller JAM (paper size error)	
JAM code	99-01	
JAM detection timing	99-01	• As a result of a paper size error, the controller transmits a forced stop command to the printer engine and the printer engine is internally processing the size error. • As a result of a paper size error, the controller transmits a forced stop command to the printer engine; but the paper causing the size error cannot be fed out.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.18.4 99-02

(1) Contents

JAM type	Controller JAM (controller forced stop command)	
JAM code	99-02	
JAM detection timing	99-02	The controller detects a fault in print sequence.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.18.5 99-03

(1) Contents

JAM type	Controller JAM (image processing)	
JAM code	99-03	
JAM detection timing	99-03	Image stabilization not completing a job.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.18.6 99-04

(1) Contents

JAM type	Controller JAM (finisher pre-drive is not completed)	
JAM code	99-04	
JAM detection timing	99-04	The finisher pre-drive is not completed even with a print start command received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

1.18.7 99-05

(1) Contents

JAM type	Controller JAM (main body not starting a job)	
JAM code	99-05	
JAM detection timing	99-05	Paper is not taken up and fed in even with a print start command received. The job is not started even with a print start command received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.18.8 99-06

(1) Contents

JAM type	Controller JAM (finisher internal processing error)	
JAM code	99-06	
JAM detection timing	99-06	Finisher internal control processing is not completed even with the job completed.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the finisher.	-	-

1.18.9 99-07

(1) Contents

JAM type	Controller JAM (main body not completing a job)	
JAM code	99-07	
JAM detection timing	99-07	The main body does not complete its paper exit operation. Finisher does not complete its paper exit operation.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

1.18.10 99-08

(1) Contents

JAM type	Controller JAM (finisher not starting a job)	
JAM code	99-08	
JAM detection timing	99-08	The finisher does not accept a print start command.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

1.18.11 99-09

(1) Contents

JAM type	Controller JAM (finisher not completing a job)	
JAM code	99-09	
JAM detection timing	99-09	• A paper exit or paper finishing process inside the finisher is not completed. • The finisher does not start during a reset procedure from the jam.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

1.19 9#-## (bizhub C658/C558/C458)

1.19.1 92-01, 92-02, 92-04, 92-40

(1) Contents

JAM type	Misfeed at duplex pre-registration section	
JAM code	92-01, 92-02, 92-04, 92-40	
JAM detection timing	92-01	The registration sensor1 (PS1) is not turned ON (unblocked) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	92-02	For the second-side feed of paper in the duplex mode, loop forming has not been complete before the second side of a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	92-04	The registration sensor2 (PS72) is not turned ON even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	92-40	For the second-side feed of paper in the duplex mode, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the duplex pre-registration section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• ADU transport motor2 (M26) • Registration sensor1 (PS1) • Registration sensor2 (PS72) • Expansion control board (EXCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	EXCB CN6-3 (ON)	26-P
3	PS72 I/O check, sensor check	EXCB CN6-5 (ON)	26-P
4	M26 operation check	EXCB CN4-1 to 4	24-P
5	Replace EXCB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.19.2 93-10

(1) Contents

JAM type	Misfeed at duplex transport section
JAM code	93-10

JAM detection timing	93-10	The ADU paper passage sensor2 (PS41) is not turned ON (blocked) even after the set period of time has elapsed after the ADU paper passage sensor1 (PS40) is turned ON (unblocked) by the paper.
	-	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor1 (PS40) is turned ON (unblocked) or the ADU paper passage sensor2 (PS41) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the duplex transport section results, if a sheet of paper is determined to exist at a position detected when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Right door	
Relevant parts	• ADU transport motor1 (M5) • ADU transport motor2 (M26) • ADU paper passage sensor1 (PS40) • ADU paper passage sensor2 (PS41) • Expansion control board (EXCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS40 I/O check, sensor check	MFPB CN17E-10 (ON)	C658/C558 7-C C458 8-C
3	PS41 I/O check, sensor check	EXCB CN8<B>-3 (ON)	24-T
4	M5 operation check	MFPB CN17E-1 to 4	C658/C558 6-C C458 8-C
5	M26 operation check	EXCB CN4-1 to 4	24-P
6	Replace EXCB.	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

1.19.3 99-01

(1) Contents

JAM type	Controller JAM (paper size error)	
JAM code	99-01	
JAM detection timing	99-01	• As a result of a paper size error, the controller transmits a forced stop command to the printer engine and the printer engine is internally processing the size error. • As a result of a paper size error, the controller transmits a forced stop command to the printer engine; but the paper causing the size error cannot be fed out.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.4 99-02

(1) Contents

JAM type	Controller JAM (controller forced stop command)	
JAM code	99-02	
JAM detection timing	99-02	The controller transmits a forced stop command under a condition other than a paper size error during a print cycle.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.5 99-03

(1) Contents

JAM type	Controller JAM (image processing)	
JAM code	99-03	
JAM detection timing	99-03	Image stabilization not completing a job.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.6 99-04

(1) Contents

JAM type	Controller JAM (a job reservation in the main body is not released)	
JAM code	99-04	
JAM detection timing	99-04	A job reservation is not released after a lapse of a given time after that a print start command has been received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.7 99-05

(1) Contents

JAM type	Controller JAM (main body not starting a job)	
JAM code	99-05	
JAM detection timing	99-05	A waiting status is not released even with a print start command received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.8 99-06

(1) Contents

JAM type	Controller JAM (print control on the main body is not completed)	
JAM code	99-06	
JAM detection timing	99-06	Print control is not completed even after a job has been completed.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.9 99-07

(1) Contents

JAM type	Controller JAM (main body not completing a job)

JAM code	99-07	
JAM detection timing	99-07	The engine does not stop after a lapse of a given time after that a print has finished.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body.	-	-

1.19.10 99-08

(1) Contents

JAM type	Controller JAM (finisher not starting a job)	
JAM code	99-08	
JAM detection timing	99-08	The finisher does not accept a print start command.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body. Or, open and close the front door of the finisher.	-	-

1.19.11 99-09

(1) Contents

JAM type	Controller JAM (finisher not completing a job)	
JAM code	99-09	
JAM detection timing	99-09	• A paper exit or paper finishing process inside the finisher is not completed. • The finisher does not start during a reset procedure from the jam.
Misfeed processing location	-	
Relevant parts	-	

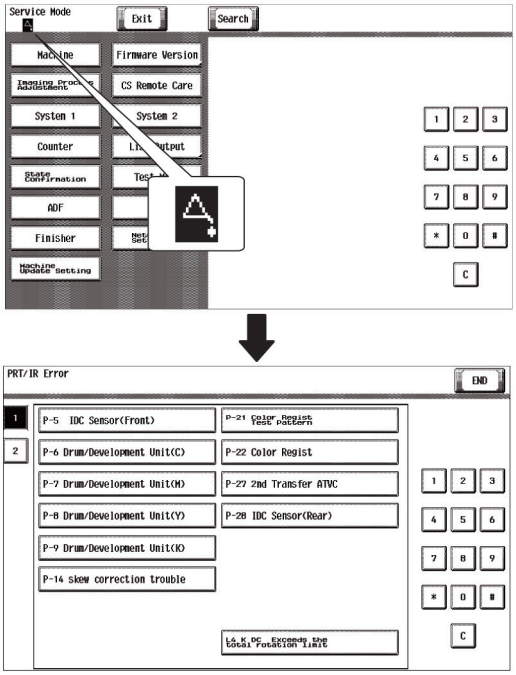
(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the lower front door of the main body. Or, open and close the front door of the finisher.	-	-

2. MALFUNCTION CODE

2.1 Display procedure

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding warning code and maintenance call mark on the control panel.
- Touching the maintenance call mark will display the corresponding warning code on the state confirm screen.



2.2 List of the malfunction code

- If an image stabilization or scanner fault occurs, the corresponding warning code appears.

Malfunction code	Contents
S-1	CCD gain adjustment failure
S-2	CIS gain adjustment failure * 1
D-1	Split line detect (front side)
D-3	Split line detect (back side) * 1
P-5	IDC sensor/Fr failure
P-28	IDC sensor/Rr failure
P-6	Drum/Development unit (C) failure
P-7	Drum/Development unit (M) failure
P-8	Drum/Development unit (Y) failure
P-9	Drum/Development unit (K) failure
P-14	Skew correction trouble
P-21	Color regist test pattern failure
P-22	Color regist adjust failure
P-27	Secondary transfer ATVC failure
P-32	Heating roller temperature sensor1 temperature detection failure *2
P-33	LD malfunction

- *1: bizhub C368/C308/C258: When DF-704 is installed, bizhub C658/C558/C458
- *2: bizhub C658/C558

2.3 S-1

2.3.1 Contents

Malfunction type	CCD gain adjustment failure
Malfunction code	S-1
Malfunction detection timing	It is detected that the CCD clamp gain adjustment value is faulty.
Relevant parts	• LED exposure unit • Scanner drive board (SCDB) • CCD board (CCDB) • MFP board (MFPB)

2.3.2 Procedure

1. Correct the harness connection between CCDB CN3-MFPB CN1 if faulty.
2. Check for possible extraneous light and correct as necessary.
3. Clean the lens, mirrors, CCD surface, and shading sheet if dirty.
4. Correct reflective mirror of the scanner if faulty, or change scanner mirror.
5. Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace SCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.4 S-2

2.4.1 Contents

Malfunction type	CIS gain adjustment failure (bizhub C368/C308/C258: When DF-704 is installed, bizhub C658/C558/C458)
Malfunction code	S-2
Malfunction detection timing	It is detected that the CIS clamp gain adjustment value is faulty.
Relevant parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

2.4.2 Procedure

1. Correct the harness connection between CIS and DSIPB if faulty.
2. Correct the harness connection between DSIPB CN01-MFPB CN22 if faulty.
3. Check for possible extraneous light and correct as necessary.
4. Wipe clean the back side scanning glass surface and shading sheet.
5. Replace CIS. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace DSIPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.5 D-1 (bizhub C368/C308/C258)

2.5.1 Contents

Malfunction type	Split line detect (front side)	
Malfunction code	D-1	
Malfunction detection timing	• While recovering from the power save mode or when the main power switch and power key are ON, it detects whether or not stain exist at the document reading glass when the DF is closed. This warning will be displayed if the original is set to DF when stain exist. • The thin line detection level and the warning display can be changed by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Front Side].	
Relevant parts	<When DF-629 is installed>	• Glass cleaning motor (M4) • Document reading glass cleaning sensor (PS12) • DF control board (DFCB)
	<When DF-704 is installed>	• Document reading glass cleaning motor (M6) • Document reading glass cleaning sensor (PS13) • DF control board (DFCB)

2.5.2 Procedure

When DF-629 is installed

1. Wipe clean the document reading glass surface.
2. Check the glass cleaning roller unit for proper installation and correct if necessary.
   Clean the glass cleaning roller unit if dirty.
3. Select [Service Mode] -> [System 2] ->[ADF Scan Glass Contamin. Set.] -> [Front Side], and change the setting.
4. Check the DFCB connector for proper connection and correct as necessary.
5. M4 operation check.
6. Replace the glass cleaning roller unit.
7. Replace DFCB.

When DF-704 is installed

1. Wipe clean the document reading glass surface.
2. Check the front side glass cleaning roller unit for proper installation and correct if necessary.
   Clean the front side glass cleaning roller unit if dirty.
3. Select [Service Mode] -> [System 2] ->[ADF Scan Glass Contamin. Set.] -> [Front Side], and change the setting.
4. Check the DFCB connector for proper connection and correct as necessary.
5. M6 operation check
6. Replace the front side glass cleaning roller unit.
7. Replace DFCB.

2.6 D-1 (bizhub C658/C558/C458)

2.6.1 Contents

Malfunction type	Split line detect (front side)
Malfunction code	D-1

Malfunction detection timing	• While recovering from the power save mode or when the main power switch and power key are ON, it detects whether or not stain exist at the document reading glass when the dual scan document feeder is closed. This warning will be displayed if the original is set to the reverse automatic document feeder when stain exist. • The thin line detection level and the warning display can be changed by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Front Side].
Relevant parts	• Front side cleaning motor (M8) • Front side cleaning home sensor (PS18) • DF control board (DFCB)

2.6.2 Procedure

1. Wipe clean the document reading glass surface.
2. Check the front side glass cleaning roller unit for proper installation and correct if necessary. Clean the front side glass cleaning roller unit if dirty.
3. Select [Service Mode] -> [System 2] ->[ADF Scan Glass Contamin. Set.] -> [Front Side], and change the setting.
4. Check the DFCB connector for proper connection and correct as necessary.
5. M8 operation check
6. Replace the front side glass cleaning roller unit.
7. Replace DFCB.

2.7 D-3

2.7.1 Contents

Malfunction type	Split line detect (back side) (bizhub C368/C308/C258: When DF-704 is installed, bizhub C658/C558/C458)
Malfunction code	D-3
Malfunction detection timing	• While recovering from the power save mode or when the main power switch and power key are ON, it detects whether or not stain exist at the back side original scanning section (CIS) when the DF is closed. This warning will be displayed if the original is set to DF when stain exist. • The thin line detection level and the warning display can be changed by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side].
Relevant parts	• CIS module (CIS) • bizhub C368/C308/C258: CIS power supply (CISPU) • bizhub C658/C558/C458: DF power supply (DFPU) • Dual scan image processing board (DSIPB)

2.7.2 Procedure

1. Wipe clean the CIS glass surface.
2. Check the back side glass cleaning roller unit for proper installation and correct if necessary. Clean the back side glass cleaning roller unit if dirty.
3. If there is a problem in the CIS module connection, correct the faulty connection.
4. Replace CIS. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5. Replace CISPU.
6. Replace DCPU.
7. Replace DSIPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.8 P-5, P-28

2.8.1 Contents

Malfunction type	IDC sensor/Fr failure, IDC sensor/Rr failure
Malfunction code	P-5, P-28
Malfunction detection timing	• During IDC sensor light intensity correction, output voltage detected for all eight sample patterns are 3.35 V or more. • During IDC sensor light intensity correction, sensor output voltage for light intensity selected after the correction is under 0.7 V. • During IDC base surface detective control, sensor output voltage detected is under 0.7 V or over 3.35V. • During image stabilization (gamma correction control), detected output value for IDC sensor did not go below threshold (half the value of what is detected by IDC sensor on the belt surface) for three consecutive times (position of the pattern end is not detected). • During image stabilization (gamma correction control), sensor's output value of each color for hyper 0 gradation after the primary approximation is half the detection level on the belt surface or under.
Relevant parts	• IDC sensor/Fr (IDCS/Fr) • IDC sensor/Rr (IDCS/Rr) • IDC sensor shutter solenoid (SD2) • High voltage unit (HV) • Transfer belt unit

2.8.2 Procedure

1. Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2. Replace the transfer belt unit if the transfer belt is damaged. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Reinstall or reconnect IDCS/Fr assy or IDCS/Rr assy, sensor shutter or connector, if it is installed or connected improperly.
4. Clean IDCS/Fr or IDCS/Rr if it is dirty.
5. Check the HV connector for proper connection and correct as necessary.

6. SD2 operation check.
7. Open/close the front door, run an image stabilization sequence, and select [State Confirmation] -> [Level History 1] to check the IDC value.
   IDC1: IDCS/Fr
   IDC2: IDCS/Rr
   If the value is 1.0 V or less, replace IDCS/Fr or IDCS/Rr.
8. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.9 P-6, P-7, P-8, P-9

2.9.1 Contents

Malfunction type	Drum/Development unit (C) failure, Drum/Development unit (M) failure, Drum/Development unit (Y) failure, Drum/Development unit (K) failure
Malfunction code	P-6, P-7, P-8, P-9
Malfunction detection timing	• All density readings taken from the density pattern produced on the transfer belt are 1.0 g/m^2 (IDC sensor photo receiver output) or less during max. density adjustment (Vg/Vdc adjustment). • All density readings taken from the density pattern produced on the transfer belt are 5.0 g/m^2 (IDC sensor photo receiver output) and more during max. density adjustment (Vg/Vdc adjustment).
Relevant parts	• Drum unit/Y,M,C,K • Developing unit/Y,M,C,K • IDC sensor/Fr (IDCS/Fr) • IDC sensor/Rr (IDCS/Rr) • IDC sensor shutter solenoid (SD2) • MFP board (MFPB) • High voltage unit (HV) • Transfer belt unit

2.9.2 Procedure

1. Select [Imaging Process Adjustment] -> [Max Image Density Adj] and, if the setting value is negative, readjust.
2. Check the drive transmission portion of the drum/developing unit and correct as necessary.
3. Clean the IDC sensor/Fr (IDCS/Fr) or IDC sensor/Rr (IDCS/Rr) window if dirty.
4. Clean the contact of the drum/developing unit connector if dirty.
5. Check the HV connector for proper connection and correct as necessary.
6. SD2 operation check.
7. Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8. Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
9. Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
10. Replace HV. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
11. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.10 P-14

2.10.1 Contents

Malfunction type	Skew correction trouble
Malfunction code	P-14
Malfunction detection timing	The difference between the skew default position setting value and the cumulative amount of skew adjustment values goes over the predetermined value.
Relevant parts	• IDC sensor/Fr (IDCS/Fr) • IDC sensor/Rr (IDCS/Rr) • Drum unit/Y,M,C,K • PH relay board (PHRYB) • Front side board (FRB) • MFP board (MFPB) • PH unit

2.10.2 Procedure

1. Check the drive transmission portion of the drum unit and correct as necessary.
2. Clean the contact of the drum unit connector if dirty.
3. Reinstall or reconnect IDCS/Fr assy or IDCS/Rr assy, sensor shutter or connector, if it is installed or connected improperly.
4. Clean IDCS/Fr or IDCS/Rr if it is dirty.
5. Check the FRB connector for proper connection and correct as necessary.
6. Check the PHRYB connector for proper connection and correct as necessary.
7. Check the connectors of the MFPB for proper connection and correct as necessary.
8. FRB fuse conduction check.
9. Replace FRB.
10. Replace IDCS/Fr assy or IDCS/Rr assy.
11. Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
12. Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
13. Replace PHRYB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
14. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

NOTE

- **After the PH unit is replaced, reset the skew default position for each color in [Service Mode] -> [Machine] -> [Print Head Skew Adj.] -> [Print Head Skew Adj.]**

- **When this alert code is displayed, according to the list, take actions to address the problem. After the problem is resolved, select [Service Mode] -> [Machine] -> [Print Head Skew Adj.] -> [Print Head Skew Reset] and perform the skew adjustment reset.**

2.11 P-21

2.11.1 Contents

Malfunction type	Color regist test pattern failure
Malfunction code	P-21
Malfunction detection timing	• During pre-pattern detection, pre-pattern edge (start/ end point of effective area) is not detected within the pre-pattern search area. • During detection of regist pattern at vertical/horizontal direction, pattern edge (start/end point of effective area) is not detected within the pattern search area of each unit.
Relevant parts	• Transfer belt unit • PH unit • IDC sensor shutter solenoid (SD2) • Front side board (FRB) • MFP board (MFPB)

2.11.2 Procedure

1. Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2. Replace the transfer belt unit if the transfer belt is damaged. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. SD2 operation check.
4. Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5. Replace FRB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.12 P-22

2.12.1 Contents

Malfunction type	Color regist adjust failure
Malfunction code	P-22
Malfunction detection timing	• The gap between maximum and minimum value of deviations among each color (the values before averaging) is over the predetermined value. • Average deviation exceeds the predetermined value. • In case the final value of the deviation after stabilization exceeds the predetermined value, it is regarded as failure even if the average deviation is within tolerance.
Relevant parts	• IDC sensor/Fr (IDCS/Fr) • IDC sensor/Rr (IDCS/Rr) • IDC sensor shutter solenoid (SD2) • Front side board (FRB) • MFP board (MFPB)

2.12.2 Procedure

1. Slide out the drum/developing unit and reinstall it in position.
2. Reinstall or reconnect IDCS/Fr assy or IDCS/Rr assy if it is installed or connected improperly.
3. Check the vertical transport guide for installed position and correct as necessary.
4. SD2 operation check.
5. Replace FRB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.13 P-27

2.13.1 Contents

Malfunction type	Secondary transfer ATVC failure
Malfunction code	P-27
Malfunction detection timing	An abnormal average value is detected during an adjustment of the second transfer ATVC value.
Relevant parts	• High voltage unit (HV) • MFP board (MFPB) • Image transfer entrance guide • 2nd transfer assy • Transfer belt unit

2.13.2 Procedure

1. Check the contact between the roller opposed to the 2nd transfer roller in the transfer belt unit and the grounding terminal. Clean the joint or correct if necessary.
2. Check the image transfer entrance guide for proper installation and correct if necessary.
3. Check that the spring does not come off during the pressure operation of the 2nd transfer roller and correct if necessary.
4. Check the contact at the joint of the 2nd transfer assy and HV. Clean the joint or correct if necessary.
5. Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace HV. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

2.14 P-32 (bizhub C658/C558)

2.14.1 Contents

Malfunction type	Heating roller temperature sensor1 temperature detection failure
Malfunction code	P-32
Malfunction detection timing	• During warm up, the temperature detected by the heating roller thermistor3 exceeded the warm up complete temperature of the heating roller for over the predetermined value, and stayed for a predetermined period of time. • When the predetermined period of time had passed after the warm up became complete, detected temperature of the heating roller thermistor3 exceeded the temperature detected by the heating roller temperature sensor1 for over the predetermined value for more than the predetermined period of time. • While printing, temperature detected by the heating roller thermistor3 exceeded the temperature detected by the heating roller temperature sensor1 for more than the predetermined value for a predetermined period of time. • This warning indicates that condensation dirt on the heating roller temperature sensor1 was detected, and the alternate temperature control is being conducted. With condensation, the warning is cleared when the condensation is detected to be removed. When the dirt on the sensor is detected, it is considered as a failure and the trouble code C392A is issued.
Relevant parts	• Fusing unit • Heating roller thermistor3 (TH3) • Heating roller temperature sensor1 (TEMS)

2.14.2 Procedure

1. Wipe the TEMS1 clean of dirt if any.
   <Cleaning procedure>
   - Clear away a dirt or a foreign object on the sensor with a cotton swab.
   - When a dirt is left even if you cleaned the sensor by above procedure, clear away a dirt or a foreign object on the sensor using a cotton swab dampened with the alcohol. And, wipe off the sensor with a dry cotton swab afterwards.
2. Check the connection of the fusing unit.
3. Replace the fusing unit.

2.15 P-33

2.15.1 Contents

Malfunction type	LD malfunction
Malfunction code	P-33
Malfunction detection timing	The DETOUT signal of the LD drive detected malfunction consecutively for the predetermined frequency.
Relevant parts	• Laser diode/Y (LD/Y) • Laser diode/M (LD/M) • Laser diode/C (LD/C) • Laser diode/K (LD/K) • Laser drive board (LDDB) • PH unit • PH relay board (PHRYB) • MFP board (MFPB)

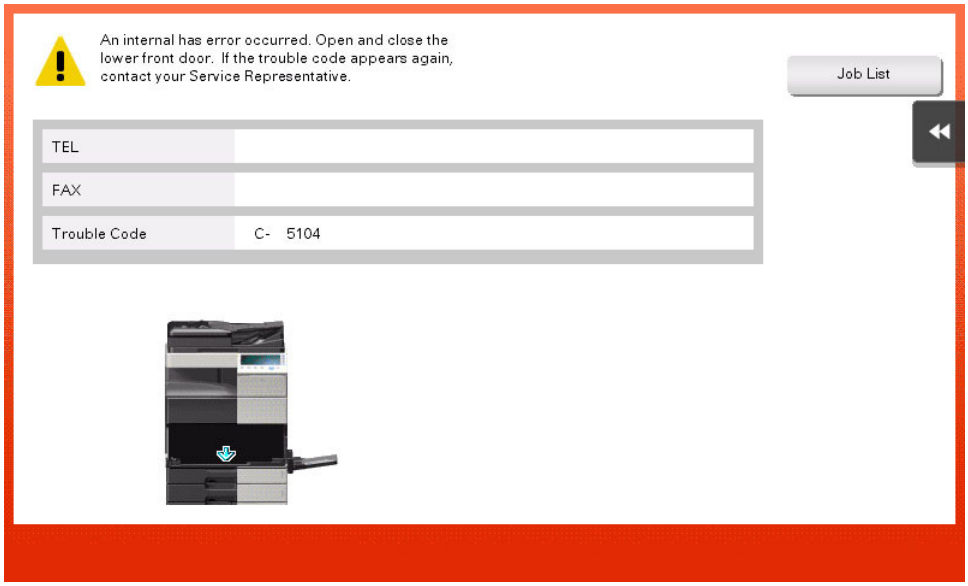
2.15.2 Procedure

1. Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2. Replace PHRYB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3. TROUBLE CODE

3.1 Overview of Trouble Code

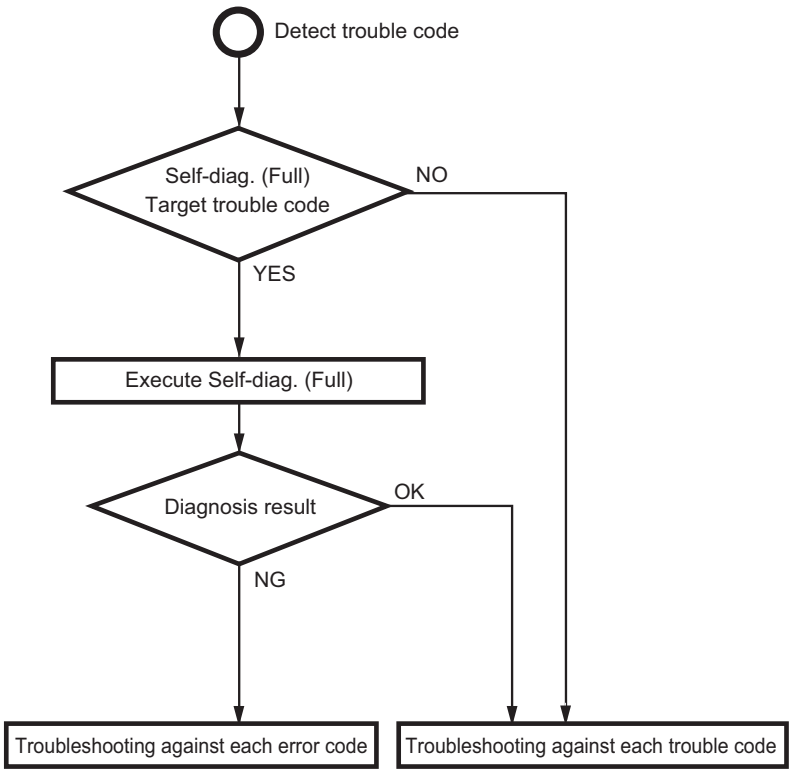
- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the control panel.



3.2 Overview of Troubleshooting Procedure

- When a trouble code is displayed, confirm that if the displayed code is the target of the "Self-diag. (Full)". (Check the "Self-diag. (Full)" field on the List of the trouble code)
- If it is the target of the self-diagnosis, execute the "Self-diag. (Full)".
  If [NG] is displayed as the result of the "Self-diag. (Full)", perform the troubleshooting against each item of "Error Code".
- If it is not the target of the self-diagnosis, perform the troubleshooting against each item of "Trouble Code".
  NOTE
  - **Only in the case that trouble cannot be resolved even after the troubleshooting against each item of "Error Code" from the "Self-diag. (Full)", perform the troubleshooting against each item of "Trouble Code".**
- After the troubleshooting against each item of "Trouble Code", execute the "Self-diag. (Full)" again, and make sure that all troubles on each device have been resolved.

Troubleshooting Flow



3.2.1 Troubleshooting Procedure

1. Display the trouble code.
2. Execute Self-diag. (Full), and perform the troubleshooting against each [Error Code].
3. After the troubleshooting against each error code, if the trouble code is displayed again, perform the troubleshooting against each trouble code.
   NOTE
   - **Perform the troubleshooting in the sequence from step 1 of "Corrective action procedure" against each item while checking that if each trouble has been resolved. Do not perform the troubleshooting against all troubles at once.**
   - **At "Troubleshooting against each error code" and "Troubleshooting against each trouble code", if the parts to be replaced are the same (ex. MFP board), do not replace the same parts twice. (Because the trouble can hardly be resolved even after replacing the same parts twice)**
4. Perform the troubleshooting against each trouble code, and make sure that the trouble has be resolved.
5. After the troubleshooting against each trouble code, execute the "Self-diag. (Full)" again, and make sure that all troubles on each device have been resolved.

3.3 Trouble resetting procedure

- Different malfunction resetting procedures apply depending on the rank of the trouble code.

* List of malfunction resetting procedures

Trouble code rank	Resetting procedures
Rank A	Trouble reset: Refer to the Trouble resetting procedure by Trouble Reset key.
Rank B	• Opening/closing the front door (bizhub C368/C308/C258) • Opening/closing the lower front door (bizhub C658/C558/C458) • Trouble reset: • When the [Internal Error. Auto Cancel] for rank B is set to “Yes”, after the set period of time, trouble is automatically cleared.
Rank C	• Turning main power switch OFF/ON • When the [Internal Error. Auto Cancel] for rank C is set to “Yes”, after the set period of time, trouble is restarted and cleared.

3.3.1 Trouble resetting procedure by Trouble Reset key

(1) Use

- If the all troubles occur and the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the front door, clear the status of the machine.
- To be used when the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the front door in case of a trouble.

(2) Procedure

1. Turn OFF the main power switch.
2. Turn main power switch ON while pressing the Reset key.
3. Touch [Trouble Reset].
4. Check to make sure that [OK] is displayed and it has been reset.
5. After turning off the main power switch, turn it on again more than 10 seconds after and check if the machine starts correctly.

3.3.2 Trouble resetting procedure by the auto cancel function

(1) Use

- When rank B or C trouble occurs, main body automatically clears trouble and makes the main body ready for use.
  When the trouble auto cancel function is enabled, upon the occurrence of trouble to be automatically cleared, the trouble detection message is displayed on the screen and the trouble is automatically cleared. If the trouble remains after performing the auto cancel operation 3 times, the normal trouble code display screen appears.

(2) Procedure

1. Select [Yes] for the trouble rank to which the trouble auto cancel operation is applied in [Service Mode] -> [System 2] -> [▶] -> [Internal Error. Auto Cancel]. (The default setting for rank B and rank C are set to [Yes].)
2. Touch [OK], and turning main power switch OFF and ON again.

3.3.3 Trouble resetting procedure by remote operation

(1) Use

- Trouble can be cleared by remote operation using the applications or CS Remote Care system.
- The combinations of the applications to be used and the ranks of trouble to be cleared are shown below.

Trouble code rank / Application	Rank A	Rank B	Rank C
PageScope Web Connection	Cannot be cleared	Can be cleared	Can be cleared
OpenAPI (PageScope Enterprise Suite)	Cannot be cleared	Can be cleared	Can be cleared
CS Remote Care (Excluding communications by fax modem)	Can be cleared	Can be cleared	Can be cleared

(2) Procedure

(a) PageScope Web Connection

1. Access PageScope Web Connection of the MFP where trouble occurs.
2. The screen for logging into Administrator Mode appears.
3. Check the following message appears; “An error has occurred. Do you want to clear the error?” Click [Trouble Reset].
4. Click [Trouble Reset] again in the confirmation screen.
5. Check that the MFP starts normally.

(b) OpenAPI (PageScope Enterprise Suite)

1. Access PageScope Enterprise Suite.
2. Select [Device List] -> [Device Management] -> [Device List] -> [Device List] -> [Device].
3. For rank B trouble, click [Trouble Reset]. For rank C trouble, click [Reset].
4. For rank B trouble, click the [Execute] button.
   For rank C trouble, click the [Execute] button in [Device Reset].
5. Check that the MFP starts normally.

(c) CS Remote Care

- Refer to the CS Remote Care Center manual.

3.4 Trouble isolation function

- The trouble isolation function enables you to control MFP temporarily isolating faulty units and options where the trouble isolation function can be applied when trouble occurs. This allows you to continue using the other units that are not affected and reduce down time that continues until CE resolves the problem.
- This function can be selected for the following units and options.
  - Tray 1
  - Tray 2
  - Tray 3
  - Tray 4
  - LCT
  - Manual
  - Center Stapling
  - Half-Fold
  - Post Inserter (bizhub C658/C558/C458 only)
  - Z fold (bizhub C658/C558/C458 only)
  - Tri-fold
  - Punch
  - Staple
  - Scanner
  - ADF
  - Expansion Function (HDD)
- If a problem occurs with the units where the trouble isolation function can be applied, the control panel displays a trouble code and a key with which you decide whether to continue using the MFP. When you press down the key, the control panel displays the units that will be isolated as well as the next confirmation key with which you decide to continue.
- When you press down the confirmation key, the message on the control panel asks you to turn OFF and ON the main power switch. After turning OFF and ON the main power switch, the MFP starts operating, isolating the faulty units. The message on the control panel also tells that the MFP is working, isolating the faulty units.
- To temporarily isolate faulty units and continue using the MFP with the trouble isolation function, be sure to make the above mentioned control panel operation. The faulty units cannot be automatically isolated.

NOTE

- **The malfunction detection mechanism is not applied to units and options that are being isolated.**

3.5 List of the trouble code (bizhub C358/C308/C258)

Code	Item	Rank	Self-diag. (Full)
C0002	Paper feed communication error	C	-
C0106	Tray 3/transfer LCT paper feed motor turning at abnormal timing (When PC-110, PC-210, or PC-410 is installed)	B	-
C0107	Tray 3/transfer LCT vertical transport motor turning at abnormal timing (When PC-110, PC-210, or PC-410 is installed)	B	-
C0108	Tray 4 paper feed motor turning at abnormal timing (When PC-210 is installed)	B	-
C0109	Tray 4 vertical transport motor turning at abnormal timing (When PC-210 is installed)	B	-
C0202	Tray 1 feeder up/down abnormality	B	-
C0204	Tray 2 feeder up/down abnormality	B	-
C0206	Tray 3 feeder up/down abnormality (When PC-110 or PC-210 is installed)	B	-
C0208	Tray 4 feeder up/down abnormality (When PC-210 is installed)	B	-
C0210	Transfer LCT lift failure (When PC-410 is installed)	B	-
C0211	Manual feed up/down abnormality	B	-
C0214	Transfer LCT shift failure (When PC-410 is installed)	B	-
C0216	External LCT up/down abnormality (When LU-302 is installed)	B	-
C1004	FNS communication error (When FS-533, FS-534, FS-534SD or JS-506 is installed)	C	-
C1081	SD communication error (When FS-534SD is installed)	C	-
C1102	Main tray up/down motor drive malfunction (When FS-533, FS-534 or FS-534SD is installed)	B	-
C1103	Alignment plate motor/Fr malfunction (When FS-533, FS-534 or FS-534SD is installed)	B	-
C1105	Bundle eject motor drive malfunction (When FS-534 or FS-534SD is installed)	B	-
C1106	Stapler movement motor malfunction (When FS-533, FS-534 or FS-534SD is installed)	B	-
C1109	Stapler motor drive malfunction (When FS-533, FS-534 or FS-534SD is installed)	B	-
C1112	Stapler motor malfunction (When FS-534SD is installed)	B	-
C1113	Center-staple lead edge stopper motor malfunction (When FS-534SD is installed)	B	-
C1114	Center-staple front adjust drive motor malfunction (When FS-534SD is installed)	B	-
C1115	Center-staple knife drive motor malfunction (When FS-534SD is installed)	B	-
C1132	Punch drive motor malfunction (When FS-533+PK-519, FS-534+PK-520 or FS-534SD+PK-520 is installed)	B	-
C1140	Alignment plate motor/Rr malfunction (When FS-533, FS-534 or FS-534SD is installed)	B	-
C1141	Paddle motor drive malfunction (When FS-534 or FS-534SD is installed)	B	-
C1144	Pre-eject drive motor malfunction (When FS-534 or FS-534SD is installed)	B	-
C1145	Trailing edge stopper motor malfunction (When FS-534 or FS-534SD is installed)	B	-
C1156	SD paddle motor malfunction (When FS-534SD is installed)	B	-
C1182	Shift motor drive malfunction (When JS-506 is installed)	B	-
C1184	Paper discharge control motor malfunction (When FS-534 or FS-534SD is installed)	B	-
C1195	Paper discharge control motor malfunction (When FS-534SD is installed)	B	-
C1196	Center fold roller motor malfunction (When FS-534SD is installed)	B	-
C1197	Tri-folding guide motor malfunction (When FS-534SD is installed)	B	-
C11A1	Exit roller pressure/ retraction malfunction (When FS-533 is installed)	B	-
C11A2	Accommodation roller pressure/ retraction malfunction (When FS-534 or FS-534SD is installed)	B	-
C11E1	Paper exit switching drive malfunction (When FS-534 or FS-534SD is installed)	B	-
C1402	FS nonvolatile memory error (When FS-533 is installed)	C	-
C2152	Transfer belt fault at initial position return	B	-
C2153	Transfer belt spacing fault at K pressure switching	B	-
C2154	Transfer belt contact fault at all pressure switching	B	-

Code	Item	Rank	Self-diag. (Full)
C2155	Transfer belt contact fault after K pressure established	B	-
C2156	Transfer belt spacing fault after all pressure established	B	-
C2253	PC motor failure to turn	B	-
C2254	PC motor turning at abnormal timing	B	-
C2255	Developing motor failure to turn	B	-
C2256	Developing motor turning at abnormal timing	B	-
C2355	Transfer belt cleaner cooling fan failure to turn	B	-
C2411	Developing unit/C new article release	B	-
C2412	Developing unit/M new article release	B	-
C2413	Developing unit/Y new article release	B	-
C2414	Developing unit/K new article release	B	-
C2551	Abnormally low toner density detected cyan TCR sensor	B	-
C2552	Abnormally high toner density detected cyan TCR sensor	B	-
C2553	Abnormally low toner density detected magenta TCR sensor	B	-
C2554	Abnormally high toner density detected magenta TCR sensor	B	-
C2555	Abnormally low toner density detected yellow TCR sensor	B	-
C2556	Abnormally high toner density detected yellow TCR sensor	B	-
C2557	Abnormally low toner density detected black TCR sensor	B	-
C2558	Abnormally high toner density detected black TCR sensor	B	-
C2559	Cyan TCR sensor adjustment failure	B	-
C255A	Magenta TCR sensor adjustment failure	B	-
C255B	Yellow TCR sensor adjustment failure	B	-
C255C	Black TCR sensor adjustment failure	B	-
C2561	Cyan TCR sensor failure	B	-
C2562	Magenta TCR sensor failure	B	-
C2563	Yellow TCR sensor failure	B	-
C2564	Black TCR sensor failure	B	-
C2650	Main backup media access error	C	-
C2A11	Drum unit/C new release failure	B	-
C2A12	Drum unit/M new release failure	B	-
C2A13	Drum unit/Y new release failure	B	-
C2A14	Drum unit/K new release failure	B	-
C2A21	Toner cartridge/C new release failure	C	-
C2A22	Toner cartridge/M new release failure	C	-
C2A23	Toner cartridge/Y new release failure	C	-
C2A24	Toner cartridge/K new release failure	C	-
C3101	Pressure roller pressure failure	B	-
C3103	Pressure roller release failure	B	-
C3201	Fusing motor failure to turn	B	-
C3202	Fusing motor turning at abnormal timing	B	-
C3302	Paper cooling fan failure to turn	B	-
C3425	Fusing warm-up trouble	A	-
C3722	Fusing abnormally high temperature detection (Edge of the heating roller)	A	-
C3725	Fusing abnormally high temperature detection (Main of the heating roller)	A	-
C3726	Fusing abnormally high temperature detection (Center of the heating roller)	A	-
C3731	Fusing abnormally high temperature detection (Hard protector)	A	-
C3825	Fusing abnormally low temperature detection (Main of the heating roller)	A	-
C3826	Fusing abnormally low temperature detection (Center of the heating roller)	A	-
C3922	Fusing sensor wire breaks detection (Edge of the heating roller)	A	-
C3925	Fusing sensor wire breaks detection (Main of the heating roller)	A	-
C3926	Fusing sensor wire breaks detection (Center of the heating roller)	A	-
C392A	Heating roller temperature sensor contamination (Main of the heating roller)	C	-
C392B	Fusing sensor wire breaks detection (Difference of temperature)	A	-
C4091	I/F communication error	C	-
C40A1	Mechanical controller sub-CPU communication error	C	-

Code	Item	Rank	Self-diag. (Full)
C40A2	Mechanical controller PF communication data error	C	-
C40A3	Mechanical controller PF transmission timeout	C	-
C40A4	Mechanical controller PF communication pulse error	C	-
C4101	Polygon motor rotation trouble	B	-
C4501	Laser malfunction	B	-
C5102	Transport motor failure to turn	B	-
C5103	Transport motor turning at abnormal timing	B	-
C5351	Power supply cooling fan motor failure to turn	B	-
C5355	Toner cartridge cooling fan failure to turn	B	-
C5360	Clean unit fan failure to turn (When CU-101 is installed)	B	-
C5370	Rear side cooling fan failure to turn	C	Target
C5501	AC signal abnormality	C	-
C5601	Engine control malfunction	C	-
C5603	Front side board communication error	C	-
C5604	PH configuration fault	C	-
C5605	Engine communication data error	C	-
C5606	Engine transmission timeout	C	-
C5610	PH LD drive communication error	C	-
C5611	PH EEPROM communication error	C	-
C6001	DF related configuration error 1	C	Target
C6002	DF related configuration error 2	C	-
C6102	Drive system home sensor malfunction	B	Target
C6103	Slider over running	B	Target
C6104	Back side cleaning home sensor abnormality (initial) (When DF-704 is installed)	B	Target
C6105	Back side cleaning home sensor abnormality (normal) (When DF-704 is installed)	B	Target
C6704	Image input time out	C	Target
C6751	CCD clamp/gain adjustment failure	B	Target
C6752	ASIC clock input error (front side)	C	Target
C6753	ASIC clock input error (back side) (When DF-704 is installed)	C	Target
C6754	CIS clamp adjustment failure (When DF-704 is installed)	B	Target
C6755	CIS gain adjustment failure (When DF-704 is installed)	B	Target
C6756	CCD power-supply voltage malfunction	C	Target
C6901	DSC board mount failure 1 (When SC-508 is installed)	C	Target
C6902	DSC board bus check NG1-1 (When SC-508 is installed)	C	Target
C6903	DSC board bus check NG1-2 (When SC-508 is installed)	C	Target
C6911	DSC board mount failure 2 (When DF-704 + SC-508 is installed)	C	Target
C6912	DSC board bus check NG2-1 (When DF-704 + SC-508 is installed)	C	Target
C6913	DSC board bus check NG2-2 (When DF-704 + SC-508 is installed)	C	Target
C6F01	Scanner sequence trouble 1	C	Target
C6F02	Scanner sequence trouble 2	C	Target
C6F03	Scanner sequence trouble 3	C	Target
C6F04	Scanner sequence trouble 4	C	Target
C6F05	Scanner sequence trouble 5	C	Target
C6F06	Scanner sequence trouble 6	C	Target
C6F07	Scanner sequence trouble 7	C	Target
C6F08	Scanner sequence trouble 8	C	Target
C6F09	Scanner sequence trouble 9	C	Target
C6F0A	Scanner sequence trouble 10	C	Target
C6FDC	Scanner sequence trouble DC	B	Target
C6FDD	Scanner sequence trouble DD	B	Target
C8101	Before reading pressure welding alienation mechanism (When DF-629 or DF-704 is installed)	B	-
C8107	Glass cleaning mechanism trouble (When DF-629 or DF-704 is installed)	B	-
C8302	Cooling fan trouble (When DF-629 or DF-704 is installed)	B	Target
C8401	Data flash failure	C	-

Code	Item	Rank	Self-diag. (Full)
C9401	Exposure LED lighting failure	B	Target
C9402	Exposure LED lighting abnormally	B	Target
C9403	CIS LED lighting failure (When DF-704 is installed)	B	Target
C9404	CIS LED lighting abnormally (When DF-704 is installed)	B	Target
CA051	Standard controller configuration failure	C	-
CA052	Controller hardware error	C	-
CA053	Controller start failure	C	-
CB001	FAX board error 1	C	Target
CB002	FAX board error 2	C	Target
CB003	FAX board error 3	C	Target
CB004	FAX board error 4	C	Target
CB005	FAX board error 5	C	Target
CB006	FAX board error 6	C	Target
CB051	FAX board mount failure line 1	C	Target
CB052	FAX board mount failure line 2	C	Target
CB110	Instance generation error or observer registration error	C	Target
CB111	Configuration space initialization NG	C	Target
CB112	Semaphore acquisition, release error	C	Target
CB113	Sequence error among main body tasks	C	Target
CB114	Message queue control error	C	Target
CB115	Main body - sequence error among FAX boards	C	Target
CB116	FAX board nonresponse (Nonresponse after initialization)	C	Target
CB117	ACK waiting timeout error	C	Target
CB118	Receiving undefined frame	C	Target
CB119	DMA transfer error	C	Target
CB120	JC soft error	C	Target
CB122	Device error (modem-DAA initialization error)	C	Target
CB123	Device error (modem-DAA power save recovery error)	C	Target
CB125	ISW failure of SubCPU	C	Target
CB126	Timeout error due to nonresponse from DC during suspension process	C	Target
CB127	Timeout error due to nonresponse from CC during suspension process	C	Target
CB128	Timeout error due to nonresponse from LINE during suspension process	C	Target
CB129	Timeout error due to nonresponse from SPI tasks during suspension process	C	Target
CB130	Driver soft error	C	Target
CB131	Reception frame length error from main	C	Target
CB132	Reception frame header error from main	C	Target
CB133	232C i/f sequence error	C	Target
CB134	DPRAM i/f sequence error	C	Target
CB135	DPRAM CTL/STL register error	C	Target
CB136	ACK waiting timeout	C	Target
CB137	DPRAM RESET reception	C	Target
CB140	MSG I/F Error with JC	C	Target
CB141	I/F error with driver	C	Target
CB142	Undefined command reception	C	Target
CB143	Command frame length error	C	Target
CB144	Command parameter length error	C	Target
CB145	Undefined parameter	C	Target
CB146	Command/response sequence error	C	Target
CB150	External class instance acquisition error	C	Target
CB151	Job start error (Starting job parameter error/child job generation error)	C	Target
CB152	Doc access error (Report buf access error)	C	Target
CB153	Response wait timeout from external task	C	Target
CB154	Internal que table control error (create/enque/deque)	C	Target
CB160	Instance generation error	C	Target
CB161	Timeout error	C	Target
CB162	Interface error	C	Target

Code	Item	Rank	Self-diag. (Full)
CB163	Message que control error	C	Target
CB164	Semaphore acquisition release error	C	Target
CB165	Observer registration error	C	Target
CB166	Reception resource check error	C	Target
CB167	Deployment error of sending image information	C	Target
CB168	Serialization error of receiving image	C	Target
CB169	Access error to quick memory data	C	Target
CB170	Internal que table control error (create/enque/deque)	C	Target
CB171	Instance generation error	C	Target
CB172	Timeout error	C	Target
CB173	Interface error	C	Target
CB174	Semaphore acquisition release error	C	Target
CB175	Observer registration error	C	Target
CB176	Unable to check TTI domain	C	Target
CB177	Error return from TTI rasterizer	C	Target
CB178	Receiving job generation error	C	Target
CB179	Sequence control error	C	Target
CB180	Access error to quick sending memory data	C	-
CB181	BlockBuff acquisition error	C	-
CB182	Sending block image error (Req, restore)	C	-
CB183	Receiving block image error (Req, store)	C	-
CB184	Storage error of receiving image information	C	-
CB185	Receiving data size logic error (Receiving data are not multiples of dotline)	C	Target
CB186	Image buf acquisition (alloc) error	C	Target
CB187	Error return from compressor	C	Target
CB188	BandBuf control error (newInstance/get/free)	C	Target
CB190	USB IF error (USB out transfer NG)	C	Target
CB191	USB IF error (USB in transfer NG)	C	Target
CB192	USB IF error	C	Target
CB193	USB IF error (USB is detached.)	C	Target
CB194	USB IF error (No response from fax board)	C	Target
CB195	USB IF error (Attach not detected for 1 min. after recovery from sleep)	C	Target
CB196	USB IF error (Detach not detected for 1 min. after recovery from sleep)	C	Target
CC140	Trouble related to security	C	-
CC151	ROM contents error upon startup (MSC)	C	Target
CC152	ROM contents error upon startup (IR)	C	Target
CC155	Finisher ROM error (When FS-533, FS-534, FS-534SD or JS-506 is installed)	C	-
CC156	DF ROM error (When DF-629 or DF-704 is installed)	C	Target
CC159	ROM contents error upon startup (DSC1)	C	Target
CC15A	ROM contents error upon startup (DSC2)	C	Target
CC15B	Flash ROM error (saddle) (When FS-534SD is installed)	C	-
CC15C	Engine Flash ROM writing error	C	-
CC163	ROM contents error (PRT)	C	-
CC164	ROM contents error (MSC)	C	Target
CC170	Dynamic link error during starting (AP0)	C	Target
CC171	Dynamic link error during starting (AP1)	C	Target
CC172	Dynamic link error during starting (AP2)	C	Target
CC173	Dynamic link error during starting (AP3)	C	Target
CC174	Dynamic link error during starting (AP4)	C	Target
CC180	Dynamic link error during starting (LDR)	C	Target
CC181	Dynamic link error during starting (IBR)	C	Target
CC182	Dynamic link error during starting (IID)	C	Target
CC183	Dynamic link error during starting (IPF)	C	Target
CC184	Dynamic link error during starting (IMY)	C	Target
CC185	Dynamic link error during starting (SPF)	C	Target

Code	Item	Rank	Self-diag. (Full)
CC186	Dynamic link error during starting (OAP)	C	Target
CC190	Outline font load error	C	Target
CC191	Setting parameter load error (LDR)	C	Target
CC211	Authentication device general error	C	Target
CC212	User validation error	C	Target
CC213	User registration error/Card information setting error	C	Target
CC214	User information deletion error	C	Target
CC216	Acquisition failure of the number of trials/Initialize error of number of authentication	C	Target
CCC00	Public user account track information error	B	-
CD002	JOB RAM save error	C	Target
CD004	Hard disk access error (connection failure)	C	Target
CD00F	Hard disk data transfer error	C	Target
CD010	Hard disk unformat	C	Target
CD011	Hard disk out of specifications mounted	C	Target
CD012	Mount error due to hard disk being unformatted	C	Target
CD013	HDD mirroring error master	A	Target
CD014	HDD mirroring error slave	A	Target
CD015	HDD mirroring error master slave	A	Target
CD016	HDD mirroring error master (rebuild)	A	Target
CD017	HDD mirroring error slave (rebuild)	A	Target
CD020	Hard disk verify error	C	Target
CD030	Hard disk management information reading error	C	Target
CD041	HDD command execution error	C	Target
CD042		C	Target
CD043		C	Target
CD044		C	Target
CD045		C	Target
CD046		C	Target
CD047	HDD SCSI library error	C	Target
CD048		C	Target
CD049		C	Target
CD04A		C	Target
CD04B		C	Target
CD050	Hard disk recovery timeout	C	Target
CD110	Wireless LAN destination initialization error	C	Target
CD201	File memory mounting error	C	Target
CD202	Memory capacity discrepancy	C	Target
CD203	Memory capacity discrepancy 2	C	Target
CD211	PCI-SDRAM DMA operation failure	C	Target
CD212	Compression/extraction timeout detection	C	Target
CD241	Encryption ASIC setting error	C	Target
CD242	Encryption ASIC mounting error	C	Target
CD252	No relay circuit boards for IC-416 mounting at IC-416 mount setting	C	Target
CD261	USB host board failure	C	Target
CD262	Extension network adapter installation error	C	Target
CD271	i-Option activated and additional memory not installed	C	Target
CD272	i-Option activated and additional memory and HDD not installed	C	Target
CD2D1	VLAN setting configuration error	B	-
CD3##	Nonvolatile data error	C	Target
CD313	TPM key data error	C	Target
CD38E	Nonvolatile data save error (SPI-Flash)	C	Target
CD390	Nonvolatile data checksum error	C	Target
CD391	Nonvolatile data save error (eMMC)	-	Target
CD392	Nonvolatile data save error (EEPROM)	C	Target
CD3A0	Counter error	C	Target
CD3C0	New board detection	C	Target

Code	Item	Rank	Self-diag. (Full)
CD401	NACK command incorrect	C	Target
CD402	ACK command incorrect	C	Target
CD403	Checksum error	C	Target
CD404	Receiving packet incorrect	C	Target
CD405	Receiving packet analysis error	C	Target
CD406	ACK receiving timeout	C	Target
CD407	Retransmission timeout	C	Target
CD411	Touch panel board error	C	Target
CD412	Touch panel type mismatch	C	Target
CD413	Electrostatic touch panel operation mode error	C	Target
CD601	Trouble related to security	-	-
CD602			
CD603			
CD701	Mechanical controller flash ROM writing error	C	-
CD702	Mechanical controller flash ROM device error	C	-
CD703	FW download communication fault	C	-
CD704	Finisher Flash ROM device error (When FS-533, FS-534, FS-534SD or JS-506 is installed)	C	-
CD705	Mechanical controller sub-CPU flash ROM device error	C	-
CD706	Mechanical controller sub-CPU flash ROM error	C	-
CDC##	Trouble related to security	-	-
CDF50	ASIC image version failure	C	Target
CDF51	ASIC image version failure (back side) (When DF-704 is installed)	C	Target
CDF70	ASIC image access failure	C	Target
CDF71	ASIC image access failure (back side) (When DF-704 is installed)	C	Target
CDFA0	ASIC image error	C	Target
CDFA1	ASIC image error (back side) (When DF-704 is installed)	C	Target
CE001	Abnormal message queue	C	Target
CE002	Message and method parameter failure	C	Target
CE003	Task error	C	Target
CE004	Event error	C	Target
CE005	Memory access error	C	Target
CE006	Header access error	C	Target
CE007	DIMM initialize error	C	Target
CE101	Browser finish detected	C	Target
CE201	Transmission operation log storage fault	C	Target
CE301	Referring incorrect memory	C	Target
CE302	Incorrect command	C	Target
CE303	Finished due to error inside Qt library	C	Target
CE304	Finished due to error outside Qt library	C	Target
CE305	Program forced to stop	C	Target
CED01	The authentication application information does not exist in the hard disk/ eMMC board in the enhanced server authentication state.	C	Target
CEEE1	MFP board (MSC) malfunction	C	Target
CEEE2	Scanner section malfunction	A	Target
CEEE3	MFP board (ENG) malfunction	A	Target
CF###	Trouble code (CF###) is referred to as abort code. For details of abort code, refer to “K.4. ABORT CODE”.	C	-

3.6 List of the trouble code (bizhub C658/C558/C458)

Code	Item	Rank	Self-diag. (Full)
C0002	Paper feed communication error	C	-
C0106	Tray 3/transfer LCT paper feed motor's turning at abnormal timing (When PC-115, PC-215, or PC-415 is installed)	B	-
C0107	Tray 3/transfer LCT vertical transport motor's turning at abnormal timing (When PC-115, PC-215, or PC-415 is installed)	B	-
C0108	Tray 4 paper feed motor's turning at abnormal timing (When PC-215 is installed)	B	-

Code	Item	Rank	Self-diag. (Full)
C0109	Tray 4 vertical transport motor's turning at abnormal timing (When PC-215 is installed)	B	-
C0202	Tray 1 feeder up/down abnormality	B	-
C0204	Tray 2 feeder up/down abnormality	B	-
C0206	Tray 3 feeder up/down abnormality (When PC-115 or PC-215 is installed)	B	-
C0208	Tray 4 feeder up/down abnormality (When PC-215 is installed)	B	-
C0210	Transfer LCT lift failure (When PC-415 is installed)	B	-
C0211	Manual feed up/down abnormality	B	-
C0214	Transfer LCT shift failure (When PC-415 is installed)	B	-
C0216	External LCT up/down abnormality (When LU-207 or LU-302 is installed)	B	-
C1003	PK communication error (Finisher detection) (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	C	-
C1004	Finisher communication error (Engine detection) (When FS-533, FS-536, FS-536SD, FS-537, FS-537SD, or JS-506 is installed)	C	-
C1007	PI communication error (Finisher detection) (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	C	-
C1013	PK communication error (PK detection) (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	C	-
C1014	Finisher communication error (Finisher detection) (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	C	-
C1017	PI communication error (PI detection) (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	C	-
C1081	SD communication error (Finisher detection) (When FS-536SD or FS-537SD is installed)	C	-
C1082	SD communication error (SD detection) (When FS-536SD or FS-537SD is installed)	C	-
C1102	Main tray up/down motor's drive malfunction (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1103	Alignment motor/front's drive malfunction (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1104	Stacker plate drive motor's malfunction (When FS-537 or FS-537SD is installed)	B	-
C1105	Bundle eject motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1106	Stapler movement motor's drive malfunction (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1109	Side stapler motor's drive malfunction (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1112	Stapler motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1113	Stopper drive motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1114	Alignment motor's drive malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1115	Center fold knife motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1124	Tray lift motor /Lw's drive malfunction (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	B	-
C1125	Tray lift motor /Up's drive malfunction (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	B	-
C1127	Punch oscillating motor's drive malfunction (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	B	-
C1130	ZU transport motor's drive malfunction (When FS-537+ZU-609 or FS-537SD+ZU-609 is installed)	B	-
C1131	Folding guide motor's drive malfunction (When FS-537+ZU-609 or FS-537SD+ZU-609 is installed)	B	-
C1132	Punch drive motor's malfunction (When FS-533+PK-519, FS-536+PK-520, FS-536SD+PK-520, FS-537+PK-523, or FS-537SD +PK-523 is installed)	B	-
C1133	Pressure motor's drive malfunction (When FS-537+ZU-609 or FS-537SD +ZU-609 is installed)	B	-
C1140	Alignment motor/rear's drive malfunction (When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1141	FNS paddle motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-

Code	Item	Rank	Self-diag. (Full)
C1142	Paddle up/down motor's drive malfunction (When FS-537 or FS-537SD is installed)	B	-
C1143	Arm drive motor's drive malfunction (When FS-537 or FS-537SD is installed)	B	-
C1144	Pre-eject drive motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1145	Trail edge stopper motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1146	Trail edge stopper motor/R's drive malfunction (When FS-537 or FS-537SD is installed)	B	-
C1152	Paper transport belt motor's malfunction (When FS-537SD is installed)	B	-
C1156	SD paddle motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1182	Shift motor's drive malfunction (When JS-506 is installed)	B	-
C1184	Paper receiving control motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C1195	Paper discharge control motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1196	Center fold guide motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C1197	Tri-folding guide motor's malfunction (When FS-536SD or FS-537SD is installed)	B	-
C11A1	Exit roller pressure/ retraction malfunction (When FS-533 is installed)	B	-
C11A2	Receiving roller retraction motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C11C5	Paper size detect board malfunction (When FS-537+PK-523 or FS-537SD +PK-523 is installed)	B	-
C11E1	Paper exit switching drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B	-
C11E2	Paper exit switching (JS) drive malfunction	B	-
C1402	FS nonvolatile memory error (When FS-533 is installed)	C	-
C1403	PK flash ROM error (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	C	-
C1404	PI flash ROM error (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	C	-
C2152	Transfer belt fault at initial position return	B	-
C2153	Transfer belt spacing fault at K pressure switching	B	-
C2154	Transfer belt contact fault at all pressure switching	B	-
C2155	Transfer belt contact fault after K pressure established	B	-
C2156	Transfer belt spacing fault after all pressure established	B	-
C2253	PC motor's failure to turn	B	-
C2254	PC motor's turning at abnormal timing	B	-
C2255	Developing motor's failure to turn	B	-
C2256	Developing motor's turning at abnormal timing	B	-
C2350	Toner suction fan's failure to turn	B	-
C2355	Transfer belt cleaner cooling fan's failure to turn	B	-
C2411	Developing unit/C new article release	B	-
C2412	Developing unit/M new article release	B	-
C2413	Developing unit/Y new article release	B	-
C2414	Developing unit/K new article release	B	-
C2551	Abnormally low toner density detected cyan TCR sensor	B	-
C2552	Abnormally high toner density detected cyan TCR sensor	B	-
C2553	Abnormally low toner density detected magenta TCR sensor	B	-
C2554	Abnormally high toner density detected magenta TCR sensor	B	-
C2555	Abnormally low toner density detected yellow TCR sensor	B	-
C2556	Abnormally high toner density detected yellow TCR sensor	B	-
C2557	Abnormally low toner density detected black TCR sensor	B	-
C2558	Abnormally high toner density detected black TCR sensor	B	-
C2559	Cyan TCR sensor adjustment failure	B	-
C255A	Magenta TCR sensor adjustment failure	B	-

Code	Item	Rank	Self-diag. (Full)
C255B	Yellow TCR sensor adjustment failure	B	-
C255C	Black TCR sensor adjustment failure	B	-
C2561	Cyan TCR sensor failure	B	-
C2562	Magenta TCR sensor failure	B	-
C2563	Yellow TCR sensor failure	B	-
C2564	Black TCR sensor failure	B	-
C2650	Main backup media access error 1	C	-
C265A	Main backup media wrongly installation	C	-
C265B	Main backup media access error 2	C	-
C2A11	Drum unit/C new release failure	B	-
C2A12	Drum unit/M new release failure	B	-
C2A13	Drum unit/Y new release failure	B	-
C2A14	Drum unit/K new release failure	B	-
C2A21	Toner cartridge/C new release failure	C	-
C2A22	Toner cartridge/M new release failure	C	-
C2A23	Toner cartridge/Y new release failure	C	-
C2A24	Toner cartridge/K new release failure	C	-
C3101	Pressure roller pressure failure	B	-
C3102	Heating roller failure to turn (bizhub C658/C558)	A	-
C3103	Pressure roller release failure	B	-
C3201	Fusing motor's failure to turn	B	-
C3202	Fusing motor's turning at abnormal timing	B	-
C3302	Paper cooling fan's failure to turn	B	-
C3425	Fusing warm-up trouble	A	-
C3722	Fusing abnormally high temperature detection (Edge of the heating roller)	A	-
C3725	Fusing abnormally high temperature detection (Main of the heating roller)	A	-
C3726	Fusing abnormally high temperature detection (Center of the heating roller)	A	-
C3732	Fusing abnormally high temperature detection hard protector (Edge of the heating roller) (bizhub C658 or bizhub C558 (Europe))	A	-
C3736	Fusing abnormally high temperature detection hard protector (Middle of the heating roller)	A	-
C3737	Fusing abnormally high temperature detection hard protector (Center of the heating roller) (bizhub C658/C558)	A	-
C3738	Fusing abnormally high temperature detection hard protector (Center of the heating roller) (bizhub C658/C558)	A	-
C3739	Fusing abnormally high temperature detection hard protector (Edge of the heating roller) (bizhub C558 (Except Europe) or bizhub C458)	A	-
C3822	Fusing abnormally low temperature detection (Edge of the heating roller) (bizhub C658 or bizhub C558 (Europe))	A	-
C3825	Fusing abnormally low temperature detection (Main of the heating roller)	A	-
C3826	Fusing abnormally low temperature detection (Center of the heating roller) (bizhub C458)	A	-
C3922	Fusing sensor wire breaks detection (Edge of the heating roller)	A	-
C3925	Fusing sensor wire breaks detection (Main of the heating roller)	A	-
C3926	Fusing sensor wire breaks detection (Center of the heating roller)	A	-
C392A	Heating roller temperature sensor contamination (Main of the heating roller)	C	-
C392B	Fusing sensor wire breaks detection (Difference of temperature)	A	-
C3B02	IH malfunction (CPU) (bizhub C658/C558)	A	-
C3B03	IH malfunction (monitor) (bizhub C658/C558)	A	-
C3B07	IH input power error	A	-
C3B08	IH input voltage error	B	-
C3B09	IH communication error	C	-
C40A1	Mechanical controller sub-CPU communication error	C	-
C40A2	Mechanical controller PF communication data error	C	-
C40A3	Mechanical controller PF transmission timeout	C	-
C40A4	Mechanical controller PF communication pulse error	C	-
C40C3	CTL PDF send timeout 1	C	Target

Code	Item	Rank	Self-diag. (Full)
C40C5	CTL PDF send timeout 2	C	Target
C4101	Polygon motor's rotation trouble	B	-
C4501	Laser malfunction	B	-
C5102	Transport motor's failure to turn	B	-
C5103	Transport motor's turning at abnormal timing	B	-
C5304	Fusing power supply cooling fan’s failure to turn (bizhub C658/C558)	B	-
C5306	IH coil cooling fan’s failure to turn (bizhub C658/C558)	B	-
C5351	Power supply cooling fan motor's failure to turn	B	-
C5355	Toner cartridge cooling fan's failure to turn	B	-
C5358	Fusing power supply cooling fan’s failure to turn (bizhub C458)	B	-
C5360	Clean unit fan's failure to turn (When CU-102 is installed)	B	-
C5361	UFP exhaust cooling fan's failure to turn	C	-
C5370	Rear side cooling fan's failure to turn	C	Target
C5501	AC signal abnormality	C	-
C5601	Engine control malfunction	C	-
C5603	Front side board communication error	C	-
C5605	Engine communication data error	C	-
C5606	Engine transmission timeout	C	-
C5610	PH LD drive communication error	C	-
C6001	DF related configuration error 1	C	Target
C6002	DF related configuration error 2	C	-
C6102	Drive system home sensor malfunction	B	Target
C6103	Slider over running	B	Target
C6104	Back side cleaning home sensor abnormality (initial)	B	Target
C6105	Back side cleaning home sensor abnormality (normal)	B	Target
C6704	Image input time out	C	Target
C6751	CCD clamp/gain adjustment failure	B	Target
C6752	ASIC clock input error (front side)	C	Target
C6753	ASIC clock input error (back side)	C	Target
C6754	CIS clamp adjustment failure	B	Target
C6755	CIS gain adjustment failure	B	Target
C6756	CCD power-supply voltage malfunction	C	Target
C6901	DSC board mount failure 1 (When SC-508 is installed)	C	Target
C6902	DSC board bus check NG1-1 (When SC-508 is installed)	C	Target
C6903	DSC board bus check NG1-2 (When SC-508 is installed)	C	Target
C6911	DSC board mount failure 2 (When SC-508 is installed)	C	Target
C6912	DSC board bus check NG2-1 (When SC-508 is installed)	C	Target
C6913	DSC board bus check NG2-2 (When SC-508 is installed)	C	Target
C6F01	Scanner sequence trouble 1	C	Target
C6F02	Scanner sequence trouble 2	C	Target
C6F03	Scanner sequence trouble 3	C	Target
C6F04	Scanner sequence trouble 4	C	Target
C6F05	Scanner sequence trouble 5	C	Target
C6F06	Scanner sequence trouble 6	C	Target
C6F07	Scanner sequence trouble 7	C	Target
C6F08	Scanner sequence trouble 8	C	Target
C6F09	Scanner sequence trouble 9	C	Target
C6F0A	Scanner sequence trouble 10	C	Target
C6FDC	Scanner sequence trouble DC	B	Target
C6FDD	Scanner sequence trouble DD	B	Target
C8101	Before reading pressure welding alienation mechanism trouble	B	-
C8103	Lift up mechanism trouble (Upward movement)	B	-
C8106	Lift up mechanism failure (Downward movement)	B	-
C8107	Glass cleaning mechanism trouble	B	-
C8302	Cooling fan motor's trouble	B	Target
C8401	Nonvolatile memory error	C	-
C8402	Multi feed detection board failure (When UK-501 is installed)	C	-

Code	Item	Rank	Self-diag. (Full)
C9401	Exposure LED lighting failure	B	Target
C9402	Exposure LED lighting abnormally	B	Target
C9403	CIS LED lighting failure	B	Target
C9404	CIS LED lighting abnormally	B	Target
CA051	Standard controller configuration failure	C	-
CA052	Controller hardware error	C	-
CA053	Controller start failure	C	-
CB001	FAX board error 1	C	Target
CB002	FAX board error 2	C	Target
CB003	FAX board error 3	C	Target
CB004	FAX board error 4	C	Target
CB005	FAX board error 5	C	Target
CB006	FAX board error 6	C	Target
CB051	FAX board mount failure line 1	C	Target
CB052	FAX board mount failure line 2	C	Target
CB110	Instance generation error or observer registration error	C	Target
CB111	Configuration space initialization NG	C	Target
CB112	Semaphore acquisition, release error	C	Target
CB113	Sequence error among main body tasks	C	Target
CB114	Message queue control error	C	Target
CB115	Main body - sequence error among FAX boards	C	Target
CB116	FAX board nonresponse (Nonresponse after initialization)	C	Target
CB117	ACK waiting timeout error	C	Target
CB118	Receiving undefined frame	C	Target
CB119	DMA transfer error	C	Target
CB120	JC soft error	C	Target
CB122	Device error (modem-DAA initialization error)	C	Target
CB123	Device error (modem-DAA power save recovery error)	C	Target
CB125	ISW failure of SubCPU	C	Target
CB126	Timeout error due to nonresponse from DC during suspension process	C	Target
CB127	Timeout error due to nonresponse from CC during suspension process	C	Target
CB128	Timeout error due to nonresponse from LINE during suspension process	C	Target
CB129	Timeout error due to nonresponse from SPI tasks during suspension process	C	Target
CB130	Driver soft error	C	Target
CB131	Reception frame length error from main	C	Target
CB132	Reception frame header error from main	C	Target
CB133	232C i/f sequence error	C	Target
CB134	DPRAM i/f sequence error	C	Target
CB135	DPRAM CTL/STL register error	C	Target
CB136	ACK waiting timeout	C	Target
CB137	DPRAM RESET reception	C	Target
CB140	MSG I/F Error with JC	C	Target
CB141	I/F error with driver	C	Target
CB142	Undefined command reception	C	Target
CB143	Command frame length error	C	Target
CB144	Command parameter length error	C	Target
CB145	Undefined parameter	C	Target
CB146	Command/response sequence error	C	Target
CB150	External class instance acquisition error	C	Target
CB151	Job start error (Starting job parameter error/child job generation error)	C	Target
CB152	Doc access error (Report buf access error)	C	Target
CB153	Response wait timeout from external task	C	Target
CB154	Internal que table control error (create/enque/deque)	C	Target
CB160	Instance generation error	C	Target
CB161	Timeout error	C	Target
CB162	Interface error	C	Target

Code	Item	Rank	Self-diag. (Full)
CB163	Message que control error	C	Target
CB164	Semaphore acquisition release error	C	Target
CB165	Observer registration error	C	Target
CB166	Reception resource check error	C	Target
CB167	Deployment error of sending image information	C	Target
CB168	Serialization error of receiving image	C	Target
CB169	Access error to quick memory data	C	Target
CB170	Internal que table control error (create/enque/deque)	C	Target
CB171	Instance generation error	C	Target
CB172	Timeout error	C	Target
CB173	Interface error	C	Target
CB174	Semaphore acquisition release error	C	Target
CB175	Observer registration error	C	Target
CB176	Unable to check TTI domain	C	Target
CB177	Error return from TTI rasterizer	C	Target
CB178	Receiving job generation error	C	Target
CB179	Sequence control error	C	Target
CB180	Access error to quick sending memory data	C	-
CB181	BlockBuff acquisition error	C	-
CB182	Sending block image error (Req, restore)	C	-
CB183	Receiving block image error (Req, store)	C	-
CB184	Storage error of receiving image information	C	-
CB185	Receiving data size logic error (Receiving data are not multiples of dotline)	C	Target
CB186	Image buf acquisition (alloc) error	C	Target
CB187	Error return from compressor	C	Target
CB188	BandBuf control error (newInstance/get/free)	C	Target
CB190	USB IF error (USB out transfer NG)	C	Target
CB191	USB IF error (USB in transfer NG)	C	Target
CB192	USB IF error	C	Target
CB193	USB IF error (USB is detached.)	C	Target
CB194	USB IF error (No response from fax board)	C	Target
CB195	USB IF error (Attach not detected for 1 min. after recovery from sleep)	C	Target
CB196	USB IF error (Detach not detected for 1 min. after recovery from sleep)	C	Target
CC140	Trouble related to security	C	-
CC151	ROM contents error upon startup (MSC)	C	Target
CC152	ROM contents error upon startup (IR)	C	Target
CC155	Finisher ROM error (When FS-533, FS-536, FS-536SD, FS-537, FS-537SD, or JS-506 is installed)	C	-
CC156	DF ROM error	C	Target
CC159	ROM contents error upon startup (DSC1)	C	Target
CC15A	ROM contents error upon startup (DSC2)	C	Target
CC15B	Flash ROM error (saddle) (When FS-536SD or FS-537SD is installed)	C	-
CC15C	Engine Flash ROM writing error	C	-
CC163	ROM contents error (PRT)	C	-
CC164	ROM contents error (MSC)	C	Target
CC170	Dynamic link error during starting (AP0)	C	Target
CC171	Dynamic link error during starting (AP1)	C	Target
CC172	Dynamic link error during starting (AP2)	C	Target
CC173	Dynamic link error during starting (AP3)	C	Target
CC174	Dynamic link error during starting (AP4)	C	Target
CC180	Dynamic link error during starting (LDR)	C	Target
CC181	Dynamic link error during starting (IBR)	C	Target
CC182	Dynamic link error during starting (IID)	C	Target
CC183	Dynamic link error during starting (IPF)	C	Target
CC184	Dynamic link error during starting (IMY)	C	Target
CC185	Dynamic link error during starting (SPF)	C	Target

Code	Item	Rank	Self-diag. (Full)
CC186	Dynamic link error during starting (OAP)	C	Target
CC190	Outline font load error	C	Target
CC191	Setting parameter load error (LDR)	C	Target
CC211	Authentication device general error	C	Target
CC212	User validation error	C	Target
CC213	User registration error/Card information setting error	C	Target
CC214	User information deletion error	C	Target
CC216	Acquisition failure of the number of trials/Initialize error of number of authentication	C	Target
CC301	Authentication customize data error	B	Target
CC302	Authentication customize data version mismatch error	B	Target
CCC00	Public user account track information error	B	Target
CD002	JOB RAM save error	C	Target
CD004	Hard disk access error (connection failure)	C	Target
CD00F	Hard disk data transfer error	C	Target
CD010	Hard disk unformat	C	Target
CD011	Hard disk out of specifications mounted	C	Target
CD012	Mount error due to hard disk being unformatted	C	Target
CD013	HDD mirroring error master	A	Target
CD014	HDD mirroring error slave	A	Target
CD015	HDD mirroring error master slave	A	Target
CD016	HDD mirroring error master (rebuild)	A	Target
CD017	HDD mirroring error slave (rebuild)	A	Target
CD020	Hard disk verify error	C	Target
CD030	Hard disk management information reading error	C	Target
CD041	HDD command execution error	C	Target
CD042		C	Target
CD043		C	Target
CD044		C	Target
CD045		C	Target
CD046		C	Target
CD047	HDD SCSI library error	C	Target
CD048		C	Target
CD049		C	Target
CD04A		C	Target
CD04B		C	Target
CD050	Hard disk recovery timeout	C	Target
CD110	Wireless LAN destination initialization error	C	Target
CD201	File memory mounting error	C	Target
CD202	Memory capacity discrepancy	C	Target
CD203	Memory capacity discrepancy 2	C	Target
CD211	PCI-SDRAM DMA operation failure	C	Target
CD212	Compression/extraction timeout detection	C	Target
CD241	Encryption ASIC setting error	C	Target
CD242	Encryption ASIC mounting error	C	Target
CD252	No relay circuit boards for IC-416 mounting at IC-416 mount setting	C	Target
CD261	USB host board failure	C	Target
CD262	Extension network adapter installation error	C	Target
CD271	The memory cannot be recognized with the i-Option activated	C	Target
CD272	i-Option activated and HDD not installed	C	Target
CD2D1	VLAN setting configuration error	B	-
CD3##	Nonvolatile data error	C	Target
CD313	TPM key data error	C	Target
CD38E	Nonvolatile data save error (SPI-Flash)	C	Target
CD390	Nonvolatile data checksum error	C	Target
CD391	Nonvolatile data save error (eMMC)	-	Target
CD392	Nonvolatile data save error (EEPROM)	C	Target

Code	Item	Rank	Self-diag. (Full)
CD3C0	New board detection	C	Target
CD401	NACK command incorrect	C	Target
CD402	ACK command incorrect	C	Target
CD403	Checksum error	C	Target
CD404	Receiving packet incorrect	C	Target
CD405	Receiving packet analysis error	C	Target
CD406	ACK receiving timeout	C	Target
CD407	Retransmission timeout	C	Target
CD411	Touch panel board error	C	Target
CD412	Touch panel type mismatch	C	Target
CD413	Electrostatic touch panel operation mode error	C	Target
CD601	Trouble related to security	-	-
CD602			
CD603			
CD701	Mechanical controller flash ROM writing error	C	-
CD702	Mechanical controller flash ROM device error	C	-
CD703	FW download communication fault	C	-
CD704	Finisher Flash ROM device error (When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, FS-537SD, or JS-506 is installed)	C	-
CD705	Mechanical controller sub-CPU flash ROM device error	C	-
CD706	Mechanical controller sub-CPU flash ROM error	C	-
CDC##	Trouble related to security	-	-
CDF50	ASIC image version failure	C	Target
CDF51	ASIC image version failure (back side)	C	Target
CDF70	ASIC image access failure	C	Target
CDF71	ASIC image access failure (back side)	C	Target
CDFA0	ASIC image error	C	Target
CDFA1	ASIC image error (back side)	C	Target
CE001	Abnormal message queue	C	Target
CE002	Message and method parameter failure	C	Target
CE003	Task error	C	Target
CE004	Event error	C	Target
CE005	Memory access error	C	Target
CE006	Header access error	C	Target
CE007	DIMM initialize error	C	Target
CE009	Memory resource shortage error	C	Target
CE101	Browser finish detected	C	Target
CE201	Transmission operation log storage fault	C	Target
CE301	Referring incorrect memory	C	Target
CE302	Incorrect command	C	Target
CE303	Finished due to error inside Qt library	C	Target
CE304	Finished due to error outside Qt library	C	Target
CE305	Program forced to stop	C	Target
CED01	The authentication application information does not exist in the hard disk/ eMMC board in the enhanced server authentication state.	C	Target
CEEE1	MFP board (MSC) malfunction	C	Target
CEEE2	Scanner section malfunction	A	Target
CEEE3	MFP board (ENG) malfunction	A	Target
CF###	Trouble code (CF###) is referred to as abort code. For details of abort code, refer to “K.4. ABORT CODE”.	C	-

3.7 C0### (bizhub C368/C308/C258)

3.7.1 C0002 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0002: Paper feed communication error
Rank	C
Trouble detection condition	When the MFP board (MFPB) is receiving data, a communication error is detected.

Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • PC control board (PCCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Correct or replace the harness connection between the main body and the paper feed cabinet if faulty.
3. Rewrite the firmware.
4. Replace PCCB. (PC-110/PC-210 / PC-410)
5. Replace MFPB.

3.7.2 C0106 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0106: Tray 3/transfer LCT paper feed motor turning at abnormal timing (When PC-110, PC-210 or PC-410 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	<When PC-110 or PC-210 is installed> • Tray 3 paper feed motor (M111) • PC control board (PCCB)
	<When PC-410 is installed> • Paper feed motor (M131) • PC control board (PCCB)

(2) Procedure

(a) When PC-110 or PC-210 is installed

1. Check the connector between M111-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M111 for proper drive coupling and correct as necessary.
3. M111 operation check
   - Control signal: PCCB CN5-5 (CW/CCW)
   - Location of electrical component: PC-110/PC-210 4-C
4. Replace M111.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.3 PC-110)
- Link to the wiring diagram (N.4.5 PC-210)

(b) When PC-410 is installed

1. Check the connector between M131-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M131 for proper drive coupling and correct as necessary.
3. M131 operation check
   - Control signal: PCCB CN5-5 (CW/CCW)
   - Location of electrical component: PC-410 4-J
4. Replace M131.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.7 PC-410)

3.7.3 C0107 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0107: Tray 3/transfer LCT vertical transport motor turning at abnormal timing (When PC-110, PC-210 or PC-410 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	<When PC-110 or PC-210 is installed> • Tray 3 vertical transport motor (M112) • PC control board (PCCB)
	<When PC-410 is installed> • Vertical transport motor (M132) • PC control board (PCCB)

(2) Procedure

(a) When PC-110 or PC-210 is installed

1. Check the connector between M112-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M112 for proper drive coupling and correct as necessary.
3. M112 operation check
   - Control signal: PCCB CN5-13 (CW/CCW)
   - Location of electrical component: PC-110/PC-210 3 to 4-C
4. Replace M112.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.3 PC-110)
- Link to the wiring diagram (N.4.5 PC-210)

(b) When PC-410 is installed

1. Check the connector between M132-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M132 for proper drive coupling and correct as necessary.
3. M132 operation check
   - Control signal: PCCB CN5-13 (CW/CCW)
   - Location of electrical component: PC-410 4-J
4. Replace M132.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.7 PC-410)

3.7.4 C0108 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0108: Tray 4 paper feed motor turning at abnormal timing (When PC-210 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Tray 4 paper feed motor (M121) • PC control board (PCCB)

(2) Procedure

1. Check the connector between M121-PCCB CN9 for proper connection and correct as necessary.
2. Check the connector of M121 for proper drive coupling and correct as necessary.
3. M121 operation check
   - Control signal: PCCB CN9-5 (CW/CCW)
   - Location of electrical component: PC-210 6-K
4. Replace M121.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.5 PC-210)

3.7.5 C0109 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0109: Tray 4 vertical transport motor turning at abnormal timing (When PC-210 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Tray 4 vertical transport motor (M122) • PC control board (PCCB)

(2) Procedure

1. Check the connector between M122-PCCB CN9 for proper connection and correct as necessary.
2. Check the connector of M122 for proper drive coupling and correct as necessary.
3. M122 operation check
   - Control signal: PCCB CN9-13 (CW/CCW)
   - Location of electrical component: PC-210 6-K
4. Replace M122.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.5 PC-210)

3.7.6 C0202 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0202: Tray 1 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 1 upper limit sensor (PS25) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 1
Relevant electrical parts	• Tray 1 lift-up motor (M12) • Tray 1 upper limit sensor (PS25) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M12-MFPB CN19E for proper connection and correct as necessary.
3. Check the connector of M12 for proper drive coupling and correct as necessary.
4. Check the connector between PS25-relay CN30-MFPB CN26E for proper connection and correct as necessary.
5. PS25 I/O check, sensor check
   - Control signal: MFPB CN26E-3 (ON)
   - Location of electrical component: 25-C
6. M12 operation check
   - Control signal: MFPB CN19E-5 (REM)
   - Location of electrical component: 21-C
7. Replace M12.
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.7.7 C0204 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0204: Tray 2 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 2 upper limit sensor (PS22) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 2
Relevant electrical parts	• Tray 2 lift-up motor (M13) • Tray 2 upper limit sensor (PS22) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M13-MFPB CN25E for proper connection and correct as necessary.
3. Check the connector of M13 for proper drive coupling and correct as necessary.
4. Check the connector between PS22-relay CN40-MFPB CN23E for proper connection and correct as necessary.
5. PS22 I/O check, sensor check
   - Control signal: MFPB CN23E-9 (ON)
   - Location of electrical component: 27-C
6. M13 operation check
   - Control signal: MFPB CN25E-5 (REM)
   - Location of electrical component: 22-C
7. Replace M13.
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.7.8 C0206 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0206: Tray 3 feeder up/down abnormality (When PC-110 or PC-210 is installed)
Rank	B
Trouble detection condition	The tray 3 upper limit sensor (PS116) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 3
Relevant electrical parts	• Tray 3 lift-up motor (M113) • Tray 3 upper limit sensor (PS116) • PC control board (PCCB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M113-PCCB CN6 for proper connection and correct as necessary.

3. Check the connector of M113 for proper drive coupling and correct as necessary.
4. Check the connector between PS116-relay CN24-PCCB CN4 for proper connection and correct as necessary.
5. PS116 I/O check, sensor check
   - Control signal: PCCB CN4-3 (ON)
   - Location of electrical component: PC-110/PC-210 7-C
6. M113 operation check
   - Control signal: PCCB CN6-8 to 9
   - Location of electrical component: PC-110/PC-210 2-C
7. Replace M113.
8. Replace PCCB.
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.4.3 PC-110)
- Link to the wiring diagram (N.4.5 PC-210)

3.7.9 C0208 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0208: Tray 4 feeder up/down abnormality (When PC-210 is installed)
Rank	B
Trouble detection condition	The tray 4 upper limit sensor (PS126) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 4
Relevant electrical parts	• Tray 4 lift-up motor (M123) • Tray 4 upper limit sensor (PS126) • PC control board (PCCB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M123-PCCB CN8 for proper connection and correct as necessary.
3. Check the connector of M123 for proper drive coupling and correct as necessary.
4. Check the connector between PS126-relay CN47-PCCB CN7 for proper connection and correct as necessary.
5. PS126 I/O check, sensor check
   - Control signal: PCCB CN7-3 (ON)
   - Location of electrical component: PC-210 8-K
6. M123 operation check
   - Control signal: PCCB CN8-8 to 9
   - Location of electrical component: PC-210 5-K
7. Replace M123.
8. Replace PCCB.
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.4.5 PC-210)

3.7.10 C0210 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0210: Transfer LCT lift failure (When PC-410 is installed)
Rank	B
Trouble detection condition	• The main tray upper limit sensor (PS136) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began. • The shifter stop / lower limit position sensor (PS138) is not turned OFF (unblocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began. • The main tray upper limit sensor (PS136) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operating. • The main tray upper limit sensor (PS136) is not turned OFF (unblocked) even after the set period of time has elapsed after the paper lift-down operation began. • The shifter stop / lower limit position sensor (PS138) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-down operation began.
Trouble isolation	LCT
Relevant electrical parts	• Main tray upper limit sensor (PS136) • Shifter stop / lower limit position sensor (PS138) • Elevator motor (M134) • PC control board (PCCB)

(2) Procedure

1. Remove thetray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M134-PCCB CN10 for proper connection and correct as necessary.
3. Check the connector of M134 for proper drive coupling and correct as necessary.
4. Check the connector between PS136-relay CN1-PCCB CN4 for proper connection and correct as necessary.
5. Check the connector between PS138-relay CN16-PCCB CN14 for proper connection and correct as necessary.
6. PS136 I/O check, sensor check
   - Control signal: PCCB CN4-3 (ON)

- Location of electrical component: PC-410 8-J

7. PS138 I/O check, sensor check
   - Control signal: PCCB CN14-6 (ON)
   - Location of electrical component: PC-410 3-J
8. M134 operation check
   - Control signal: PCCB CN10-1 to 2
   - Location of electrical component: PC-410 6-J
9. Replace M134.
10. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.7 PC-410)

3.7.11 C0211 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0211: Manual feed up/down abnormality
Rank	B
Trouble detection condition	• The bypass lift-up position sensor (PS26) is not turned OFF (unblock) even after the transport motor (M1) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position. • The bypass lift-up position sensor (PS26) is not turned ON (blocked) even after the transport motor (M1) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position.
Trouble isolation	Manual
Relevant electrical parts	• Transport motor (M1) • Bypass pick-up solenoid (SD1) • Bypass lift-up position sensor (PS26) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M1-MFPB CN8E for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS26-relay CN19-MFPB CN18E for proper connection and correct as necessary.
4. Check the connector between SD1-relay CN21-relay CN19-MFPB CN18E for proper connection and correct as necessary.
5. PS26 I/O check, sensor check
   - Control signal: MFPB CN18E-13 (ON)
   - Location of electrical component: 22-J
6. SD1 operation check
   - Control signal: MFPB CN18E-10 (ON)
   - Location of electrical component: 22-J
7. M1 operation check
   - Control signal: MFPB CN8E-3 (REM), MFPB CN8E-6 (LOCK)
   - Location of electrical component: 2-C
8. Replace M1.
9. MFPB ICP3E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.7.12 C0214 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0214: Transfer LCT shift failure (When PC-410 is installed)
Rank	B
Trouble detection condition	• The shifter stop / lower limit position sensor (PS138) is not turned ON (blocked) even after the set period of time has elapsed after the shift operation began (shift to the right). • The shifter home sensor (PS139) is not turned OFF (unblocked) even after the set period of time has elapsed after the shift operation began (shift to the right). • The shifter stop / lower limit position sensor (PS138) is not turned OFF (unblocked) even after the set period of time has elapsed after the return operation began (shift to the left). • The shifter home sensor (PS139) is not turned ON (blocked) even after the set period of time has elapsed after the return operation began (shift to the left).
Trouble isolation	LCT
Relevant electrical parts	• Shifter stop / lower limit position sensor (PS138) • Shifter home sensor (PS139) • Shifter motor (M133) • PC control board (PCCB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M133-PCCB CN10 for proper connection and correct as necessary.
3. Check the connector of M133 for proper drive coupling and correct as necessary.
4. Check the connector between PS138-relay CN16-PCCB CN14 for proper connection and correct as necessary.
5. Check the connector between PS139-relay CN16-PCCB CN14 for proper connection and correct as necessary.

6. PS138 I/O check, sensor check
   - Control signal: PCCB CN14-6 (ON)
   - Location of electrical component: PC-410 3-J
7. PS139 I/O check, sensor check
   - Control signal: PCCB CN14-3 (ON)
   - Location of electrical component: PC-410 4-J
8. M133 operation check
   - Control signal: PCCB CN10-3 to 4
   - Location of electrical component: PC-410 6-J
9. Replace M133.
10. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.7 PC-410)

3.7.13 C0216 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C0216: External LCT up/down abnormality (When LU-302 is installed)
Rank	B
Trouble detection condition	The LU upper limit sensor (PS2) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	LCT
Relevant electrical parts	• LU upper limit sensor (PS2) • LU lift-up motor (M1) • LU drive board (LUDB)

(2) Procedure

1. Check the connector between M1-LUDB CN3 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN3-LUDB CN5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: LUDB CN5-3 (ON)
   - Location of electrical component: LU-302 4-G
5. M1 operation check
   - Control signal: LUDB CN3-4 (ON)
   - Location of electrical component: LU-302 3-G
6. Replace M1.
7. Replace LUDB.

NOTICE
- Link to the wiring diagram (N.4.10 LU-302)

3.8 C0### (bizhub C658/C558/C458)

3.8.1 C0002 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0002: Paper feed communication error
Rank	C
Trouble detection condition	When the MFP board (MFPB) is receiving data, a communication error is detected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • PC control board (PCCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Correct or replace the harness connection between the main body and the paper feed cabinet if faulty.
3. Rewrite the firmware.
4. Replace PCCB. (PC-115/PC-215 / PC-415)
5. Replace MFPB.

3.8.2 C0106 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0106: Tray 3/transfer LCT paper feed motor's turning at abnormal timing (When PC-115, PC-215, or PC-415 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-

Relevant electrical parts	<When PC-115 or PC-215 is installed> • Tray 3 paper feed motor (M111) • PC control board (PCCB)
	<When PC-415 is installed> • Paper feed motor (M131) • PC control board (PCCB)

(2) Procedure

(a) When PC-115 or PC-215 is installed

1. Check the connector between M111-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M111 for proper drive coupling and correct as necessary.
3. M111 operation check
   - Control signal: PCCB CN5-5 (CW/CCW)
   - Location of electrical component: PC-115/PC-215 4-C
4. Replace M111.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.4 PC-115)
- Link to the wiring diagram (N.4.6 PC-215)

(b) When PC-415 is installed

1. Check the connector between M131-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M131 for proper drive coupling and correct as necessary.
3. M131 operation check
   - Control signal: PCCB CN5-5 (CW/CCW)
   - Location of electrical component: PC-415 4-J
4. Replace M131.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.8 PC-415)

3.8.3 C0107 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0107: Tray 3/transfer LCT vertical transport motor's turning at abnormal timing (When PC-115, PC-215, or PC-415 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	<When PC-115 or PC-215 is installed> • Tray 3 vertical transport motor (M112) • PC control board (PCCB)
	<When PC-415 is installed> • Vertical transport motor (M132) • PC control board (PCCB)

(2) Procedure

(a) When PC-115 or PC-215 is installed

1. Check the connector between M112-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M112 for proper drive coupling and correct as necessary.
3. M112 operation check
   - Control signal: PCCB CN5-13 (CW/CCW)
   - Location of electrical component: PC-115/PC-215 3 to 4-C
4. Replace M112.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.4 PC-115)
- Link to the wiring diagram (N.4.6 PC-215)

(b) When PC-415 is installed

1. Check the connector between M132-PCCB CN5 for proper connection and correct as necessary.
2. Check the connector of M132 for proper drive coupling and correct as necessary.
3. M132 operation check
   - Control signal: PCCB CN5-13 (CW/CCW)
   - Location of electrical component: PC-415 4-J
4. Replace M132.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.8 PC-415)

3.8.4 C0108 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0108: Tray 4 paper feed motor's turning at abnormal timing (When PC-215 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Tray 4 paper feed motor (M121) • PC control board (PCCB)

(2) Procedure

1. Check the connector between M121-PCCB CN9C for proper connection and correct as necessary.
2. Check the connector of M121 for proper drive coupling and correct as necessary.
3. M121 operation check
   - Control signal: PCCB CN9C-5 (CW/CCW)
   - Location of electrical component: PC-215 6-K
4. Replace M121.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.6 PC-215)

3.8.5 C0109 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0109: Tray 4 vertical transport motor's turning at abnormal timing (When PC-215 is installed)
Rank	B
Trouble detection condition	• The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Tray 4 vertical transport motor (M122) • PC control board (PCCB)

(2) Procedure

1. Check the connector between M122-PCCB CN9C for proper connection and correct as necessary.
2. Check the connector of M122 for proper drive coupling and correct as necessary.
3. M122 operation check
   - Control signal: PCCB CN9C-13 (CW/CCW)
   - Location of electrical component: PC-215 6-K
4. Replace M122.
5. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.6 PC-215)

3.8.6 C0202 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0202: Tray 1 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 1 upper limit sensor (PS25) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 1
Relevant electrical parts	• Tray 1 lift-up motor (M12) • Tray 1 upper limit sensor (PS25) • MFP board (MFPB)

(2) Procedure

1. Remove thetray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M12-MFPB CN27E for proper connection and correct as necessary.
3. Check the connector of M12 for proper drive coupling and correct as necessary.
4. Check the connector between PS25-relay CN30-MFPB CN34E for proper connection and correct as necessary.
5. PS25 I/O check, sensor check
   - Control signal: MFPB CN34E<B>-3 (ON)
   - Location of electrical component: 27-J
6. M12 operation check
   - Control signal: MFPB CN27E-5 (M12_24V)
   - Location of electrical component: 19-J
7. Replace M12.

8. MFPB F1E conduction check
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.8.7 C0204 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0204: Tray 2 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 2 upper limit sensor (PS22) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 2
Relevant electrical parts	• Tray 2 lift-up motor (M13) • Tray 2 upper limit sensor (PS22) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M13-MFPB CN32E for proper connection and correct as necessary.
3. Check the connector of M13 for proper drive coupling and correct as necessary.
4. Check the connector between PS22-relay CN40-MFPB CN34E for proper connection and correct as necessary.
5. PS22 I/O check, sensor check
   - Control signal: MFPB CN34E<A>-9 (ON)
   - Location of electrical component: 26-J
6. M13 operation check
   - Control signal: MFPB CN32E-5 (M13_24V)
   - Location of electrical component: 20-J
7. Replace M13.
8. MFPB F1E conduction check
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.8.8 C0206 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0206: Tray 3 feeder up/down abnormality (When PC-115 or PC-215 is installed)
Rank	B
Trouble detection condition	The tray 3 upper limit sensor (PS116) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 3
Relevant electrical parts	• Tray 3 lift-up motor (M113) • Tray 3 upper limit sensor (PS116) • PC control board (PCCB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M113-PCCB CN6C for proper connection and correct as necessary.
3. Check the connector of M113 for proper drive coupling and correct as necessary.
4. Check the connector between PS116-relay CN24-PCCB CN4 for proper connection and correct as necessary.
5. PS116 I/O check, sensor check
   - Control signal: PCCB CN4-3 (ON)
   - Location of electrical component: PC-115/PC-215 7-C
6. M113 operation check
   - Control signal: PCCB CN6C-8 to 9
   - Location of electrical component: PC-115/PC-215 2-C
7. Replace M113.
8. Replace PCCB.
9. MFPB F1E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.4.4 PC-115)
- Link to the wiring diagram (N.4.6 PC-215)

3.8.9 C0208 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0208: Tray 4 feeder up/down abnormality (When PC-215 is installed)
Rank	B
Trouble detection condition	The tray 4 upper limit sensor (PS126) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.

Trouble isolation	Tray 4
Relevant electrical parts	• Tray 4 lift-up motor (M123) • Tray 4 upper limit sensor (PS126) • PC control board (PCCB) • MFP board (MFPB)

(2) Procedure

1. Remove thetray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M123-PCCB CN8C for proper connection and correct as necessary.
3. Check the connector of M123 for proper drive coupling and correct as necessary.
4. Check the connector between PS126-relay CN47-PCCB CN7C for proper connection and correct as necessary.
5. PS126 I/O check, sensor check
   - Control signal: PCCB CN7C-3 (ON)
   - Location of electrical component: PC-215 8-K
6. M123 operation check
   - Control signal: PCCB CN8C-8 to 9
   - Location of electrical component: PC-215 5-K
7. Replace M123.
8. Replace PCCB.
9. MFPB F1E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.4.6 PC-215)

3.8.10 C0210 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0210: Transfer LCT lift failure (When PC-415 is installed)
Rank	B
Trouble detection condition	• The main tray upper limit sensor (PS136) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began. • The shifter stop / lower limit position sensor (PS138) is not turned OFF (unblocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began. • The main tray upper limit sensor (PS136) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operating. • The main tray upper limit sensor (PS136) is not turned OFF (unblocked) even after the set period of time has elapsed after the paper lift-down operation began. • The shifter stop / lower limit position sensor (PS138) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-down operation began.
Trouble isolation	LCT
Relevant electrical parts	• Main tray upper limit sensor (PS136) • Shifter stop / lower limit position sensor (PS138) • Elevator motor (M134) • PC control board (PCCB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M134-PCCB CN10L for proper connection and correct as necessary.
3. Check the connector of M134 for proper drive coupling and correct as necessary.
4. Check the connector between PS136-relay CN1-PCCB CN4 for proper connection and correct as necessary.
5. Check the connector between PS138-relay CN16-PCCB CN14L for proper connection and correct as necessary.
6. PS136 I/O check, sensor check
   - Control signal: PCCB CN4-3 (ON)
   - Location of electrical component: PC-415 8-J
7. PS138 I/O check, sensor check
   - Control signal: PCCB CN14L-6 (ON)
   - Location of electrical component: PC-415 3-J
8. M134 operation check
   - Control signal: PCCB CN10L-1 to 2
   - Location of electrical component: PC-415 6-J
9. Replace M134.
10. MFPB F1E conduction check
11. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.8 PC-415)

3.8.11 C0211 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0211: Manual feed up/down abnormality
Rank	B
Trouble detection condition	• The bypass lift-up position sensor (PS26) is not turned OFF (unblock) even after the transport motor (M1) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position.

	• The bypass lift-up position sensor (PS26) is not turned ON (blocked) even after the transport motor (M1) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position.
Trouble isolation	Manual
Relevant electrical parts	• Transport motor (M1) • Bypass pick-up solenoid (SD1) • Bypass lift-up position sensor (PS26) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M1-MFPB CN14E for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS26-relay CN19-MFPB CN19E for proper connection and correct as necessary.
4. Check the connector between SD1-relay CN21-relay CN19-MFPB CN19E for proper connection and correct as necessary.
5. PS26 I/O check, sensor check
   - Control signal: MFPB CN19E-13 (ON)
   - Location of electrical component: 22-J
6. SD1 operation check
   - Control signal: MFPB CN19E-9 (SD1_24V)
   - Location of electrical component: 22-J
7. M1 operation check
   - Control signal: MFPB CN41E-3 (REM), MFPB CN14E-6 (LOCK)
   - Location of electrical component: 1-C
8. Replace M1.
9. MFPB ICP3E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.8.12 C0214 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0214: Transfer LCT shift failure (When PC-415 is installed)
Rank	B
Trouble detection condition	• The shifter stop / lower limit position sensor (PS138) is not turned ON (blocked) even after the set period of time has elapsed after the shift operation began (shift to the right). • The shifter home sensor (PS139) is not turned OFF (unblocked) even after the set period of time has elapsed after the shift operation began (shift to the right). • The shifter stop / lower limit position sensor (PS138) is not turned OFF (unblocked) even after the set period of time has elapsed after the return operation began (shift to the left). • The shifter home sensor (PS139) is not turned ON (blocked) even after the set period of time has elapsed after the return operation began (shift to the left).
Trouble isolation	LCT
Relevant electrical parts	• Shifter stop / lower limit position sensor (PS138) • Shifter home sensor (PS139) • Shifter motor (M133) • PC control board (PCCB)

(2) Procedure

1. Remove thetray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M133-PCCB CN10L for proper connection and correct as necessary.
3. Check the connector of M133 for proper drive coupling and correct as necessary.
4. Check the connector between PS138-relay CN16-PCCB CN14L for proper connection and correct as necessary.
5. Check the connector between PS139-relay CN16-PCCB CN14L for proper connection and correct as necessary.
6. PS138 I/O check, sensor check
   - Control signal: PCCB CN14L-6 (ON)
   - Location of electrical component: PC-415 3-J
7. PS139 I/O check, sensor check
   - Control signal: PCCB CN14L-3 (ON)
   - Location of electrical component: PC-415 4-J
8. M133 operation check
   - Control signal: PCCB CN10L-3 to 4
   - Location of electrical component: PC-415 5-J
9. Replace M133.
10. Replace PCCB.

NOTICE
- Link to the wiring diagram (N.4.8 PC-415)

3.8.13 C0216 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C0216: External LCT up/down abnormality (When LU-207 or LU-302 is installed)
Rank	B

Trouble detection condition	The LU upper limit sensor (PS2) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	LCT
Relevant electrical parts	• LU upper limit sensor (PS2) • LU lift-up motor (M1) • LU drive board (LUDB)

(2) Procedure

1. Check the connector between M1-LUDB CN3 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN406 (LU-207), Cn3 (LU-302)-LUDB CN5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: LUDB CN5-3 (ON)
   - Location of electrical component: LU-207/LU-302 4-G
5. M1 operation check
   - Control signal: LUDB CN3-4 (ON)
   - Location of electrical component: LU-207/LU-302 3-G
6. Replace M1. (LU-207 / LU-302)
7. Replace LUDB. (LU-207 / LU-302)

NOTICE
- Link to the wiring diagram (N.4.9 LU-207)
- Link to the wiring diagram (N.4.10 LU-302)

3.9 C1### (bizhub C368/C308/C258)

3.9.1 C1004 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1004: FNS communication error (When FS-533, FS-534, FS-534SD or JS-506 is installed)
Rank	C
Trouble detection condition	<When FS-533, FS-534 or FS-534SD is installed> • When the FS control board (FSCB) is receiving data, a communication error is detected.
	<When JS-506 is installed> • When the JS control board (JSCB) is receiving data, a communication error is detected.
Trouble isolation	-
Relevant electrical parts	<When FS-533, FS-534 or FS-534SD is installed> • FS control board (FSCB)
	<When JS-506 is installed> • JS control board (JSCB)

(2) Procedure

(a) When FS-533, FS-534 or FS-534SD is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-533 / FS-534/FS-534SD)

(b) When JS-506 is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace JSCB.

3.9.2 C1081 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1081: SD communication error (When FS-534SD is installed)
Rank	C
Trouble detection condition	When a communication error is detected between the FS control board (FSCB) and the SD control board (SDDB).
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace SDDB.
4. Replace FSCB.

3.9.3 C1102 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1102: Main tray up/down motor drive malfunction (When FS-533, FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	<When FS-533 is installed> • While the exit tray is being lifted, the paper exit tray home sensor (PS107) is not turned OFF (unblocked) after the set period of time has elapsed after the tray lift up motor (M109) is turned ON. • While the exit tray is being lowered, the paper exit tray home sensor (PS107) is not turned ON (blocked) after the set period of time has elapsed after the tray lift up motor (M109) is turned ON.
	<When FS-534 or FS-534SD is installed> • While the exit tray is being lifted, the main tray upper position sensor (PS26/PS27) is not turned ON (blocked) and the main tray upper position detect switch (SW2) is not turned ON, even after the main tray up/down motor (M11) turns by the set number of times. • While the exit tray is being lowered, the main tray full detection sensor (PS29) is not turned ON (blocked) after the set period of time has elapsed after the main tray up/down motor (M11) is turned ON.
Trouble isolation	-
Relevant electrical parts	<When FS-533 is installed> • Tray lift up motor (M109) • Paper exit tray home sensor (PS107) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed> • Main tray up/down motor (M11) • Main tray upper position sensor/R (PS26) • Main tray upper position sensor/F (PS27) • Main tray full detection sensor (PS29) • Main tray upper position detect switch (SW2) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M109-FSCB CN108 for proper connection and correct as necessary.
2. Check the connector of M109 for proper drive coupling, and correct as necessary.
3. Check the connector between PS107-FSCB CN110 for proper connection and correct as necessary.
4. PS107 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 7-D to E
5. M109 operation check
   - Control signal: FSCB CN108
   - Location of electrical component: FS-533 10-E
6. Replace M109.
7. FSCB CP109 conduction check
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

1. Check the motor, sensor and switch connectors for proper connection, and correct as necessary.
2. Check the connector of M11 for proper drive coupling, and correct as necessary.
3. PS26 I/O check, sensor check
   - Control signal: FSCB J14<A>-5 (ON)
   - Location of electrical component: FS-534 2-C
4. PS27 I/O check, sensor check
   - Control signal: FSCB J14<B>-6 (ON)
   - Location of electrical component: FS-534 3-C
5. PS29 I/O check, sensor check
   - Control signal: FSCB J14<A>-8 (ON)
   - Location of electrical component: FS-534 4-C
6. SW2 operation check
   - Control signal: FSCB J10-1 to 2
   - Location of electrical component: FS-534 8-K
7. M11 operation check
   - Control signal: FSCB J9<A>-9 to 10
   - Location of electrical component: FS-534 10-C to D
8. Replace M11.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.4 C1103 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1103: Alignment plate motor/Fr malfunction (When FS-533, FS-534 or FS-534SD is installed)
Rank	B

Trouble detection condition	<When FS-533 is installed> • The alignment plate home sensor/F (PS108) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate home sensor/F (PS108) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/F (M105) is turned ON to return the plate to the home position.
	<When FS-534 or FS-534SD is installed> • The alignment plate/F home sensor (PS12) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate/F home sensor (PS12) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/Front (M7) is turned ON to return the plate to the home position. • The alignment plate/F does not reach the specified position within the set period of time.
Trouble isolation	-
Relevant electrical parts	<When FS-533 is installed> • Alignment motor/F (M105) • Alignment plate home sensor/F (PS108) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed> • Alignment motor/Front (M7) • Alignment plate/F home sensor (PS12) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M105-FSCB CN102 for proper connection and correct as necessary.
2. Check the connector of M105 for proper drive coupling, and correct as necessary.
3. Check the connector between PS108-FSCB CN102 for proper connection and correct as necessary.
4. PS108 I/O check, sensor check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
5. M105 operation check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
6. Replace M105.
7. FSCB CP105 conduction check
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

1. Check the connector between M7-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS12-FSCB J4 for proper connection and correct as necessary.
4. PS12 I/O check, sensor check
   - Control signal: FSCB J4<B>-4 (ON)
   - Location of electrical component: FS-534 13-C
5. M7 operation check
   - Control signal: FSCB J4<A>-5 to 8
   - Location of electrical component: FS-534 11-C to D
6. Replace M7.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.5 C1105 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1105: Bundle eject motor drive malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	• The gripper home position sensor (PS18) is not turned ON (blocked) even after the set period of time has elapsed after the gripper position detection sensor (PS19) is turned OFF (unblocked). • The gripper position detection sensor (PS19) is not turned OFF (unblocked) even after the set period of time has elapsed after it is turned ON (blocked). • The gripper position detection sensor (PS19) is not turned ON (blocked) even after the set period of time has elapsed after the gripper home position sensor (PS18) is turned OFF (unblocked). • The gripper home position sensor (PS18) is not turned OFF (unblocked) even after the set period of time has elapsed after the bundle eject motor (M10) is energized. • The gripper home position sensor (PS18) and the gripper position detection sensor (PS19) is turned ON (blocked) at the same time.
Trouble isolation	-
Relevant electrical parts	• Bundle eject motor (M10) • Gripper home position sensor (PS18) • Gripper position detection sensor (PS19) • FS control board (FSCB)

(2) Procedure

1. Check the motor and sensor connectors for proper connection, and correct as necessary.
2. Check the connector of M10 for proper drive coupling, and correct as necessary.
3. PS18 I/O check, sensor check
   - Control signal: FSCB J13-13 (ON)
   - Location of electrical component: FS-534 7-C
4. PS19 I/O check, sensor check
   - Control signal: FSCB J12-3 (ON)
   - Location of electrical component: FS-534 7-C
5. M10 operation check
   - Control signal: FSCB J13-1 to 2
   - Location of electrical component: FS-534 8-C to D
6. Replace M10.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.6 C1106 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1106: Stapler movement motor malfunction (When FS-533, FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	<When FS-533 is installed> • The stapler home sensor (PS110) is not turned OFF (unblocked) after the laps of given time after it started operating from the home position. • The stapler home sensor (PS110) is not turned ON (blocked) after the laps of give time after the stapler movement motor (M107) turned ON when it returned to the home position.
	<When FS-534 or FS-534SD is installed> • The stapler home position sensor (Rear) (PS23) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the side stapler movement motor (M13) turned ON. • The stapler does not reach the specified position within the set period of time.
Trouble isolation	Staple
Relevant electrical parts	<When FS-533 is installed> • Stapler movement motor (M107) • Stapler home sensor (PS110) • Stapler relay board (STREYB) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed> • Side stapler movement motor (M13) • Stapler home position sensor (Rear) (PS23) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M107-STREYB CN123 for proper connection, and correct as necessary.
2. Check the connector of M107 for proper drive coupling, and correct as necessary.
3. Check the connector between PS110-FSCB CN110 for proper connection, and correct as necessary.
4. PS110 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 8-D to E
5. M107 operation check
   - Control signal: STREYB CN123-5 to 8
   - Location of electrical component: FS-533 5-L
6. Replace M107.
7. Replace STREYB.
8. FSCB CP107 conduction check
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

1. Check the connector between M13-relay CN3-FSCB J11 for proper connection, and correct as necessary.
2. Check the connector of M13 for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-534 4-C
5. M13 operation check
   - Control signal: FSCB J11<A>-1 to 4
   - Location of electrical component: FS-534 4-C to D
6. Replace M13.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.7 C1109 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1109: Stapler motor drive malfunction (When FS-533, FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	<When FS-533 is installed> • The stapler home sensor (PS110) is not turned ON (blocked) even after the set period of time has elapsed after the stapler motor turned ON.
	<When FS-534 or FS-534SD is installed> • The stapler home position sensor (Rear) (PS23) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the stapler motor (M14) turned ON. • The stapler position sensor (Center) (PS24) is turned ON (blocked), when the stapler motor (M14) is running.
Trouble isolation	Staple
Relevant electrical parts	<When FS-533 is installed> • Stapler home sensor (PS110) • Stapler unit • Stapler relay board (STREYB) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed> • Stapler home position sensor (Rear) (PS23) • Stapler unit • Stapler position sensor (Center) (PS24) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between the stapler unit-STREYB CN122 and CN123 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS110-FSCB CN110 for proper connection and correct as necessary.
4. PS110 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 8-D to E
5. Replace the stapler unit.
6. Replace STREYB.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

1. Check the connector between the stapler unit-relay CN4-FSCB J11 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. Check the connector between PS24-relay CN3-FSCB J11 for proper connection and correct as necessary.
5. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-534 4-C
6. PS24 I/O check, sensor check
   - Control signal: FSCB J11<B>-6 (ON)
   - Location of electrical component: FS-534 4 to 5-C
7. Replace the stapler unit.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.8 C1112 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1112: Stapler motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	• The stapler home sensor is not turned ON even after the set period of time has elapsed while the stapler motor is energized. • The stapler home sensor is not turned OFF even after the set period of time has elapsed after the stapler home sensor is turned ON.
Trouble isolation	• Staple • Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Staple unit • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between the staple unit-SDDB J4 for proper connection and correct as necessary.

2. Check the connector of the staple unit for proper drive coupling and correct as necessary.
3. Replace the staple unit.
4. Replace SDDB.
5. Replace FSCB.

3.9.9 C1113 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1113: Center-staple lead edge stopper motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The stopper home sensor (PS6) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the stopper drive motor (M4) is turned ON.
Trouble isolation	• Staple • Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Stopper drive motor (M4) • Stopper home sensor (PS6) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M4-SDDB J10 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-SDDB J10 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: SDDB J10-5 (ON)
   - Location of electrical component: SD-511 2-G
5. M4 operation check
   - Control signal: SDDB J10-6 to 9
   - Location of electrical component: SD-511 1 to 2-F to G
6. Replace M4.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.10 C1114 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1114: Center-staple front adjust drive motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The alignment home sensor (PS4) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the alignment motor (M3) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Alignment motor (M3) • Alignment home sensor (PS4) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M3-relay CN10-SDDB J7 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS4-relay CN10-SDDB J7 for proper connection and correct as necessary.
4. PS4 I/O check, sensor check
   - Control signal: SDDB J7-6 (ON)
   - Location of electrical component: SD-511 6-F
5. M3 operation check
   - Control signal: SDDB J7-7 to 10
   - Location of electrical component: SD-511 5-F to G
6. Replace M3.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.11 C1115 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1115: Center-staple knife drive motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The center fold knife home sensor (PS8) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the center fold knife motor (M9) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold

Relevant electrical parts	• Center fold knife motor (M9) • Center fold knife home sensor (PS8) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M9-SDDB J11 for proper connection and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS8-relay CN10-SDDB J7 for proper connection and correct as necessary.
4. PS8 I/O check, sensor check
   - Control signal: SDDB J7-3 (ON)
   - Location of electrical component: SD-511 6-G
5. M9 operation check
   - Control signal: SDDB J11-11 to 20
   - Location of electrical component: SD-511 1 to 2-B
6. Replace M9.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.12 C1132 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1132: Punch drive motor malfunction (When FS-533+PK-519, FS-534+PK-520 or FS-534SD+PK-520 is installed)
Rank	B
Trouble detection condition	<When FS-533+PK-519 is installed> • The puncher drive cam sensor (PS203) or puncher home sensor (PS204) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the punch motor (M201) is energized. • The punch motor sensor (PS202) is not turned ON when the punch motor (M201) driven. • The holes with other marketing area is set in [Service Mode] -> [Finisher] -> [Punch Option Setting].
	<When FS-534+PK-520 or FS-534SD+PK-520 is installed> • The punch home sensor (PS1) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the punch drive motor (M1) is energized. • Thick paper is loaded and a punch operation is performed with [Plain Paper] left set for the paper type.
Trouble isolation	-
Relevant electrical parts	<When FS-533+PK-519 is installed> • Punch motor (M201) • Punch motor sensor (PS202) • Puncher drive cam sensor (PS203) • Puncher home sensor (PS204) • PK control board (PKCB) • FS control board (FSCB)
	<When FS-534+PK-520 or FS-534SD+PK-520 is installed> • Punch drive motor (M1) • Punch home sensor (PS1) • FS control board (FSCB)

(2) Procedure

(a) When FS-533+PK-519 is installed

1. Check the number of the holes in [Service Mode] -> [Finisher] -> [Punch Option Setting].
2. Check the connector between M201-PKCB CN203 for proper connection and correct as necessary.
3. Check the connector of M201 for proper drive coupling and correct as necessary.
4. Check the connector between PS202-PKCB CN204 for proper connection and correct as necessary.
5. Check the connector between PS203-PKCB CN204 for proper connection and correct as necessary.
6. Check the connector between PS204-PKCB CN204 for proper connection and correct as necessary.
7. PS202 I/O check, sensor check
   - Control signal: PKCB CN204
   - Location of electrical component: FS-533 (PK-519) 5-C
8. PS203 I/O check, sensor check
   - Control signal: PKCB CN204
   - Location of electrical component: FS-533 (PK-519) 6-C
9. PS204 I/O check, sensor check
   - Control signal: PKCB CN204
   - Location of electrical component: FS-533 (PK-519) 6-C
10. M201 operation check
    - Control signal: PKCB CN203-1 to 2
    - Location of electrical component: FS-533 (PK-519) 4-C
11. Replace M201.
12. PKCB F201 conduction check
13. Replace PKCB.
14. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534+PK-520 or FS-534SD+PK-520 is installed

1. Check that the correct paper type is set.
   To print on thick paper, change the paper type to [Thick].
2. If the trouble occurs even when [Paper Type] is set to the correct paper type, select [Service Mode] -> [Security Settings] -> [Engine FW DipSW] and flip SW No. 17 to the ON.
   NOTE
   - **Changing the setting of Engine FW DipSW results in a longer perforating time and greater punch perforating noise regardless of the paper type.**
3. Check the connector between M1-relay CN351-FSCB J7 for proper connection and correct as necessary.
4. Check the connector of M1 for proper drive coupling and correct as necessary.
5. Check the connector between PS1-FSCB J7 for proper connection and correct as necessary.
6. PS1 I/O check, sensor check
   - Control signal: FSCB J7-5 (ON)
   - Location of electrical component: FS-534 (PK-520) 7-K
7. M1 operation check
   - Control signal: FSCB J7-7 to 8
   - Location of electrical component: FS-534 (PK-520) 7-K
8. Replace M1.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.13 C1140 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1140: Alignment plate motor/Rr malfunction (When FS-533, FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	<When FS-533 is installed> • The alignment plate home sensor/R (PS109) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate home sensor/R (PS109) is not turned ON (blocked) after the set period of time has elapsed while the alignment motor/R (M106) is energized when the plate returns to the home position.
	<When FS-534 or FS-534SD is installed> • The alignment plate/R home sensor (PS13) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the alignment motor/Rear (M8) is energized.
Trouble isolation	-
Relevant electrical parts	<When FS-533 is installed> • Alignment motor/R (M106) • Alignment plate home sensor/R (PS109) • FS control board (FSCB)
	<When FS-534 or FS-534SD is installed> • Alignment motor/Rear (M8) • Alignment plate/R home sensor (PS13) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M106-FSCB CN102 for proper connection and correct as necessary.
2. Check the connector of M106 for proper drive coupling and correct as necessary.
3. Check the connector between PS109-FSCB CN102 for proper connection and correct as necessary.
4. PS109 I/O check, sensor check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
5. M106 operation check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 8-J
6. Replace M106
7. FSCB CP105 conduction check
8. Replace FSCB

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-534 or FS-534SD is installed

1. Check the connector between M8-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS13-FSCB J9 for proper connection and correct as necessary.
4. PS13 I/O check, sensor check
   - Control signal: FSCB J9<B>-9 (ON)
   - Location of electrical component: FS-534 9-C
5. M8 operation check
   - Control signal: FSCB J12-13 to 16

- Location of electrical component: FS-534 5 to 6-C to D

6. Replace M8.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.14 C1141 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1141: Paddle motor drive malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	The upper paddle home position detection sensor (PS14) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the FNS paddle motor (M5) is turning.
Trouble isolation	Staple
Relevant electrical parts	• FNS paddle motor (M5) • Upper paddle home position detection sensor (PS14) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M5-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS14-FSCB J4 for proper connection and correct as necessary.
4. PS14 I/O check, sensor check
   - Control signal: FSCB J4<B>-7 (ON)
   - Location of electrical component: FS-534 13-C
5. M5 operation check
   - Control signal: FSCB J4<A>-9 to 12
   - Location of electrical component: FS-534 12-C to D
6. Replace M5.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.15 C1144 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1144: Pre-eject drive motor malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	• The pre-eject home sensor (PS21) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON. • The pre-eject away sensor (PS22) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON.
Trouble isolation	-
Relevant electrical parts	• Pre-eject drive motor (M9) • Pre-eject home sensor (PS21) • Pre-eject away sensor (PS22) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M9-relay CN7<A>-FSCB J13 for proper connection, and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS21-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
4. Check the connector between PS22-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
5. PS21 I/O check, sensor check
   - Control signal: FSCB J12-6 (ON)
   - Location of electrical component: FS-534 6-C
6. PS22 I/O check, sensor check
   - Control signal: FSCB J12-9 (ON)
   - Location of electrical component: FS-534 6-C
7. M9 operation check
   - Control signal: FSCB J13-3 to 4
   - Location of electrical component: FS-534 8-C to D
8. Replace M9.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.16 C1145 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1145: Trailing edge stopper motor malfunction (When FS-534 or FS-534SD is installed)
Rank	B

Trouble detection condition	The trailing edge stopper home position detection sensor (PS20) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the trailing edge stopper motor (M6) is turned ON.
Trouble isolation	-
Relevant electrical parts	• Trailing edge stopper motor (M6) • Trailing edge stopper home position detection sensor (PS20) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M6-FSCB J5 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS20-relay CN22-FSCB J5 for proper connection and correct as necessary.
4. PS20 I/O check, sensor check
   - Control signal: FSCB J5-9 (ON)
   - Location of electrical component: FS-534 9-K
5. M6 operation check
   - Control signal: FSCB J5-13 to 16
   - Location of electrical component: FS-534 9-K
6. Replace M6.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.17 C1156 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1156: SD paddle motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The paddle home sensor (PS5) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the SD paddle motor (M7) is energized.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• SD paddle motor (M7) • Paddle home sensor (PS5) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M7-SDDB J8 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS5-SDDB J8 for proper connection and correct as necessary.
4. PS5 I/O check, sensor check
   - Control signal: SDDB J8-3 (ON)
   - Location of electrical component: SD-511 3 to 4-G
5. M7 operation check
   - Control signal: SDDB J8-4 to 7
   - Location of electrical component: SD-511 3-F to G
6. Replace M7.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.18 C1182 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1182: Shift motor drive malfunction (When JS-506 is installed)
Rank	B
Trouble detection condition	• The tray shift home sensor (PS1) is not turned ON (blocked) after the set period of time has elapsed after the tray shift motor (M1) is turned ON (start of moving to the home position.) • The tray shift home sensor (PS1) is not turned OFF (unblocked) after the set period of time has elapsed after the tray shift motor (M1) is turned ON (start of moving to the shift position.)
Trouble isolation	Staple
Relevant electrical parts	• Tray shift motor (M1) • Tray shift home sensor (PS1) • JS control board (JSCB)

(2) Procedure

1. Check the connector between M1-JSCB CN208 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS1-JSCB CN208 for proper connection and correct as necessary.
4. PS1 I/O check, sensor check
   - Control signal: JSCB CN208-5 (ON)
   - Location of electrical component: JS-506 5-C

5. M1 operation check
   - Control signal: JSCB CN208-1 (DRV)
   - Location of electrical component: JS-506 4 to 5-C
6. Replace M1.
7. JSCB ICP3 conduction check
8. Replace JSCB.

NOTICE
- Link to the wiring diagram (N.4.14 JS-506)

3.9.19 C1184 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1184: Paper discharge control motor malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	The paper delivery control sensor (PS28) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the paper receiving control motor (M12) is energized.
Trouble isolation	-
Relevant electrical parts	• Paper receiving control motor (M12) • Paper delivery control sensor (PS28) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M12-relay CN1-FRCB J14 for proper connection and correct as necessary.
2. Check the connector of M12 for proper drive coupling and correct as necessary.
3. Check the connector between PS28-relay CN1-FRCB J14 for proper connection and correct as necessary.
4. PS28 I/O check, sensor check
   - Control signal: FSCB J14<B>-3 (ON)
   - Location of electrical component: FS-534 2 to 3-C
5. M12 operation check
   - Control signal: FSCB J14<A>-9 to 12
   - Location of electrical component: FS-534 2-C to D
6. Replace M12.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.20 C1195 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1195: Paper discharge control motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The curl cover detection sensor (PS2) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the paper discharge control motor (M2) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Paper discharge control motor (M2) • Curl cover detection sensor (PS2) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M2-relay CN3-relay CN2-SDDB J5 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN3-relay CN2-SDDB J5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: SDDB J5-3 (ON)
   - Location of electrical component: SD-511 3-B
5. M2 operation check
   - Control signal: SDDB J5-4 to 7
   - Location of electrical component: SD-511 3-B
6. Replace M2.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.21 C1196 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1196: Center fold roller motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The guide home sensor (PS7) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the center fold roller motor (M8) is turned ON.

Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Center fold roller motor (M8) • Guide home sensor (PS7) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M8-SDDB J8 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS7-SDDB J9 for proper connection and correct as necessary.
4. PS7 I/O check, sensor check
   - Control signal: SDDB J9-6 (ON)
   - Location of electrical component: SD-511 4-G
5. M8 operation check
   - Control signal: SDDB J8-11 to 14
   - Location of electrical component: SD-511 2 to 3-F to G
6. Replace M8.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.22 C1197 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1197: Tri-folding guide motor malfunction (When FS-534SD is installed)
Rank	B
Trouble detection condition	The tri-folding gate home sensor (PS11) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the tri-folding guide motor (M6) is energized.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Tri-folding guide motor (M6) • Tri-folding gate home sensor (PS11) • SD drive board (SDDB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M6-SDDB J9 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-SDDB J8 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: SDDB J8-10 (ON)
   - Location of electrical component: SD-511 3-G
5. M6 operation check
   - Control signal: SDDB J9-7 to 10
   - Location of electrical component: SD-511 4-F to G
6. Replace M6.
7. Replace SDDB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (SD-511)

3.9.23 C11A1 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C11A1: Exit roller pressure/ retraction malfunction (When FS-533 is installed)
Rank	B
Trouble detection condition	The pick up roller position sensor (PS105) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the exit roller lift up motor (M104) is turned ON.
Trouble isolation	-
Relevant electrical parts	• Exit roller lift up motor (M104) • Pick up roller position sensor (PS105) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M104-FSCB CN109 for proper connection and correct as necessary.
2. Check the connector of M104 for proper drive coupling and correct as necessary.
3. Check the connector between PS105-FSCB CN110 for proper connection and correct as necessary.
4. PS105 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 7-D to E
5. M104 operation check
   - Control signal: FSCB CN109
   - Location of electrical component: FS-533 9-D to E

6. Replace M104.
7. FSCB CP104 conduction check
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

3.9.24 C11A2 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C11A2: Accommodation roller pressure/ retraction malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	The receiving roller retraction sensor (PS11) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the receiving roller retraction motor (M4) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold
Relevant electrical parts	• Receiving roller retraction motor (M4) • Receiving roller retraction sensor (PS11) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M4-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-FSCB J4 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: FSCB J4<B>-16 (ON)
   - Location of electrical component: FS-534 13-C
5. M4 operation check
   - Control signal: FSCB J4<A>-1 to 4
   - Location of electrical component: FS-534 11-C to D
6. Replace M4.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.25 C11E1 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C11E1: Paper exit switching drive malfunction (When FS-534 or FS-534SD is installed)
Rank	B
Trouble detection condition	The exchange folded knife home position sensor (PS30) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the FNS entry transport motor (M2) is turned ON.
Trouble isolation	-
Relevant electrical parts	• FNS entry transport motor (M2) • Exchange folded knife home position sensor (PS30) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M2-FSCB J9 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS30-FSCB J4 for proper connection and correct as necessary.
4. PS30 I/O check, sensor check
   - Control signal: FSCB J4<A>-15 (ON)
   - Location of electrical component: FS-534 12-C
5. M2 operation check
   - Control signal: FSCB J9<A>-1 to 4
   - Location of electrical component: FS-534 10 to 11-B to C
6. Replace M2.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.12 FS-534)

3.9.26 C1402 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C1402: FS nonvolatile memory error (When FS-533 is installed)
Rank	C
Trouble detection condition	When the main power switch is turned ON, malfunctioning of the nonvolatile memory on the FS control board (FSCB) is detected.
Trouble isolation	-
Relevant electrical parts	FS control board (FSCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB.

3.10 C1### (bizhub C658/C558/C458)

3.10.1 C1003, C1013 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C1003: PK communication error (Finisher detection) • C1013: PK communication error (PK detection)	
Rank	C	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	When a communication error is detected between the FS control board (FSCB) and the punch control board (PKCB).
Trouble isolation	Punch	
Relevant electrical parts	• Punch control board (PKCB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PKCB.
4. Replace FSCB.

3.10.2 C1004, C1014 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C1004: Finisher communication error (Engine detection) • C1014: Finisher communication error (Finisher detection)	
Rank	C	
Trouble detection condition	<When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed>	When a communication error is detected between the MFP board (MFPB) and the FS control board (FSCB).
	<When JS-506 is installed>	When a communication error is detected between the MFP board (MFPB) and the JS control board (JSCB).
Trouble isolation	-	
Relevant electrical parts	<When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed>	• FS control board (FSCB) • MFP board (MFPB)
	<When JS-506 is installed>	JS control board (JSCB)

(2) Procedure

(a) When FS-533, FS-536, FS-536SD, FS-537, or FS-537SD is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-533 / FS-536/FS-536SD / FS-537/FS-537SD)
4. PKCB ICP1 conduction check.
5. PIDB ICP1 conduction check.
6. Replace MFPB.

(b) When JS-506 is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace JSCB.

3.10.3 C1007, C1017 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C1007: PI communication error (Finisher detection) • C1017: PI communication error (PI detection)	
Rank	C	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	When a communication error is detected between the FS control board (FSCB) and the PI drive board (PIDB).
Trouble isolation	-	
Relevant electrical parts	• PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PIDB.
4. Replace FSCB.

3.10.4 C1081, C1082 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C1081: SD communication error (Finisher detection) • C1082: SD communication error (SD detection)	
Rank	C	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	When a communication error is detected between the FS control board (FSCB) and the SD control board (SDCB).
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	• SD control board (SDCB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace SDCB. (FS-536/FS-536SD / FS-537/FS-537SD)
4. Replace FSCB. (FS-536/FS-536SD / FS-537/FS-537SD)

3.10.5 C1102 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1102: Main tray up/down motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	• While the exit tray is being lifted, the paper exit tray home sensor (PS107) is not turned OFF (unblocked) after the set period of time has elapsed after the tray lift up motor (M109) is turned ON. • While the exit tray is being lowered, the paper exit tray home sensor (PS107) is not turned ON (blocked) after the set period of time has elapsed after the tray lift up motor (M109) is turned ON.
	<When FS-536 or FS-536SD is installed>	• While the exit tray is being lifted, the main tray upper position sensor (PS26/PS27) is not turned ON (blocked) and the main tray upper position detect switch (SW2) is not turned ON, even after the main tray up/down motor (M11) turns by the set number of times • While the exit tray is being lowered, the main tray full detection sensor (PS29) is not turned ON (blocked) after the set period of time has elapsed after the main tray up/down motor (M11) is turned ON.
	<When FS-537 or FS-537SD is installed>	• The main tray lift up detection sensor (PS16/PS17) is not turned ON after the set period of time has elapsed after the main tray up/down motor (M6) is turned ON. • The main tray full detection sensor (PS12) is not turned ON (unblocked) after the set period of time has elapsed after the main tray up/down motor (M6) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-533 is installed>	• Tray lift up motor (M109) • Paper exit tray home sensor (PS107) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Main tray up/down motor (M11) • Main tray upper position sensor/R (PS26) • Main tray upper position sensor/F (PS27) • Main tray full detection sensor (PS29) • Main tray upper position detect switch (SW2) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Main tray up/down motor (M6) • Main tray lift up detection sensor/F (PS16) • Main tray lift up detection sensor/R (PS17) • Main tray full detection sensor (PS12) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M109-FSCB CN108 for proper connection and correct as necessary.
2. Check the connector of M109 for proper drive coupling, and correct as necessary.
3. Check the connector between PS107-FSCB CN110 for proper connection and correct as necessary.
4. PS107 I/O check, sensor check

- Control signal: FSCB CN110
- Location of electrical component: FS-533 7-D to E

5. M109 operation check
   - Control signal: FSCB CN108
   - Location of electrical component: FS-533 10-E
6. Replace M109.
7. FSCB CP109 conduction check
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

1. Check the connector between M11-FSCB J9 for proper connection and correct as necessary.
2. Check the connector of M11 for proper drive coupling, and correct as necessary.
3. Check the connector between PS26-relay CN1-FSCB J14 for proper connection and correct as necessary.
4. Check the connector between PS27-relay CN1-FSCB J14 for proper connection and correct as necessary.
5. Check the connector between PS29-relay CN2-FSCB J14 for proper connection and correct as necessary.
6. Check the connector between SW2-FSCB J10 for proper connection and correct as necessary.
7. PS26 I/O check, sensor check
   - Control signal: FSCB J14<A>-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 2-C
8. PS27 I/O check, sensor check
   - Control signal: FSCB J14<B>-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 3-C
9. PS29 I/O check, sensor check
   - Control signal: FSCB J14<A>-8 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
10. SW2 operation check
    - Control signal: FSCB J10-1 to 2
    - Location of electrical component: FS-536/FS-536SD 15-K
11. M11 operation check
    - Control signal: FSCB J9<A>-9 to 10
    - Location of electrical component: FS-536/FS-536SD 12-C
12. Replace M11.
13. FSCB F2 conduction check
14. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

1. Check the connector between M6-FSCB J23 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS16-relay CN10<B>-FSCB J20 for proper connection and correct as necessary.
4. Check the connector between PS17-relay CN10<B>-FSCB J20 for proper connection and correct as necessary.
5. Check the connector between PS12-relay CN9-FSCB J19 for proper connection and correct as necessary.
6. PS16 I/O check, sensor check
   - Control signal: FSCB J20<B>-4 (ON)
   - Location of electrical component: FS-537/FS-537SD 11 to 12-D
7. PS17 I/O check, sensor check
   - Control signal: FSCB J20<B>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 12-D
8. PS12 I/O check, sensor check
   - Control signal: FSCB J19-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 10-D
9. M6 operation check
   - Control signal: FSCB J23-1 to 11
   - Location of electrical component: FS-537/FS-537SD 13-D
10. Replace M6.
11. FSCB F3 conduction check
12. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.6 C1103 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1103: Alignment motor/front's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	• The alignment plate home sensor/F (PS108) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate home sensor/F (PS108) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/F (M105) is turned ON to return the plate to the home position.

	<When FS-536 or FS-536SD is installed>	• The alignment plate/F home sensor (PS12) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate/F home sensor (PS12) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/front (M7) is turned ON to return the plate to the home position. • The alignment plate/F does not reach the specified position within the set period of time.
	<When FS-537 or FS-537SD is installed>	• The alignment plate/F home sensor (PS9) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate/F home sensor (PS9) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/front (M14) is turned ON to return the plate to the home position. • The alignment plate/F does not reach the specified position within the set period of time.
Trouble isolation	-	
Relevant electrical parts	<When FS-533 is installed>	• Alignment motor/F (M105) • Alignment plate home sensor/F (PS108) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Alignment motor/front (M7) • Alignment plate/F home sensor (PS12) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Alignment motor/front (M14) • Alignment plate/F home sensor (PS9) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M105-FSCB CN102 for proper connection and correct as necessary.
2. Check the connector of M105 for proper drive coupling, and correct as necessary.
3. Check the connector between PS108-FSCB CN102 for proper connection and correct as necessary.
4. PS108 I/O check, sensor check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
5. M105 operation check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
6. Replace M105.
7. FSCB CP105 conduction check
8. Replace FSCB

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

1. Check the connector between M7-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS12-FSCB J4 for proper connection and correct as necessary.
4. PS12 I/O check, sensor check
   - Control signal: FSCB J4<B>-4 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-C
5. M7 operation check
   - Control signal: FSCB J4<A>-5 to 8
   - Location of electrical component: FS-536/FS-536SD 14-C
6. Replace M7.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

1. Check the connector between M14-relay CN5-FSCB J18 for proper connection and correct as necessary.
2. Check the connector of M14 for proper drive coupling and correct as necessary.
3. Check the connector between PS9-relay CN5-FSCB J18 for proper connection and correct as necessary.
4. PS9 I/O check, sensor check
   - Control signal: FSCB J18-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 6-D
5. M14 operation check
   - Control signal: FSCB J18-1 to 4
   - Location of electrical component: FS-537/FS-537SD 6-D
6. Replace M14.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.7 C1104 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1104: Stacker plate drive motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The stacker plate home sensor (PS30) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stacker plate drive motor (M3) is turned ON.
Trouble isolation	-	
Relevant electrical parts	• Stacker plate drive motor (M3) • Stacker plate home sensor (PS30) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M3-relay CN1<B>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS30-relay CN2-relay CN1<B>-FSCB J22 for proper connection, and correct as necessary.
4. PS30 I/O check, sensor check
   - Control signal: FSCB J22<B>-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 3-D
5. M3 operation check
   - Control signal: FSCB J22<B>1 to 2
   - Location of electrical component: FS-537/FS-537SD 2-D
6. Replace M3.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.8 C1105 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1105: Bundle eject motor’s drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The gripper home position sensor (PS18) is not turned ON (unblocked) even after the set period of time has elapsed after the gripper position detection sensor (PS19) turns OFF (block). • The gripper position detection sensor (PS19) is not turned OFF (blocked) even after the set period of time has elapsed after PS19 turns ON (unblock). • The gripper position detection sensor (PS19) is not turned ON (unblocked) even after the set period of time has elapsed after the gripper home position sensor (PS18) turns OFF (block). • The gripper home position sensor (PS18) is not turned OFF (blocked) even after the set period of time has elapsed after the bundle eject motor (M10) is energized. • The gripper home position sensor (PS18) and the gripper position detection sensor (PS19) is turned ON (unblocked) at the same time.
	<When FS-537 or FS-537SD is installed>	The gripper home position sensor (PS3) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the bundle eject motor (M1) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Bundle eject motor (M10) • Gripper home position sensor (PS18) • Gripper position detection sensor (PS19) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Bundle eject motor (M1) • Gripper home position sensor (PS3) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M10-relay CN7<A>-FSCB J13 for proper connection, and correct as necessary.
2. Check the connector of M10 for proper drive coupling, and correct as necessary.
3. Check the connector between PS18-relay CN7<A>-FSCB J13 for proper connection, and correct as necessary.
4. Check the connector between PS19-relay CN7<B>-FSCB J12 for proper connection and correct as necessary.
5. PS18 I/O check, sensor check
   - Control signal: FSCB J13-13 (ON)
   - Location of electrical component: FS-536/FS-536SD 8-C
6. PS19 I/O check, sensor check
   - Control signal: FSCB J12-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-C
7. M10 operation check
   - Control signal: FSCB J13-1 to 2

- Location of electrical component: FS-536/FS-536SD 9-C

8. Replace M10.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M1-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS3-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
4. PS3 I/O check, sensor check
   - Control signal: FSCB J22<A>-13 (ON)
   - Location of electrical component: FS-537/FS-537SD 2-D
5. M1 operation check
   - Control signal: FSCB J22<A>-1 to 2
   - Location of electrical component: FS-537/FS-537SD 1-D
6. Replace M1.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.9 C1106 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1106: Stapler movement motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	• The stapler home sensor (PS110) is not turned OFF (unblocked) after the laps of given time after it started operating from the home position. • The stapler home sensor (PS110) is not turned ON (blocked) after the laps of give time after the stapler movement motor (M107) turned ON when it returned to the home position.
	<When FS-536 or FS-536SD is installed>	• The stapler home position sensor (rear) (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the side stapler movement motor (M13) turned ON. • The stapler does not reach the specified position within the set period of time.
	<When FS-537 or FS-537SD is installed>	• The stapler home position sensor (PS18/PS19) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler movement motor (M19) turned ON. • The stapler does not reach the specified position within the set period of time.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-533 is installed>	• Stapler movement motor (M107) • Stapler home sensor (PS110) • Stapler relay board (STREYB) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Side stapler movement motor (M13) • Stapler home position sensor (rear) (PS23) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Stapler movement motor (M19) • Stapler home position sensor (corner) (PS18) • Stapler home position sensor (rear) (PS19) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M107-STREYB CN123 for proper connection, and correct as necessary.
2. Check the connector of M107 for proper drive coupling, and correct as necessary.
3. Check the connector between PS110-FSCB CN110 for proper connection, and correct as necessary.
4. PS110 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 8-D to E
5. M107 operation check
   - Control signal: STREYB CN123-5 to 8
   - Location of electrical component: FS-533 5-L
6. Replace M107.
7. Replace STREYB.
8. FSCB CP107 conduction check
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

1. Check the connector between M13-relay CN3-FSCB J11 for proper connection, and correct as necessary.
2. Check the connector of M13 for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
5. M13 operation check
   - Control signal: FSCB J11<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 4-C
6. Replace M13.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

1. Check the connector between M19-FSCB J17 for proper connection and correct as necessary.
2. Check the connector of M19 for proper drive coupling and correct as necessary.
3. Check the connector between PS18-FSCB J16 for proper connection and correct as necessary.
4. Check the connector between PS19-FSCB J16 for proper connection and correct as necessary.
5. PS18 I/O check, sensor check
   - Control signal: FSCB J16-9 (ON)
   - Location of electrical component: FS-537/FS-537SD 15-D
6. PS19 I/O check, sensor check
   - Control signal: FSCB J16-6 (ON)
   - Location of electrical component: FS-537/FS-537SD 15-D
7. M19 operation check
   - Control signal: FSCB J17-10 to 13
   - Location of electrical component: FS-537/FS-537SD 14-D
8. Replace M19.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.10 C1109 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1109: Stapler motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	The stapler home sensor (PS110) is not turned ON (blocked) even after the set period of time has elapsed after the stapler motor turned ON.
	<When FS-536 or FS-536SD is installed>	• The stapler home position sensor (rear) (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler motor turned ON. • The stapler position sensor (center) (PS24) is turned ON (blocked), when the stapler motor is running.
	<When FS-537 or FS-537SD is installed>	• The stapler home position sensor (PS18/PS19) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler motor (M5) turned ON. • The stapler position sensor (center) (PS20) is turned ON (blocked), when the stapler motor (M5) is running.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-533 is installed>	• Stapler home sensor (PS110) • Stapler unit • Stapler relay board (STREYB) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Stapler unit • Stapler home position sensor (rear) (PS23) • Stapler position sensor (center) (PS24) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Stapler unit • Stapler home position sensor (corner) (PS18) • Stapler home position sensor (rear) (PS19) • Stapler position sensor (center) (PS20) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between the stapler unit-STREYB CN122, CN123 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS110-FSCB CN110 for proper connection and correct as necessary.
4. PS110 I/O check, sensor check
   - Control signal: FSCB CN110

- Location of electrical component: FS-533 8-D to E

5. Replace the stapler unit.
6. Replace STREYB.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

1. Check the connector between the stapler unit-relay CN4-FSCB J11 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. Check the connector between PS24-relay CN3-FSCB J11 for proper connection and correct as necessary.
5. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
6. PS24 I/O check, sensor check
   - Control signal: FSCB J11<B>-6
   - Location of electrical component: FS-536/FS-536SD 5-C
7. Replace the stapler unit.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

1. Check the connector between the stapler unit-FSCB J17 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS18-FSCB J16 for proper connection and correct as necessary.
4. Check the connector between PS19-FSCB J16 for proper connection and correct as necessary.
5. Check the connector between PS20-FSCB J16 for proper connection and correct as necessary.
6. PS18 I/O check, sensor check
   - Control signal: FSCB J16-9
   - Location of electrical component: FS-537/FS-537SD 15-D
7. PS19 I/O check, sensor check
   - Control signal: FSCB J16-6
   - Location of electrical component: FS-537/FS-537SD 15-D
8. PS20 I/O check, sensor check
   - Control signal: FSCB J16-3
   - Location of electrical component: FS-537/FS-537SD 15-D
9. Replace the stapler unit.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.11 C1112 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1112: Stapler motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	• The stapler home sensor is not turned ON even after the set period of time has elapsed while the stapler motor is energized. • The stapler home sensor is not turned OFF even after the set period of time has elapsed after the stapler home sensor is turned ON.
Trouble isolation	• Staple • Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Staple unit • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between the staple unit-SDCB J4 for proper connection and correct as necessary.
2. Check the connector of the staple unit for proper drive coupling and correct as necessary.
3. Replace the staple unit. (FS-536SD / FS-537SD)
4. Replace SDCB. (FS-536SD / FS-537SD)
5. Replace FSCB. (FS-536SD / FS-537SD)

3.10.12 C1113 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1113: Stopper drive motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The stopper home sensor (PS6) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stopper drive motor (M4) is turned ON.
Trouble isolation	• Staple	

	• Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Stopper drive motor (M4) • Stopper home sensor (PS6) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M4-SDCB J10 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-SDCB J10 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: SDCB J10-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 2-P, FS-537/FS-537SD 2-P
5. M4 operation check
   - Control signal: SDCB J10-6 to 9
   - Location of electrical component: FS-536SD 2-P, FS-537SD 1-P
6. Replace M4. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.13 C1114 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1114: Alignment motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The alignment home sensor (PS4) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the alignment motor (M3) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Alignment motor (M3) • Alignment home sensor (PS4) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M3-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS4-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
4. PS4 I/O check, sensor check
   - Control signal: SDCB J7-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 6-P, FS-537/FS-537SD 5-P
5. M3 operation check
   - Control signal: SDCB J7-7 to 10
   - Location of electrical component: FS-536/FS-536SD 6-P, FS-537/FS-537SD 5-P
6. Replace M3. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.14 C1115 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1115: Center fold knife motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The center fold knife home sensor (PS8) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the center fold knife motor (M9) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Center fold knife motor (M9) • Center fold knife home sensor (PS8) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M9-SDCB J11 for proper connection and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.

3. Check the connector between PS8-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
4. PS8 I/O check, sensor check
   - Control signal: SDCB J7-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-P, FS-537/FS-537SD 6-P
5. M9 operation check
   - Control signal: SDCB J11-11 to 20
   - Location of electrical component: FS-536/FS-536SD 2-L, FS-537/FS-537SD 1-K
6. Replace M9. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.15 C1124 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1124: Tray lift motor /Lw's drive malfunction	
Rank	B	
Trouble detection condition	<FS-537+PI-507, FS-537SD +PI-507 is installed>	The tray upper limit sensor /Lw (PS209) or tray lower limit sensor /Lw (PS210) is not turned ON (blocked) after the set period of time has elapsed after the tray lift motor /Lw (M202) is turned ON.
Trouble isolation	Post inserter	
Relevant electrical parts	• Tray lift motor /Lw (M202) • Tray upper limit sensor /Lw (PS209) • Tray lower limit sensor /Lw (PS210) • PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M202-relay CN206-PIDB CN56 for proper connection and correct as necessary.
2. Check the connector of M202 for proper drive coupling and correct as necessary.
3. Check the connector between PS209-relay CN237-PIDB CN53 for proper connection and correct as necessary.
4. Check the connector between PS210-relay CN236-PIDB CN53 for proper connection and correct as necessary.
5. PS209 I/O check, sensor check
   - Control signal: PIDB CN53<A>-8 (ON)
   - Location of electrical component: PI-507 10-C
6. PS210 I/O check, sensor check
   - Control signal: PIDB CN53<A>-11 (ON)
   - Location of electrical component: PI-507 11-C
7. M202 operation check
   - Control signal: PIDB CN56-5 to 6
   - Location of electrical component: PI-507 9-C
8. Replace M202.
9. Replace PIDB.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.19 PI-507)

3.10.16 C1125 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1125: Tray lift motor /Up's drive malfunction	
Rank	B	
Trouble detection condition	<FS-537+PI-507, FS-537SD +PI-507 is installed>	The tray upper limit sensor /Up (PS204) or tray lower limit sensor /Up (PS205) is not turned ON (blocked) after the set period of time has elapsed after the tray lift motor /Up (M201) is turned ON.
Trouble isolation	Post inserter	
Relevant electrical parts	• Tray lift motor /Up (M201) • Tray upper limit sensor /Up (PS204) • Tray lower limit sensor /Up (PS205) • PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M201-relay CN203-PIDB CN54 for proper connection and correct as necessary.
2. Check the connector of M201 for proper drive coupling and correct as necessary.
3. Check the connector between PS204-relay CN235-PIDB CN55 for proper connection and correct as necessary.
4. Check the connector between PS205-relay CN235-PIDB CN55 for proper connection and correct as necessary.
5. PS204 I/O check, sensor check
   - Control signal: PIDB CN55-8 (ON)
   - Location of electrical component: PI-507 8-C
6. PS205 I/O check, sensor check

- Control signal: PIDB CN55-7 (ON)
- Location of electrical component: PI-507 8-C

7. M201 operation check
   - Control signal: PIDB CN54-7 to 8
   - Location of electrical component: PI-507 6 to 7-C
8. Replace M201.
9. Replace PIDB.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.19 PI-507)

3.10.17 C1127 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1127: Punch oscillating motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The PK punch oscillating home sensor (PS303) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the punch oscillating motor (M302) is energized.
Trouble isolation	Punch	
Relevant electrical parts	• Punch oscillating motor (M302) • PK punch oscillating home sensor (PS303) • Punch control board (PKCB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M302-relay CN341-relay CN342-PKCB CN1 for proper connection and correct as necessary.
2. Check the connector of M302 for proper drive coupling and correct as necessary.
3. Check the connector between PS303-relay CN341-relay CN342-PKCB CN37 for proper connection and correct as necessary.
4. PS303 I/O check, sensor check
   - Control signal: PKCB CN37-2 (ON)
   - Location of electrical component: PK-523 5-C
5. M302 operation check
   - Control signal: PKCB CN1-1 to 6
   - Location of electrical component: PK-523 5-C
6. Replace M302.
7. PKCB ICP2 conduction check.
8. Replace PKCB.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.17 PK-523)

3.10.18 C1130 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1130: ZU transport motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The chopper home sensor (PS501) is not turned ON (blocked) even after the set period of time has elapsed after the ZU transport motor (M500) is turned ON.
Trouble isolation	Z fold	
Relevant electrical parts	• ZU transport motor (M500) • Chopper home sensor (PS501) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M500-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M500 for proper drive coupling and correct as necessary.
3. Check the connector between PS501-ZUDB CN5 for proper connection and correct as necessary.
4. PS501 I/O check, sensor check
   - Control signal: ZUDB CN5-9 (ON)
   - Location of electrical component: ZU-609 4-B
5. M500 operation check
   - Control signal: ZUDB CN6-1 to 6
   - Location of electrical component: ZU-609 1 to 2-B
6. Replace M500.
7. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.4.18 ZU-609)

3.10.19 C1131 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1131: Folding guide motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The guide home sensor (PS500) is not turned ON (blocked) even after the set period of time has elapsed after the folding guide motor (M501) is turned ON.
Trouble isolation	Z fold	
Relevant electrical parts	• Folding guide motor (M501) • Guide home sensor (PS500) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M501-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M501 for proper drive coupling and correct as necessary.
3. Check the connector between PS500-ZUDB CN5 for proper connection and correct as necessary.
4. PS500 I/O check, sensor check
   - Control signal: ZUDB CN5-3 (ON)
   - Location of electrical component: ZU-609 3-B
5. M501 operation check
   - Control signal: ZUDB CN6-9 to 12
   - Location of electrical component: ZU-609 2-B
6. Replace M501.
7. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.4.18 ZU-609)

3.10.20 C1132 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1132: Punch drive motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-533+PK-519 is installed>	• The puncher drive cam sensor (PS203) or puncher home sensor (PS204) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the punch motor (M201) is energized. • The punch motor sensor (PS202) is not turned ON when the punch motor (M201) driven. • The holes with other marketing area is set in [Service Mode] -> [Finisher] -> [Punch option setting].
	<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	The punch home sensor (PS1) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the punch drive motor (M1) is energized.
	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The PK punch home sensor/2 (PS301) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the punch drive motor (M301) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-533+PK-519 is installed>	• Punch motor (M201) • Punch motor sensor (PS202) • Puncher drive cam sensor (PS203) • Puncher home sensor (PS204) • PK control board (PKCB) • FS control board (FSCB)
	<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	• Punch drive motor (M1) • Punch home sensor (PS1) • FS control board (FSCB)
	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	• Punch drive motor (M301) • PK punch home sensor/2 (PS301) • Punch control board (PKCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-533+PK-519 is installed

1. Check the number of the holes in [Service Mode] -> [Finisher] -> [Punch option setting].
2. Check the connector between M201-PKCB CN203 for proper connection and correct as necessary.
3. Check the connector of M201 for proper drive coupling and correct as necessary.
4. Check the connector between PS202-PKCB CN204 for proper connection and correct as necessary.
5. Check the connector between PS203-PKCB CN204 for proper connection and correct as necessary.
6. Check the connector between PS204-PKCB CN204 for proper connection and correct as necessary.
7. PS202 I/O check, sensor check
   - Control signal: PKCB CN204

- Location of electrical component: FS-533 (PK-519) 5-C

8. PS203 I/O check, sensor check
   - Control signal: PKCB CN204
   - Location of electrical component: FS-533 (PK-519) 6-C
9. PS204 I/O check, sensor check
   - Control signal: PKCB CN204
   - Location of electrical component: FS-533 (PK-519) 6-C
10. M201 operation check
    - Control signal: PKCB CN203-1 to 2
    - Location of electrical component: FS-533 (PK-519) 4-C
11. Replace M201.
12. PKCB F201 conduction check
13. Replace PKCB.
14. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536+PK-520 or FS-536SD+PK-520 is installed

1. Check the connector between M1-relay CN351-FSCB J7 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS1-FSCB J7 for proper connection and correct as necessary.
4. PS1 I/O check, sensor check
   - Control signal: FSCB J7-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 13-K
5. M1 operation check
   - Control signal: FSCB J7-7 to 8
   - Location of electrical component: FS-536/FS-536SD 13-K
6. Replace M1.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537+PK-523 or FS-537SD+PK-523 is installed

1. Check the connector between M301-relay CN351-PKCB CN35 for proper connection and correct as necessary.
2. Check the connector of M301 for proper drive coupling and correct as necessary.
3. Check the connector between PS301-PKCB CN36 for proper connection and correct as necessary.
4. PS301 I/O check, sensor check
   - Control signal: PKCB CN36-5 (ON)
   - Location of electrical component: PK-523 3-C
5. M301 operation check
   - Control signal: PKCB CN35-1 to 3
   - Location of electrical component: PK-523 2-C
6. Replace M301.
7. Replace PKCB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.21 C1133 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1133: Pressure motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The press home sensor (PS502) is not turned ON (unblocked), or is not turned OFF (blocked) after it is turned ON (unblocked), even after the set period of time has elapsed after the pressure motor (M502) starts searching its home position.
Trouble isolation	Z fold	
Relevant electrical parts	• Pressure motor (M502) • Press home sensor (PS502) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M502-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M502 for proper drive coupling and correct as necessary.
3. Check the connector between PS502-ZUDB CN5 for proper connection and correct as necessary.
4. PS502 I/O check, sensor check
   - Control signal: ZUDB CN5-6 (ON)
   - Location of electrical component: ZU-609 4-B
5. M502 operation check
   - Control signal: ZUDB CN6-7 (DRV)
   - Location of electrical component: ZU-609 2-B
6. Replace M502.
7. ZUDB ICP3 conduction check.
8. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.4.18 ZU-609)

3.10.22 C1140 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1140: Alignment motor/rear's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	• The alignment plate home sensor/R (PS109) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate home sensor/R (PS109) is not turned ON (blocked) after the set period of time has elapsed while the alignment motor/R (M106) is energized when the plate returns to the home position.
	<When FS-536 or FS-536SD is installed>	The alignment plate/R home sensor (PS13) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the alignment motor/rear (M8) is energized.
	<When FS-537 or FS-537SD is installed>	The alignment plate/R home sensor (PS6) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the alignment motor/rear (M13) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-533 is installed>	• Alignment motor/R (M106) • Alignment plate home sensor/R (PS109) • FS control board (FSCB)
	<When FS-536 or FS-536SD is installed>	• Alignment motor/rear (M8) • Alignment plate/R home sensor (PS13) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Alignment motor/rear (M13) • Alignment plate/R home sensor (PS6) • FS control board (FSCB)

(2) Procedure

(a) When FS-533 is installed

1. Check the connector between M106-FSCB CN102 for proper connection and correct as necessary.
2. Check the connector of M106 for proper drive coupling and correct as necessary.
3. Check the connector between PS109-FSCB CN102 for proper connection and correct as necessary.
4. PS109 I/O check, sensor check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 7-J
5. M106 operation check
   - Control signal: FSCB CN102
   - Location of electrical component: FS-533 8-J
6. Replace M106
7. FSCB CP105 conduction check
8. Replace FSCB

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

(b) When FS-536 or FS-536SD is installed

1. Check the connector between M8-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS13-FSCB J9 for proper connection and correct as necessary.
4. PS13 I/O check, sensor check
   - Control signal: FSCB J9<B>-11 (ON)
   - Location of electrical component: FS-536/FS-536SD 10-C
5. M8 operation check
   - Control signal: FSCB J12-13 to 16 (ON)
   - Location of electrical component: FS-536/FS-536SD 6-C
6. Replace M8.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(c) When FS-537 or FS-537SD is installed

1. Check the connector between M13-relay CN3-FSCB J21 for proper connection and correct as necessary.
2. Check the connector of M13 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: FSCB J21-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 4-D
5. M13 operation check
   - Control signal: FSCB J21-1 to 4
   - Location of electrical component: FS-537/FS-537SD 4-D

6. Replace M13.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.23 C1141 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1141: FNS paddle motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The upper paddle home position detection sensor (PS14) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the FNS paddle motor (M5) is turning.
	<When FS-537 or FS-537SD is installed>	The paddle home sensor (PS25) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the FNS paddle motor (M9) is turning.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• FNS paddle motor (M5) • Upper paddle home position detection sensor (PS14) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• FNS paddle motor (M9) • Paddle home sensor (PS25) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M5-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS14-FSCB J4 for proper connection and correct as necessary.
4. PS14 I/O check, sensor check
   - Control signal: FSCB J4<B>-7 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-C
5. M5 operation check
   - Control signal: FSCB J4<A>-9 to 12
   - Location of electrical component: FS-536/FS-536SD 14-C
6. Replace M5.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M9-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS25-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
4. PS25 I/O check, sensor check
   - Control signal: FSCB J14<B>-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 16-K to L
5. M9 operation check
   - Control signal: FSCB J14<B>-4 to 7
   - Location of electrical component: FS-537/FS-537SD 17-K to L
6. Replace M9.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.24 C1142 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1142: Paddle up/down motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The paddle up/down home sensor (PS27) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the paddle up/down motor (M7) is energized.
Trouble isolation	Staple	
Relevant electrical parts	• Paddle up/down motor (M7) • Paddle up/down home sensor (PS27) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M7-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS27-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.

4. PS27 I/O check, sensor check
   - Control signal: FSCB J14<A>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 18-K to L
5. M7 operation check
   - Control signal: FSCB J14<A>-1 to 4
   - Location of electrical component: FS-537/FS-537SD 18-K to L
6. Replace M7.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.25 C1143 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1143: Arm drive motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The arm home position sensor (PS26) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the arm drive motor (M8) is energized.
Trouble isolation	-	
Relevant electrical parts	• Arm drive motor (M8) • Arm home position sensor (PS26) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M8-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS26-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
4. PS26 I/O check, sensor check
   - Control signal: FSCB J14<B>-3 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-K to L
5. M8 operation check
   - Control signal: FSCB J14<A>-8 to 11
   - Location of electrical component: FS-537/FS-537SD 17-K to L
6. Replace M8.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.26 C1144 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1144: Pre-eject drive motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The pre-eject home sensor (PS21) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON. • The pre-eject away sensor (PS22) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON.
	<When FS-537 or FS-537SD is installed>	The trail edge stopper home sensor (PS31) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the pre-eject drive motor (M2) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Pre-eject drive motor (M9) • Pre-eject home sensor (PS21) • Pre-eject away sensor (PS22) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Pre-eject drive motor (M2) • Trail edge stopper home sensor (PS31) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M9-relay CN7<A>-FSCB J13 for proper connection, and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS21-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
4. Check the connector between PS22-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
5. PS21 I/O check, sensor check
   - Control signal: FSCB J12-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-C
6. PS22 I/O check, sensor check
   - Control signal: FSCB J12-9 (ON)

- Location of electrical component: FS-536/FS-536SD 7-C

7. M9 operation check
   - Control signal: FSCB J13-3 to 4
   - Location of electrical component: FS-536/FS-536SD 9-C
8. Replace M9.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M2-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS31-relay CN2-relay CN1<B>-FSCB J22 for proper connection, and correct as necessary.
4. PS31 I/O check, sensor check
   - Control signal: FSCB J22<B>-13
   - Location of electrical component: FS-537/FS-537SD 3-D
5. M2 operation check
   - Control signal: FSCB J22<A>-3 to 4
   - Location of electrical component: FS-537/FS-537SD 1-D
6. Replace M2.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.27 C1145 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1145: Trailing edge stopper motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The trailing edge stopper home position detection sensor (PS20) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trailing edge stopper motor (M6) is turned ON.
	<When FS-537 or FS-537SD is installed>	The trail edge stopper sensor/F (PS10) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trail edge stopper motor/F (M12) is turned ON.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Trailing edge stopper motor (M6) • Trailing edge stopper home position detection sensor (PS20) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Trail edge stopper motor/F (M12) • Trail edge stopper sensor/F (PS10) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M6-FSCB J5 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS20-relay CN19-FSCB J5 for proper connection and correct as necessary.
4. PS20 I/O check, sensor check
   - Control signal: FSCB J5-9 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-K
5. M6 operation check
   - Control signal: FSCB J5-13 to 16
   - Location of electrical component: FS-536/FS-536SD 15-K
6. Replace M6.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M12-relay CN5-FSCB J18 for proper connection and correct as necessary.
2. Check the connector of M12 for proper drive coupling and correct as necessary.
3. Check the connector between PS10-relay CN5-FSCB J18 for proper connection and correct as necessary.
4. PS10 I/O check, sensor check
   - Control signal: FSCB J18-13 (ON)
   - Location of electrical component: FS-537/FS-537SD 6 to 7-D
5. M12 operation check
   - Control signal: FSCB J18-14 to 17
   - Location of electrical component: FS-537/FS-537SD 7-D
6. Replace M12.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.28 C1146 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1146: Trail edge stopper motor/R's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The trail edge stopper sensor/R (PS7) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trail edge stopper motor/R (M11) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-537 or FS-537SD is installed>	• Trail edge stopper motor/R (M11) • Trail edge stopper sensor/R (PS7) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M11-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
2. Check the connector of M11 for proper drive coupling, and correct as necessary.
3. Check the connector between PS7-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
4. PS7 I/O check, sensor check
   - Control signal: FSCB J21-16 (ON)
   - Location of electrical component: FS-537/FS-537SD 5-D
5. M11 operation check
   - Control signal: FSCB J21-17 to 20
   - Location of electrical component: FS-537/FS-537SD 5-D
6. Replace M11.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.29 C1152 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1152: Paper transport belt motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537SD is installed>	Even after a predetermined period of time has elapsed since the paper transport belt motor (M34) starts operation, the lock signal is not set to L (turning).
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	• Paper transport belt motor (M34) • SD control board (SDCB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M34-relay CN21-FSCB J24 for proper connection and correct as necessary.
2. Check the connector of M34 for proper drive coupling and correct as necessary.
3. M34 operation check
   - Control signal: FSCB J24-1 to 11
   - Location of electrical component: FS-537/FS-537SD 7-M
4. Replace M34.
5. Replace SDCB.
6. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.30 C1156 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1156: SD paddle motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The paddle home sensor (PS5) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the SD paddle motor (M7) is turning.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• SD paddle motor (M7) • Paddle home sensor (PS5) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M7-SDCB J8 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS5-SDCB J8 for proper connection and correct as necessary.
4. PS5 I/O check, sensor check

- Control signal: SDCB J8-3 (ON)
- Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 3-P

5. M7 operation check
   - Control signal: SDCB J8-4 to 7
   - Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 3-P
6. Replace M7. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.31 C1182 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1182: Shift motor's drive malfunction (When JS-506 is installed)
Rank	B
Trouble detection condition	• The tray shift home sensor (PS1) is not turned ON (blocked) after the set period of time has elapsed after the tray shift motor (M1) is turned ON (start of moving to the home position.) • The tray shift home sensor (PS1) is not turned OFF (unblocked) after the set period of time has elapsed after the tray shift motor (M1) is turned ON (start of moving to the shift position.)
Trouble isolation	Staple
Relevant electrical parts	• Tray shift motor (M1) • Tray shift home sensor (PS1) • JS control board (JSCB)

(2) Procedure

1. Check the connector between M1-JSCB CN208 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS1-JSCB CN208 for proper connection and correct as necessary.
4. PS1 I/O check, sensor check
   - Control signal: JSCB CN208-5 (ON)
   - Location of electrical component: JS-506 5-C
5. M1 operation check
   - Control signal: JSCB CN208-1 (DRV)
   - Location of electrical component: JS-506 4 to 5-C
6. Replace M1.
7. JSCB ICP3 conduction check
8. Replace JSCB.

NOTICE
- Link to the wiring diagram (N.4.14 JS-506)

3.10.32 C1184 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1184: Paper receiving control motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The paper delivery control sensor (PS28) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the paper receiving control motor (M12) is energized.
	<When FS-537 or FS-537SD is installed>	The paper delivery control sensor (PS11) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the paper receiving control motor (M15) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Paper receiving control motor (M12) • Paper delivery control sensor (PS28) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Paper receiving control motor (M15) • Paper delivery control sensor (PS11) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

1. Check the connector between M12-relay CN1-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M12 for proper drive coupling and correct as necessary.
3. Check the connector between PS28-relay CN1-FSCB J14 for proper connection and correct as necessary.
4. PS28 I/O check, sensor check
   - Control signal: FSCB J14<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 2 to 3-C
5. M12 operation check
   - Control signal: FSCB J14<A>-9 to 12
   - Location of electrical component: FS-536/FS-536SD 2-C
6. Replace M12.

7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

1. Check the connector between M15-FSCB J19 for proper connection and correct as necessary.
2. Check the connector of M15 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-relay CN10<A>-FSCB J20 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: FSCB J20<A>-3 (ON)
   - Location of electrical component: FS-537/FS-537SD 10-D
5. M15 operation check
   - Control signal: FSCB J19-1 to 4
   - Location of electrical component: FS-537/FS-537SD 10-D
6. Replace M15.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.33 C1195 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1195: Paper discharge control motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The curl cover detection sensor (PS2) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the paper discharge control motor (M2) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Paper discharge control motor (M2) • Curl cover detection sensor (PS2) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M2-relay CN22 (FS-536SD), CN25 (FS-537SD)-relay CN21 (FS-536SD), CN26 (FS-537SD)-SDCB J5 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN22 (FS-536SD), CN25 (FS-537SD)-relay CN21 (FS-536SD), CN26 (FS-537SD)-SDCB J5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: SDCB J5-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-L, FS-537/FS-537SD 3-K
5. M2 operation check
   - Control signal: SDCB J5-4 to 7
   - Location of electrical component: FS-536/FS-536SD 4-L, FS-537/FS-537SD 3-K
6. Replace M2. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.34 C1196 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1196: Center fold guide motor’s malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The guide home sensor (PS7) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the center fold guide motor (M6) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Center fold guide motor (M6) • Guide home sensor (PS7) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M6-SDCB J9 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS7-SDCB J9 for proper connection and correct as necessary.
4. PS7 I/O check, sensor check
   - Control signal: SDCB J9-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 5-P, FS-537/FS-537SD 4-P

5. M6 operation check
   - Control signal: SDCB J9-7 to 10
   - Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 4-P
6. Replace M6. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.35 C1197 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1197: Tri-folding guide motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The tri-folding gate home sensor (PS11) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the tri-folding guide motor (M8) is energized.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Tri-folding guide motor (M8) • Tri-folding gate home sensor (PS11) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M8-SDCB J8 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-SDCB J8 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: SDCB J8-10 (ON)
   - Location of electrical component: FS-536/FS-536SD 3-P, FS-537/FS-537SD 3-P
5. M8 operation check
   - Control signal: SDCB J8-11 to 14
   - Location of electrical component: FS-536/FS-536SD 3-P, FS-537/FS-537SD 2-P
6. Replace M8. (FS-536SD / FS-537SD)
7. Replace SDCB. (FS-536SD / FS-537SD)
8. Replace FSCB. (FS-536SD / FS-537SD)

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.36 C11A1 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C11A1: Exit roller pressure/ retraction malfunction (When FS-533 is installed)	
Rank	B	
Trouble detection condition	<When FS-533 is installed>	The pick up roller position sensor (PS105) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the exit roller lift up motor (M104) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-533 is installed>	• Exit roller lift up motor (M104) • Pick up roller position sensor (PS105) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M104-FSCB CN109 for proper connection and correct as necessary.
2. Check the connector of M104 for proper drive coupling and correct as necessary.
3. Check the connector between PS105-FSCB CN110 for proper connection and correct as necessary.
4. PS105 I/O check, sensor check
   - Control signal: FSCB CN110
   - Location of electrical component: FS-533 7-D to E
5. M104 operation check
   - Control signal: FSCB CN109
   - Location of electrical component: FS-533 9-D to E
6. Replace M104.
7. FSCB CP104 conduction check
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.11 FS-533)

3.10.37 C11A2 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C11A2: Receiving roller retraction motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The receiving roller retraction sensor (PS11) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the receiving roller retraction motor (M4) is turned ON.
	<When FS-537 or FS-537SD is installed>	The receiving roller retraction sensor (PS22) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the receiving roller retraction motor (M10) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Receiving roller retraction motor (M4) • Receiving roller retraction sensor (PS11) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Receiving roller retraction motor (M10) • Receiving roller retraction sensor (PS22) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M4-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-FSCB J4 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: FSCB J4<B>-16 (ON)
   - Location of electrical component: FS-536/FS-536SD 16-C
5. M4 operation check
   - Control signal: FSCB J4<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 13-C
6. Replace M4.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M10-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M10 for proper drive coupling, and correct as necessary.
3. Check the connector between PS22-FSCB J12 for proper connection and correct as necessary.
4. PS22 I/O check, sensor check
   - Control signal: FSCB J12<B>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-D
5. M10 operation check
   - Control signal: FSCB J12<B>-1 to 4
   - Location of electrical component: FS-537/FS-537SD 17-D
6. Replace M10.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.38 C11C5 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C11C5: Paper size detect board malfunction	
Rank	B	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The size of a transported paper is not detected, causing no punch operation.
Trouble isolation	-	
Relevant electrical parts	Paper size detect board (PSDTB)	

(2) Procedure

1. Check the sensor part of PSDTB, to clean if it is dirty.
2. Check the connector between PSDTB-PKCB CN38 for proper connection and correct as necessary.
3. Replace PSDTB.

3.10.39 C11E1 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C11E1: Paper exit switching drive malfunction
Rank	B

Trouble detection condition	<When FS-536 or FS-536SD is installed>	The exchange folded paper output sensor (PS30) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the FNS entry transport motor (M2) is turned ON.
	<When FS-537 or FS-537SD is installed>	The route change gate home sensor (PS21) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the route change gate motor (M4) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• FNS entry transport motor (M2) • Exchange folded paper output sensor (PS30) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Route change gate motor (M4) • Route change gate home sensor (PS21) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M2-FSCB J9 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS30-FSCB J4 for proper connection and correct as necessary.
4. PS30 I/O check, sensor check
   - Control signal: FSCB J4<A>-15 (ON)
   - Location of electrical component: FS-536/FS-536SD 14-C
5. M2 operation check
   - Control signal: FSCB J9<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 12-C
6. Replace M2.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.15 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M4-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS21-FSCB J12 for proper connection and correct as necessary.
4. PS21 I/O check, sensor check
   - Control signal: FSCB J12<B>-12 (ON)
   - Location of electrical component: FS-537/FS-537SD 18-D
5. M4 operation check
   - Control signal: FSCB J21<B>-8 to 9
   - Location of electrical component: FS-537/FS-537SD 18-D
6. Replace M4.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.40 C11E2 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C11E2: Paper exit switching (JS) drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The sub tray/JS route change gate home sensor (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the sub tray discharge motor (M18) is turned ON.
Trouble isolation	-	
Relevant electrical parts	• Sub tray discharge motor (M18) • Sub tray/JS route change gate home sensor (PS23) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M18-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M18 for proper drive coupling and correct as necessary.
3. Check the connector between PS23-FSCB J12 for proper connection and correct as necessary.
4. PS23 I/O check, sensor check
   - Control signal: FSCB J12<A>-16 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-D
5. M18 operation check
   - Control signal: FSCB J12<A>-5 to 6
   - Location of electrical component: FS-537/FS-537SD 16-D
6. Replace M18.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.4.16 FS-537/FS-537SD)

3.10.41 C1402 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1402: FS nonvolatile memory error (When FS-533 is installed)
Rank	C
Trouble detection condition	When the main power switch is turned ON, malfunctioning of the nonvolatile memory on the FS control board (FSCB) is detected.
Trouble isolation	-
Relevant electrical parts	FS control board (FSCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB.

3.10.42 C1403 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1403: PK flash ROM error	
Rank	C	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	Data of flash ROM of the PK is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-	
Relevant electrical parts	Punch control board (PKCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PKCB.

3.10.43 C1404 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C1404: PI flash ROM error	
Rank	C	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	Data of flash ROM of the PI is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-	
Relevant electrical parts	PI drive board (PIDB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PIDB.

3.11 C2### (bizhub C368/C308/C258)

3.11.1 C2152, C2153, C2154, C2155, C2156 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2152: Transfer belt fault at initial position return • C2153: Transfer belt spacing fault at K pressure switching • C2154: Transfer belt contact fault at all pressure switching • C2155: Transfer belt contact fault after K pressure established • C2156: Transfer belt spacing fault after all pressure established
Rank	B
Trouble detection condition	• C2152: The 1st transfer pressure sensor (PS39) is unable to detect "switch from retraction to pressure" or "switch from pressure to retraction" within a given period time after the 1st transfer pressure clutch (CL5) has stared engagement during an initial position return. • C2153: The 1st transfer pressure sensor (PS39) does not detect “switch from pressure to retraction” within a given period time after 1st transfer pressure clutch (CL5) has stared engagement. • C2154: The 1st transfer pressure sensor (PS39) does not detect “switch from retraction to pressure” within a given period time after 1st transfer pressure clutch (CL5) has stared engagement. • C2155: The 1st transfer pressure sensor (PS39) is blocked after the lamps of given time after the 1st transfer pressure clutch (CL5) turned OFF when the release operation is finished. • C2156: The 1st transfer pressure sensor (PS39) is unblocked after the laps of given time after the 1st transfer pressure clutch (CL5) turned OFF when the pressing operation is finished.
Trouble isolation	-

Relevant electrical parts	• Fusing motor (M3) • 1st transfer pressure clutch (CL5) • 1st transfer pressure sensor (PS39) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M3-MFPB CN8E for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS39-relay CN113-MFPB CN15EB for proper connection and correct as necessary.
4. Check the connector between CL5-relay CN118-MFPB CN15EA for proper connection and correct as necessary.
5. PS39 I/O check, sensor check
   - Control signal: MFPB CN15EB-17 (ON)
   - Location of electrical component: 10-C
6. CL5 operation check
   - Control signal: MFPB CN15EA-18 (ON)
   - Location of electrical component: 8-C
7. M3 operation check
   - Control signal: MFPB CN8E-9 (REM), MFPB CN8E-12 (LOCK)
   - Location of electrical component: 2-C
8. Replace M3.
9. MFPB ICP2E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.2 C2253, C2254 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2253: PC motor failure to turn • C2254: PC motor turning at abnormal timing
Rank	B
Trouble detection condition	• C2253: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C2254: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• PC motor (M2) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M2-MFPB CN7E for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. M2 operation check
   - Control signal: MFPB CN7E-13 (REM), MFPB CN7E-16 (LOCK)
   - Location of electrical component: 3 to 4-C
4. Replace M2.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.3 C2255, C2256 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2255: Developing motor failure to turn • C2256: Developing motor turning at abnormal timing
Rank	B
Trouble detection condition	• C2255: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C2256: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Developing motor (M21) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M21-MFPB CN7E for proper connection and correct as necessary.
2. Check the connector of M21 for proper drive coupling and correct as necessary.
3. M21 operation check
   - Control signal: MFPB CN7E-5 (REM), MFPB CN7E-8 (LOCK)
   - Location of electrical component: 3-C
4. Replace M21.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.4 C2355 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C2355: Transfer belt cleaner cooling fan failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Transfer belt cleaner cooling fan (FM2) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM2-relay CN115-relay CN141-MFPB CN15EB for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM2 operation check
   - Control signal: MFPB CN15EB-3 (REM), MFPB CN15EB-5 (LOCK)
   - Location of electrical component: 9-C
4. Replace FM2.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.5 C2411, C2412, C2413, C2414 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2411: Developing unit/C new article release • C2412: Developing unit/M new article release • C2413: Developing unit/Y new article release • C2414: Developing unit/K new article release
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new developing unit is set.
Trouble isolation	-
Relevant electrical parts	• Developing unit • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Check the connector between the developing unit-FRB CN13 (C2414), CN14 (C2411), CN15 (C2412), CN16 (C2413) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
4. Replace the developing unit.
5. Replace FRB.
6. Replace MFPB.

3.11.6 C2551, C2553, C2555 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2551: Abnormally low toner density detected cyan TCR sensor • C2553: Abnormally low toner density detected magenta TCR sensor • C2555: Abnormally low toner density detected yellow TCR sensor
Rank	B
Trouble detection condition	When sampling data is determined in TC ratio calculation control, TCR sensor output is higher than a predetermined value for a predetermined number of times in a row even though there is toner in the sub hopper.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y • Toner cartridge/C,M,Y • Toner empty sensor/Y (PS34) • Toner empty sensor/M (PS33) • Toner empty sensor/C (PS32) • Toner cartridge motor/Y,M,C (M10) • Toner supply motor/Y (M9) • Toner supply motor/M (M8) • Toner supply motor/C (M7) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Perform image troubleshooting procedure if image density is low.
2. Reinstall developing unit.

3. Reinstall toner cartridge.
4. Check the connector between the developing unit-FRB CN14 (C2551), CN15 (C2553), CN16 (C2555) for proper connection and correct as necessary.
5. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
6. M10 operation check
   - Control signal: MFPB CN16E-1 to 4
   - Location of electrical component: 15-C
7. M7, M8, M9 operation check
   - Control signal: MFPB CN16E-5 to 8 (M7), MFPB CN16E-9 to 12 (M8), MFPB CN16E-13 to 16 (M9)
   - Location of electrical component: 15-C (M7, M8), 16-C (M9)
8. If the toner empty sensor and its surroundings inside the sub hopper are dirtied with toner, clean them.
9. Replace the developing unit.
10. Replace FRB.
11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.7 C2552, C2554, C2556, C2558 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2552: Abnormally high toner density detected cyan TCR sensor • C2554: Abnormally high toner density detected magenta TCR sensor • C2556: Abnormally high toner density detected yellow TCR sensor • C2558: Abnormally high toner density detected black TCR sensor
Rank	B
Trouble detection condition	The TC ratio of the toner determined by the toner replenishment control is detected to be the predetermined value or over for consecutive times.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Toner cartridge/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Reinstall toner cartridge.
3. Check the connector between the developing unit-FRB CN13 (C2558), CN14 (C2552), CN15 (C2554), CN16 (C2556) for proper connection and correct as necessary.
4. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
5. Replace the developing unit.
6. Replace FRB.
7. Replace MFPB.

3.11.8 C2557 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C2557: Abnormally low toner density detected black TCR sensor
Rank	B
Trouble detection condition	When sampling data is determined in TC ratio calculation control, TCR sensor output is higher than a predetermined value for a predetermined number of times in a row even though there is toner in the sub hopper.
Trouble isolation	-
Relevant electrical parts	• Developing unit/K • Toner cartridge/K • Toner empty sensor/K (PS31) • Toner cartridge motor/K (M25) • Toner supply motor/K (M6) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Perform image troubleshooting procedure if image density is low.
2. Reinstall developing unit/K.
3. Reinstall toner cartridge/K.
4. Check the connector between the developing unit/K-FRB CN13 for proper connection and correct as necessary.
5. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
6. M25 operation check
   - Control signal: MFPB CN30E-1 to 4
   - Location of electrical component: 16-C
7. M6 operation check
   - Control signal: MFPB CN30E-5 to 8
   - Location of electrical component: 17-C
8. If the toner empty sensor and its surroundings inside the sub hopper are dirtied with toner, clean them.
9. Replace the developing unit/K.
10. Replace FRB.

11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.9 C2559, C255A, C255B (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2559: Cyan TCR sensor adjustment failure • C255A: Magenta TCR sensor adjustment failure • C255B: Yellow TCR sensor adjustment failure
Rank	B
Trouble detection condition	TCR sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y • Toner cartridge motor/Y,M,C (M10) • Toner supply motor/Y (M9) • Toner supply motor/M (M8) • Toner supply motor/C (M7) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Check the connector between the developing unit-FRB CN14 (C2559), CN15 (C255A), CN16 (C255B) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
4. M10 operation check
   - Control signal: MFPB CN16E-1 to 4
   - Location of electrical component: 15-C
5. M7, M8, M9 operation check
   - Control signal: MFPB CN16E-5 to 8 (M7), MFPB CN16E-9 to 12 (M8), MFPB CN16E-13 to 16 (M9)
   - Location of electrical component: 15-C (M7, M8), 16-C (M9)
6. Replace the developing unit.
7. Replace FRB.
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.10 C255C (bizhub C368/C308/C258)

(1) Contents

Trouble type	C255C: Black TCR sensor adjustment failure
Rank	B
Trouble detection condition	TCR sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
Trouble isolation	-
Relevant electrical parts	• Developing unit/K • Toner cartridge motor/K (M25) • Toner supply motor/K (M6) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit/K.
2. Check the connector between the developing unit/K-FRB CN13 for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
4. M25 operation check
   - Control signal: MFPB CN30E-1 to 4
   - Location of electrical component: 16-C
5. M6 operation check
   - Control signal: MFPB CN30E-5 to 8
   - Location of electrical component: 17-C
6. Replace the developing unit/K.
7. Replace FRB.
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.11.11 C2561, C2562, C2563, C2564 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2561: Cyan TCR sensor failure • C2562: Magenta TCR sensor failure • C2563: Yellow TCR sensor failure

	• C2564: Black TCR sensor failure
Rank	B
Trouble detection condition	Alarm signals for each TCR sensor is detected more than the predetermined number of times. This detection is used for detecting disconnection of TCR sensor connector.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Check the connector between the developing unit-FRB CN13 (C2564), CN14 (C2561), CN15 (C2562), CN16 (C2563) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
4. Replace the developing unit.
5. Replace FRB.
6. MFPB ICP2E conduction check
7. Replace MFPB.

3.11.12 C2650 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C2650: Main backup media access error
Rank	C
Trouble detection condition	• The re-written data, which has been read out, checked and founded as error, is read out again and found as error. • The error was found when reading out the counter value. • The main body detects that the EEPROM is not mounted.
Trouble isolation	-
Relevant electrical parts	• EEPROM/1 • EEPROM/2 • MFP board (MFPB)

(2) Procedure

1. Make sure that EEPROM/1 and EEPROM/2 are mounted in their respective correct positions.
2. Check to see if the EEPROM is mounted in a reverse direction.
3. Check the connector from MFPB to EEPROM for proper connection and correct as necessary.
4. Replace MFPB.
5. Replace EEPROM/1 and EEPROM/2.
   1. Replace the current EEPROM with a new one.
   2. Replace the following components with new ones.
   When the transfer belt unit and the fusing unit have been replaced with new ones, perform [New Release] in the service mode. When the transfer roller has been replaced with a new one, perform [Counter clear].
   - Developing unit/Y,M,C,K
   - Drum unit/Y,M,C,K
   - Toner cartridge/Y,M,C,K
   - Transfer belt unit
   - Fusing unit
   - Transfer roller
   - Feed roller, pick-up roller, separation roller (including options)

   3. Turn ON the main power switch and check to see that warm-up is started.
   Make sure that malfunction codes other than C2650 or improper IU/TC placement is not detected.
   4. Make the specified readjustments.
6. If the above actions do not solve the problem, contact KM.

3.11.13 C2A11, C2A12, C2A13, C2A14 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2A11: Drum unit/C new release failure • C2A12: Drum unit/M new release failure • C2A13: Drum unit/Y new release failure • C2A14: Drum unit/K new release failure
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new drum unit is set.
Trouble isolation	-
Relevant electrical parts	• Drum unit/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Clean the connection between the drum unit and the machine if dirty.

2. Reinstall the drum unit.
3. Check the connector between the drum unit-FRB CN12 for proper connection and correct as necessary.
4. Check the connector between FRB CN1, CN3-MFPB CN4E, CN11E for proper connection and correct as necessary.
5. Replace the drum unit.
6. Replace FRB.
7. Replace MFPB.

3.11.14 C2A21, C2A22, C2A23, C2A24 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C2A21: Toner cartridge/C new release failure • C2A22: Toner cartridge/M new release failure • C2A23: Toner cartridge/Y new release failure • C2A24: Toner cartridge/K new release failure
Rank	C
Trouble detection condition	The status with the new unit is not cleared after the new toner cartridge is set.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge/ C,M,Y,K • MFP board (MFPB)

(2) Procedure

1. Clean the connection between the toner cartridge and the machine if dirty.
2. Check the connector between the toner cartridge-relay CN79-MFPB CN35E for proper connection and correct as necessary.
3. Reinstall the toner cartridge.
4. Check the harness for proper connection and correct as necessary.
5. Replace the toner cartridge.
6. Replace MFPB.

3.12 C2### (bizhub C658/C558/C458)

3.12.1 C2152, C2153, C2154, C2155, C2156 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2152: Transfer belt fault at initial position return • C2153: Transfer belt spacing fault at K pressure switching • C2154: Transfer belt contact fault at all pressure switching • C2155: Transfer belt contact fault after K pressure established • C2156: Transfer belt spacing fault after all pressure established
Rank	B
Trouble detection condition	• C2152: The 1st transfer pressure sensor (PS39) is unable to detect "switch from retraction to pressure" or "switch from pressure to retraction" within a given period time after the 1st transfer pressure clutch (CL5) has stared engagement during an initial position return. • C2153: The 1st transfer pressure sensor (PS39) does not detect “switch from pressure to retraction” within a given period time after 1st transfer pressure clutch (CL5) has stared engagement. • C2154: The 1st transfer pressure sensor (PS39) does not detect “switch from retraction to pressure” within a given period time after 1st transfer pressure clutch (CL5) has stared engagement. • C2155: The 1st transfer pressure sensor (PS39) is blocked after the lamps of given time after the 1st transfer pressure clutch (CL5) turned OFF when the release operation is finished. • C2156: The 1st transfer pressure sensor (PS39) is unblocked after the laps of given time after the 1st transfer pressure clutch (CL5) turned OFF when the pressing operation is finished.
Trouble isolation	-
Relevant electrical parts	• Fusing motor (M3) • 1st transfer pressure clutch (CL5) • 1st transfer pressure sensor (PS39) • Expansion control board (EXCB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M3-MFPB CN14E for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS39-relay CN113-MFPB CN15E for proper connection and correct as necessary.
4. Check the connector between CL5-relay CN118-EXCB CN8 for proper connection and correct as necessary.
5. PS39 I/O check, sensor check
   - Control signal: MFPB CN15E<B>-10 (ON)
   - Location of electrical component: C658/C558 18-C, C458 21-C
6. CL5 operation check
   - Control signal: EXCB CN8<A>-4 (CL5_REM)
   - Location of electrical component: 25-T
7. M3 operation check
   - Control signal: MFPB CN14E-9 (REM), MFPB CN14E-12 (LOCK)
   - Location of electrical component: 2-C
8. Replace M3.
9. Replace EXCB.
10. MFPB F6E conduction check

11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.2 C2253, C2254 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2253: PC motor's failure to turn • C2254: PC motor's turning at abnormal timing
Rank	B
Trouble detection condition	• C2253: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C2254: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• PC motor (M2) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M2-MFPB CN23E for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. M2 operation check
   - Control signal: MFPB CN23E-13 (REM), MFPB CN23E-16 (LOCK)
   - Location of electrical component: C658 3-C, C558 4-C, C458 6-C
4. Replace M2.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.3 C2255, C2256 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2255: Developing motor's failure to turn • C2256: Developing motor's turning at abnormal timing
Rank	B
Trouble detection condition	• C2255: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C2256: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Developing motor (M21) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M21-MFPB CN23E for proper connection and correct as necessary.
2. Check the connector of M21 for proper drive coupling and correct as necessary.
3. M21 operation check
   - Control signal: MFPB CN23E-5 (REM), MFPB CN23E-8 (LOCK)
   - Location of electrical component: C658 3-C, C558 4-C, C458 5-C
4. Replace M21.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.4 C2350 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C2350: Toner suction fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Toner suction fan (FM11) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM11-relay CN62-MFPB CN31E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM11 operation check
   - Control signal: MFPB CN31E<A>-12 (REM), MFPB CN31E<A>-14 (LOCK)
   - Location of electrical component: 24-J
4. Replace FM11.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.5 C2355 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C2355: Transfer belt cleaner cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Transfer belt cleaner cooling fan (FM2) • Expansion control board (EXCB)

(2) Procedure

1. Check the connector between FM2-relay CN115-EXCB CN5 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM2 operation check
   - Control signal: EXCB CN5-1 (REM), EXCB CN5-3 (LOCK)
   - Location of electrical component: 28-P
4. Replace FM2.
5. MFPB F6E conduction check
6. Replace EXCB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.6 C2411, C2412, C2413, C2414 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2411: Developing unit/C new article release • C2412: Developing unit/M new article release • C2413: Developing unit/Y new article release • C2414: Developing unit/K new article release
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new developing unit is set.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall the developing unit.
2. Check the connector between the developing unit-FRB CN13 (C2414), CN14 (C2411), CN15 (C2412), CN16 (C2413) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
4. Replace the developing unit.
5. Replace FRB.
6. Replace MFPB.

3.12.7 C2551, C2553, C2555, C2557 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2551: Abnormally low toner density detected cyan TCR sensor • C2553: Abnormally low toner density detected magenta TCR sensor • C2555: Abnormally low toner density detected yellow TCR sensor • C2557: Abnormally low toner density detected black TCR sensor
Rank	B
Trouble detection condition	When sampling data is determined in TC ratio calculation control, TCR sensor output is higher than a predetermined value for a predetermined number of times in a row even though there is toner in the sub hopper.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Toner cartridge/C,M,Y,K • Toner empty sensor/Y (PS34) • Toner empty sensor/M (PS33) • Toner empty sensor/C (PS32) • Toner empty sensor/K (PS31) • Toner cartridge motor/Y,M (M10) • Toner cartridge motor/C,K (M25) • Toner supply motor/Y (M9) • Toner supply motor/M (M8) • Toner supply motor/C (M7) • Toner supply motor/K (M6) • Expansion control board (EXCB)

	• Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Perform image troubleshooting procedure if image density is low.
2. Reinstall the developing unit.
3. Reinstall the toner cartridge.
4. Check the connector between the developing unit-FRB CN13 (C2557), CN14 (C2551), CN15 (C2553), CN16 (C2555) for proper connection and correct as necessary.
5. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
6. M10, M25 operation check
   - Control signal: MFPB CN28E-8 to 11 (M10), CN28E-4 to 7 (M25)
   - Location of electrical component: 12-C (M10), 11-C (M25)
7. M6, M7, M8, M9 operation check
   - Control signal: EXCB CN3-4 to 7 (M6), CN3-8 to 11 (M7), CN3-12 to 15 (M8), CN3-16 to 19 (M9)
   - Location of electrical component: 25-T (M8, M9), 26-T (M6, M7)
8. If the toner empty sensor and its surroundings inside the sub hopper are dirtied with toner, clean them.
9. Replace the developing unit.
10. Replace FRB.
11. Replace EXCB.
12. MFPB F6E conduction check
13. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.8 C2552, C2554, C2556, C2558 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2552: Abnormally high toner density detected cyan TCR sensor • C2554: Abnormally high toner density detected magenta TCR sensor • C2556: Abnormally high toner density detected yellow TCR sensor • C2558: Abnormally high toner density detected black TCR sensor
Rank	B
Trouble detection condition	The TC ratio of the toner determined by the toner replenishment control is detected to be the predetermined value or over for consecutive times.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Toner cartridge/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall the developing unit.
2. Reinstall the toner cartridge.
3. Check the connector between the developing unit-FRB CN13 (C2558), CN14 (C2552), CN15 (C2554), CN16 (C2556) for proper connection and correct as necessary.
4. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
5. Replace the developing unit.
6. Replace FRB.
7. Replace MFPB.

3.12.9 C2559, C255A, C255B, C255C (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2559: Cyan TCR sensor adjustment failure • C255A: Magenta TCR sensor adjustment failure • C255B: Yellow TCR sensor adjustment failure • C255C: Black TCR sensor adjustment failure
Rank	B
Trouble detection condition	TCR sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Toner cartridge motor/Y,M (M10) • Toner cartridge motor/C,K (M25) • Toner supply motor/Y (M9) • Toner supply motor/M (M8) • Toner supply motor/C (M7) • Toner supply motor/K (M6) • Expansion control board (EXCB) • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall the developing unit.
2. Check the connector between the developing unit-FRB CN13 (C255C), CN14 (C2559), CN15 (C255A), CN16 (C255B) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
4. M10, M25 operation check
   - Control signal: MFPB CN28E-8 to 11 (M10), CN28E-4 to 7 (M25)
   - Location of electrical component: 12-C (M10), 11-C (M25)
5. M6, M7, M8, M9 operation check
   - Control signal: EXCB CN3-4 to 7 (M6), CN3-8 to 11 (M7), CN3-12 to 15 (M8), CN3-16 to 19 (M9)
   - Location of electrical component: 15-C (M7, M8), 16-C (M9)
6. Replace the developing unit.
7. Replace FRB.
8. Replace EXCB.
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.12.10 C2561, C2562, C2563, C2564 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2561: Cyan TCR sensor failure • C2562: Magenta TCR sensor failure • C2563: Yellow TCR sensor failure • C2564: Black TCR sensor failure
Rank	B
Trouble detection condition	• Alarm signals for each TCR sensor is detected more than the predetermined number of times. • This detection is used for detecting disconnection of TCR sensor connector.
Trouble isolation	-
Relevant electrical parts	• Developing unit/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Reinstall the developing unit.
2. Check the connector between the developing unit-FRB CN13 (C2564), CN14 (C2561), CN15 (C2562), CN16 (C2563) for proper connection and correct as necessary.
3. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
4. Replace the developing unit.
5. Replace FRB.
6. Replace MFPB.

3.12.11 C2650, C265B (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2650: Main backup media access error 1 • C265B: Main backup media access error 2
Rank	C
Trouble detection condition	• The re-written data, which has been read out, checked and founded as error, is read out again and found as error. • The error was found when reading out the counter value. • The main body detects that the EEPROM is not mounted.
Trouble isolation	-
Relevant electrical parts	• C2650: EEPROM1 (EEPROM/1) • C265B: EEPROM2 (EEPROM/2) • MFP board (MFPB)

(2) Procedure

1. Make sure that EEPROM/1 and EEPROM/2 are mounted in their respective correct positions.
2. Check to see if the EEPROM is mounted in a reverse direction.
3. Check the connector from MFPB to EEPROM for proper connection and correct as necessary.
4. Replace MFPB.
5. Replace EEPROM/1 and EEPROM/2.
   1. Replace the current EEPROM with a new one.
   2. Replace the following components with new ones.
   When the transfer belt unit and the fusing unit have been replaced with new ones, perform [New Release] in the service mode. When the transfer roller has been replaced with a new one, perform [Counter clear].
   - Developing unit/Y,M,C,K
   - Drum unit/Y,M,C,K
   - Toner cartridge/Y,M,C,K
   - Transfer belt unit
   - Fusing unit
   - Transfer roller

- Feed roller, pick-up roller, separation roller (including options)

3. Turn ON the main power switch and check to see that warm-up is started. Make sure that malfunction codes other than C2650 or improper IU/TC placement is not detected.
4. Make the specified readjustments.

6. If the above actions do not solve the problem, contact KM.

3.12.12 C265A (bizhub C658/C558/C458)

(1) Contents

Trouble type	C265A: Main backup media wrongly installation
Rank	C
Trouble detection condition	The EEPROM/1 and EEPROM/2 are mounted in a reverse direction.
Trouble isolation	-
Relevant electrical parts	• EEPROM1 (EEPROM/1) • EEPROM2 (EEPROM/2)

(2) Procedure

1. Check to see if the EEPROM/1 and EEPROM/2 are mounted in a reverse direction.
2. Check the type of the installed EEPROM and replace it if it is a wrong one.
3. Replace EEPROM/1 and EEPROM/2.

3.12.13 C2A11, C2A12, C2A13, C2A14 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2A11: Drum unit/C new release failure • C2A12: Drum unit/M new release failure • C2A13: Drum unit/Y new release failure • C2A14: Drum unit/K new release failure
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new drum unit is set.
Trouble isolation	-
Relevant electrical parts	• Drum unit/C,M,Y,K • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Clean the connection between the drum unit and the main body if dirty.
2. Reinstall the drum unit.
3. Check the connector between the drum unit-FRB CN12 for proper connection and correct as necessary.
4. Check the connector between FRB CN1, CN3-MFPB CN4E, CN5E for proper connection and correct as necessary.
5. Replace the drum unit.
6. Replace FRB.
7. Replace MFPB.

3.12.14 C2A21, C2A22, C2A23, C2A24 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C2A21: Toner cartridge/C new release failure • C2A22: Toner cartridge/M new release failure • C2A23: Toner cartridge/Y new release failure • C2A24: Toner cartridge/K new release failure
Rank	C
Trouble detection condition	The status with the new unit is not cleared after the new toner cartridge is set.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge/ C,M,Y,K • Expansion control board (EXCB)

(2) Procedure

1. Clean the connection between the toner cartridge and the main body if dirty.
2. Check the connector between the toner cartridge-relay CN79-EXCB CN5 for proper connection and correct as necessary.
3. Reinstall the toner cartridge.
4. Check the harness for proper connection and correct as necessary.
5. Replace the toner cartridge.
6. Replace EXCB.

3.13 C3### (bizhub C368/C308/C258)

3.13.1 C3101, C3103 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C3101: Pressure roller pressure failure • C3103: Pressure roller release failure

Rank	B
Trouble detection condition	C3101: • The encoder pulse does not change even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during pressure by the pressure roller. • The fusing pressure home sensor (PS38) is not blocked even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during pressure by the pressure roller.
	C3103: • The encoder pulse does not change even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during retraction of the pressure roller. • The fusing pressure home sensor (PS38) is not unblocked even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during retraction of the pressure roller.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing pressure motor (M11) • Fusing pressure home sensor (PS38) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M11-MFPB CN15EA for proper connection and correct as necessary.
2. Check the connector between the fusing unit-relay CN98, CN99, CN104-MFPB CN13E for proper connection and correct as necessary.
3. PS38 I/O check, sensor check
   - Control signal: MFPB CN13E-12 (ON)
   - Location of electrical component: 11-C
4. M11 operation check
   - Control signal: MFPB CN15EA-5 to 8
   - Location of electrical component: 6-C
5. Replace M11.
6. Replace the fusing unit.
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.13.2 C3201, C3202 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C3201: Fusing motor failure to turn • C3202: Fusing motor turning at abnormal timing
Rank	B
Trouble detection condition	• C3201: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C3202: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Fusing motor (M3) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M3-MFPB CN8E for proper connection and correct as necessary.
2. Check the loading status of the fusing unit drive, and correct the error as necessary.
3. M3 operation check
   - Control signal: MFPB CN8E-9 (REM), MFPB CN8E-12 (LOCK)
   - Location of electrical component: 2-C
4. Replace M3.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.13.3 C3302 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C3302: Paper cooling fan failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Paper cooling fan (FM8) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM8-relay CN106-MFPB CN15EB for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM8 operation check

- Control signal: MFPB CN15EB-9 (REM), MFPB CN15EB-11 (LOCK)
- Location of electrical component: 9-C

4. Replace FM8.
5. MFPB ICP3E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.13.4 C3425 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C3425: Fusing warm-up trouble
Rank	A
Trouble detection condition	• Detected temperature of the heating roller temperature sensor (TEMS) does not go up a given range of temperature even after a lapse of given period of time at warm up. • The temperature detected by the heating roller temperature sensor (TEMS) does not shift from the pre-standby state or the post-print color printing-enable wait state even after the lapse of a predetermined period of time after the completion of warm-up.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller temperature sensor (TEMS) • DC power supply (DCPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and DCPU for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.
6. Replace DCPU.

3.13.5 C3722, C3725, C3726 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C3722: Fusing abnormally high temperature detection (Edge of the heating roller) • C3725: Fusing abnormally high temperature detection (Main of the heating roller) • C3726: Fusing abnormally high temperature detection (Center of the heating roller)
Rank	A
Trouble detection condition	• C3722: Detected temperature of the heating roller thermistor/1 (TH1) goes beyond a given temperature for a given period of time consecutively. • C3725: Detected temperature of the heating roller temperature sensor (TEMS) goes beyond a given temperature for a given period of time consecutively. • C3726: Detected temperature of the heating roller thermistor/2 (TH2) goes beyond a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3722: Heating roller thermistor/1 (TH1) • C3725: Heating roller temperature sensor (TEMS) • C3726: Heating roller thermistor/2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

3.13.6 C3731 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C3731: Fusing abnormally high temperature detection (Hard protector)
Rank	A
Trouble detection condition	The hard protector signal error is detected for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller thermistor/1 (TH1) • Heating roller temperature sensor (TEMS) • Heating roller thermistor/2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

3.13.7 C3825, C3826 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C3825: Fusing abnormally low temperature detection (Main of the heating roller) • C3826: Fusing abnormally low temperature detection (Center of the heating roller)
Rank	A
Trouble detection condition	• C3825: The heating roller temperature sensor (TEMS) continues to detect a temperature lower than a predetermined one for a predetermined period of time. • C3826: The heating roller thermistor/2 (TH2) continues to detect a temperature lower than a predetermined one for a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3825: Heating roller temperature sensor (TEMS) • C3826: Heating roller thermistor/2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

3.13.8 C3922, C3925, C3926 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C3922: Fusing sensor wire breaks detection (Edge of the heating roller) • C3925: Fusing sensor wire breaks detection (Main of the heating roller) • C3926: Fusing sensor wire breaks detection (Center of the heating roller)
Rank	A
Trouble detection condition	• C3922: After a predetermined period of time after the warm-up stage is started, the heating roller thermistor/1 (TH1) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3925: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor (TEMS) voltage does not increase by predetermined steps (temperature rise) within a predetermined period of time. • C3926: After a predetermined period of time after the warm-up stage is started, the heating roller thermistor/2 (TH2) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3922: Heating roller thermistor/1 (TH1) • C3925: Heating roller temperature sensor (TEMS) • C3926: Heating roller thermistor/2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

3.13.9 C392A (bizhub C368/C308/C258)

(1) Contents

Trouble type	C392A: Heating roller temperature sensor contamination (Main of the heating roller)
Rank	C
Trouble detection condition	When the machine is in standby mode after a predetermined period of time after the warm-up stage is started, detected temperature of the heating roller temperature sensor (TEMS) higher than a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller temperature sensor (TEMS) • MFP board (MFPB)

(2) Procedure

1. Wipe the TEMS clean of dirt if any.
   <Cleaning procedure>
   - Clear away a dirt or a foreign object on the sensor with a cotton swab.
   - When a dirt is left even if you cleaned the sensor by above procedure, clear away a dirt or a foreign object on the sensor using a cotton swab dampened with the alcohol. And, wipe off the sensor with a dry cotton swab afterwards.
2. Check the TEMS for installed position and proper connector connection.
3. Check the connection of the fusing unit.
4. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
5. Replace the fusing unit.
6. Replace MFPB.

3.13.10 C392B (bizhub C368/C308/C258)

(1) Contents

Trouble type	C392B: Fusing sensor wire breaks detection (Difference of temperature)
Rank	A
Trouble detection condition	The difference between the temperature corrected by the heating roller thermistor/1 (TH1) and the temperature detected by the heating roller thermistor/2 (TH2) exceeds a predetermined value.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller thermistor/1 (TH1) • Heating roller thermistor/2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

3.14 C3### (bizhub C658/C558/C458)

3.14.1 C3101, C3103 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3101: Pressure roller pressure failure • C3103: Pressure roller release failure
Rank	B
Trouble detection condition	C3101: • The encoder pulse does not change even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during pressure by the pressure roller. • The fusing pressure home sensor (PS38) is not blocked even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during pressure by the pressure roller.
	C3103: • The encoder pulse does not change even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during retraction of the pressure roller. • The fusing pressure home sensor (PS38) is not unblocked even after the lapse of a predetermined period of time after the fusing pressure motor (M11) has started rotating during retraction of the pressure roller.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing pressure motor (M11) • Fusing pressure home sensor (PS38) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M11-relay CN112-MFPB CN15E for proper connection and correct as necessary.
2. Check the connector between the fusing unit-relay CN96-MFPB CN22E for proper connection and correct as necessary. (bizhub C658/C558)
3. Check the connector between the fusing unit-relay CN104-MFPB CN12E for proper connection and correct as necessary. (bizhub C458)
4. PS38 I/O check, sensor check
   - Control signal: C658/C558 MFPB CN22E-9 (ON), C458 MFPB CN12E-12 (ON)
   - Location of electrical component: C658/C558 22-C, C458 24-C
5. M11 operation check
   - Control signal: MFPB CN15E<A>-7 to 10
   - Location of electrical component: C658/C558 16-C, C458 19-C
6. Replace M11.
7. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.14.2 C3102 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C3102: Heating roller failure to turn (bizhub C658/C558)
Rank	A
Trouble detection condition	The hard latch signal from one or both of the heating roller rotation latch detection 1 and the heating roller rotation latch detection 2 is turned ON.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller rotation sensor (PS37) • Fusing motor (M3) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for proper installation and correct as necessary.
2. Check the connector between M3-MFPB CN14E for proper connection and correct as necessary.
3. Check the connector of M3 for proper drive coupling and correct as necessary.
4. Check the connector between the fusing unit-relay CN100-MFPB CN13E for proper connection and correct as necessary.
5. PS37 I/O check, sensor check
   - Control signal: MFPB CN13E-3 (ON)
   - Location of electrical component: 23-C
6. M3 operation check
   - Control signal: MFPB CN14E-9 (REM), MFPB CN14E-12 (LOCK)
   - Location of electrical component: 2-C
7. Replace M3.
8. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.14.3 C3201, C3202 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3201: Fusing motor's failure to turn • C3202: Fusing motor's turning at abnormal timing
Rank	B
Trouble detection condition	• C3201: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C3202: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Fusing motor (M3) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M3-MFPB CN14E for proper connection and correct as necessary.
2. Check the loading status of the fusing unit drive, and correct the error as necessary.
3. M3 operation check
   - Control signal: MFPB CN14E-9 (REM), MFPB CN14E-12 (LOCK)
   - Location of electrical component: 2-C
4. Replace M3.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.14.4 C3302 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C3302: Paper cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Paper cooling fan (FM8) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM8-relay CN106-MFPB CN15E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM8 operation check
   - Control signal: MFPB CN15E<A>-13 (REM), MFPB CN15E<A>-15 (LOCK)
   - Location of electrical component: C658/C558 16-C, C458 20-C
4. Replace FM8.

5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.14.5 C3425 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C3425: Fusing warm-up trouble
Rank	A
Trouble detection condition	bizhub C658/C558 • Detected temperature of the heating roller temperature sensor1 (TEMS/1) does not go up a given range of temperature even after a lapse of given period of time at warm up. • The temperature detected by the heating roller temperature sensor1 (TEMS/1) does not shift from the pre-standby state or the post-print color printing-enable wait state even after the lapse of a predetermined period of time after the completion of warm-up.
	bizhub C458 • Detected temperature of the heating roller thermistor1 (TH1) does not go up a given range of temperature even after a lapse of given period of time at warm up. • The temperature detected by the heating roller thermistor1 (TH1) does not shift from the pre-standby state or the post-print color printing-enable wait state even after the lapse of a predetermined period of time after the completion of warm-up.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • bizhub C658/C558: Heating roller temperature sensor1 (TEMS/1) • bizhub C458: Heating roller thermistor1 (TH1) • DC power supply (DCPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit, DCPU, and MFPB for proper connection and correct or change as necessary.
4. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
5. Replace MFPB.
6. Replace DCPU.

3.14.6 C3722, C3725, C3726 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3722: Fusing abnormally high temperature detection (Edge of the heating roller) • C3725: Fusing abnormally high temperature detection (Main of the heating roller) • C3726: Fusing abnormally high temperature detection (Center of the heating roller)
Rank	A
Trouble detection condition	• C3722: Detected temperature of the heating roller temperature sensor2 (TEMS/2) or heating roller thermistor1 (TH1) goes beyond a given temperature for a given period of time consecutively. • C3725: Detected temperature of the heating roller temperature sensor1 (TEMS/1) or heating roller thermistor1 (TH1) goes beyond a given temperature for a given period of time consecutively. • C3726: Detected temperature of the heating roller thermistor2 (TH2) goes beyond a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3722 (bizhub C658): Heating roller temperature sensor2 (TEMS/2) • C3722 (bizhub C558/C458): Heating roller thermistor1 (TH1) • C3725 (bizhub C658/C558): Heating roller temperature sensor1 (TEMS/1) • C3725 (bizhub C458): Heating roller thermistor1 (TH1) • C3726: Heating roller thermistor2 (TH2) • IH power supply (IHPU) (bizhub C658/C558 only) • Fusing power supply (FUPU) (bizhub C458 only) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary. (bizhub C658/C558)
4. Check the fusing unit-MFPB CN12E for proper connection and correct or change as necessary. (bizhub C458)
5. Check the connector between TEMS/1-relay CN109-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
6. Check the connector between TEMS/2-relay CN138-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
7. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
8. Replace IHPU. (bizhub C658/C558 only)
9. Replace FUPU. (bizhub C458 only)
10. Replace MFPB.

3.14.7 C3732, C3736, C3737, C3738, C3739 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3732: Fusing abnormally high temperature detection hard protector (Edge of the heating roller) (bizhub C658 or bizhub C558 (Europe)) • C3736: Fusing abnormally high temperature detection hard protector (Middle of the heating roller) • C3737: Fusing abnormally high temperature detection hard protector (Center of the heating roller) (bizhub C658/C558) • C3738: Fusing abnormally high temperature detection hard protector (Middle of the heating roller) (bizhub C658/C558) • C3739: Fusing abnormally high temperature detection hard protector (Edge of the heating roller) (bizhub C558 (Except Europe) and bizhub C458)
Rank	A
Trouble detection condition	• C3732: An abnormally high temperature is detected on the hard protector circuit (edge of the heating roller). • C3736: An abnormally high temperature is detected on the hard protector circuit (middle of the heating roller). • C3737: An abnormally high temperature is detected on the hard protector circuit (center of the heating roller). • C3738: An abnormally high temperature is detected on the hard protector circuit (center of the heating roller). • C3739: An abnormally high temperature is detected on the hard protector circuit (edge of the heating roller).
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3732: Heating roller temperature sensor2 (TEMS/2) • C3736: Heating roller thermistor2 (TH2) • C3737: Heating roller temperature sensor1 (TEMS/1) • C3738: Heating roller thermistor3 (TH3) • C3739: Heating roller thermistor1 (TH1) • IH power supply (IHPU) (bizhub C658/C558 only) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary. (bizhub C658/C558)
4. Check the fusing unit-MFPB CN12E for proper connection and correct or change as necessary. (bizhub C458)
5. Check the connector between TEMS/1-relay CN109-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
6. Check the connector between TEMS/2-relay CN138-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
7. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
8. Replace IHPU. (bizhub C658/C558 only)
9. Replace MFPB.

3.14.8 C3822, C3825, C3826 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3822: Fusing abnormally low temperature detection (Edge of the heating roller) (bizhub C658 or bizhub C558 (Europe)) • C3825: Fusing abnormally low temperature detection (Main of the heating roller) • C3826: Fusing abnormally low temperature detection (Center of the heating roller) (bizhub C458)
Rank	A
Trouble detection condition	• C3822: The heating roller temperature sensor2 (TEMS/2) continues to detect a temperature lower than a predetermined one for a predetermined period of time. • C3825: The heating roller temperature sensor1 (TEMS/1) or heating roller thermistor1 (TH1) continues to detect a temperature lower than a predetermined one for a predetermined period of time. • C3826: The heating roller thermistor/2 (TH2) continues to detect a temperature lower than a predetermined one for a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3822: Heating roller temperature sensor2 (TEMS/2) • C3825 (bizhub C658/C558): Heating roller temperature sensor1 (TEMS/1) • C3825 (bizhub C458): Heating roller thermistor1 (TH1) • C3826: Heating roller thermistor/2 (TH2) • IH power supply (IHPU) (bizhub C658/C558 only) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary. (bizhub C658/C558)
4. Check the fusing unit-MFPB CN12E for proper connection and correct or change as necessary. (bizhub C458)
5. Check the connector between TEMS/1-relay CN109-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
6. Check the connector between TEMS/2-relay CN138-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
7. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
8. Replace IHPU. (bizhub C658/C558 only)

9. MFPB F12E conduction check
10. Replace MFPB.

3.14.9 C3922, C3925, C3926 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3922: Fusing sensor wire breaks detection (Edge of the heating roller) • C3925: Fusing sensor wire breaks detection (Main of the heating roller) • C3926: Fusing sensor wire breaks detection (Center of the heating roller)
Rank	A
Trouble detection condition	• C3922: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor2 (TEMS/2) or heating roller thermistor1 (TH1) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3925: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor1 (TEMS/1) voltage does not increase by predetermined steps (temperature rise) within a predetermined period of time. • C3926: After a predetermined period of time after the warm-up stage is started, the heating roller thermistor2 (TH2) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3922 (bizhub C658): Heating roller temperature sensor2 (TEMS/2) • C3922 (bizhub C558/C458): Heating roller thermistor1 (TH1) • C3925 (bizhub C658/C558): Heating roller temperature sensor1 (TEMS/1) • C3925 (bizhub C458): Heating roller thermistor1 (TH1) • C3926: Heating roller thermistor2 (TH2) • IH power supply (IHPU) (bizhub C658/C558/C458 only) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary. (bizhub C658/C558)
4. Check the fusing unit-MFPB CN12E for proper connection and correct or change as necessary. (bizhub C458)
5. Check the connector between TEMS/1-relay CN109-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
6. Check the connector between TEMS/2-relay CN138-MFPB CN15E for proper connection and correct as necessary. (bizhub C658/C558)
7. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
8. Replace IHPU. (bizhub C658/C558 only)
9. MFPB F12E conduction check
10. Replace MFPB.

3.14.10 C392A (bizhub C658/C558/C458)

(1) Contents

Trouble type	C392A: Heating roller temperature sensor contamination (Main of the heating roller)
Rank	C
Trouble detection condition	During waiting after a predetermined period of time after the warm-up stage terminates, the temperature detected by the heating roller thermostat3 (TH3) exceeds that detected by the heating roller temperature sensor1 (TEMS/1) above a predetermined temperature, and this state continues for a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller temperature sensor1 (TEMS/1) • Heating roller thermistor3 (TH3) • MFP board (MFPB)

(2) Procedure

1. Wipe the TEMS/1 clean of dirt if any.
   <Cleaning procedure>
   - Clear away a dirt or a foreign object on the sensor with a cotton swab.
   - When a dirt is left even if you cleaned the sensor by above procedure, clear away a dirt or a foreign object on the sensor using a cotton swab dampened with the alcohol. And, wipe off the sensor with a dry cotton swab afterwards.
2. Check the TEMS/1 for installed position and proper connector connection.
3. Check the connection of the fusing unit.
4. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary.
5. Check the connector between TEMS/1-relay CN109-MFPB CN15E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace MFPB.

3.14.11 C392B (bizhub C658/C558/C458)

(1) Contents

Trouble type	C392B: Fusing sensor wire breaks detection (Difference of temperature)

Rank	A
Trouble detection condition	The difference between the temperature corrected by the heating roller thermistor1 (TH1) and the temperature detected by the heating roller thermistor2 (TH2) exceeds a predetermined value.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Heating roller thermistor1 (TH1) • Heating roller thermistor2 (TH2) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary. (bizhub C658/C558)
4. Check the fusing unit-MFPB CN12E for proper connection and correct or change as necessary. (bizhub C458)
5. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
6. Replace MFPB.

3.14.12 C3B02, C3B03 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3B02: IH malfunction (CPU) (bizhub C658/C558) • C3B03: IH malfunction (monitor) (bizhub C658/C558)
Rank	A
Trouble detection condition	• C3B02: A failure in communication with the fusing CPU continues for a predetermined period of time. • C3B03: Though the IH heater is OFF, mechanically, the ON status is detected. (Malfunction of IH heater operation)
Trouble isolation	-
Relevant electrical parts	• Fusing unit • IH coil (IHC) • IH power supply (IHPU) • IH magnetic erasing board (IHMEB) • NF board (NFB) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary.
4. Check the connector between MFPB CN13E-NFB CN3 for proper connection and correct as necessary.
5. Check the connector between NFB CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU-IHC for proper connection and correct as necessary.
7. Check the connector between IHC-IHMEB for proper connection and correct as necessary.
8. Replace the fusing unit.
9. Replace IHC.
10. Replace IHPU.
11. Replace IHMEB.
12. Replace MFPB.
13. Replace NFB.

3.14.13 C3B07, C3B08 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C3B07: IH input power error • C3B08: IH input voltage error
Rank	C3B07: A C3B08: B
Trouble detection condition	C3B07: • While the IH heater was ON, input power stayed at the high voltage power detection value or over for more than the predetermined period of time. • While the IH heater was ON, input power was at the low power detection value or under for more than the predetermined period of time. • While the IH heater was ON, input power was at the high voltage detection value or over for more than the predetermined period of time. • While the IH heater was ON, input power was below the low voltage detection value or under for more than the predetermined period of time. • While the IH heater was ON, inverter power stayed at the upper limit value or over for more than the predetermined period of time. • While the IH heater was ON, output voltage halt was detected.
	C3B08: • While the IH heater was ON, input power was at the high voltage detection value or over for more than the predetermined period of time. • While the IH heater was ON, input voltage was at the low power detection value or under for more than the predetermined period of time.

Trouble isolation	-
Relevant electrical parts	• Fusing unit • IH coil (IHC) • IH power supply (IHPU) • NF board (NFB) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary.
3. Check the connector between NFB CN2-IHPU CN1 for proper connection and correct as necessary.
4. Check the connector between IHPU CN8-MFPB CN3E for proper connection and correct as necessary.
5. Check the marketing area of the fusing unit. If the marketing area is incorrect, replace the fusing unit for proper marketing area.
6. Check the marketing area of IHPU. If the marketing area is incorrect, replace IHPU for proper marketing area.
7. Replace IHC.
8. Replace IHPU.
9. Replace MFPB.
10. Replace NFB.

3.14.14 C3B09 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C3B09: IH communication error
Rank	C
Trouble detection condition	No signal has been received from the fusing CPU a predetermined number of consecutive times.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • IH coil (IHC) • IH power supply (IHPU) • IH magnetic erasing board (IHMEB) • NF board (NFB) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the right door.
3. Check the fusing unit-MFPB CN22E for proper connection and correct or change as necessary.
4. Check the connector between MFPB CN13E-NFB CN3 for proper connection and correct as necessary.
5. Check the connector between NFB CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU-IHC for proper connection and correct as necessary.
7. Check the connector between IHC-IHMEB for proper connection and correct as necessary.
8. Replace the fusing unit.
9. Replace IHC.
10. Replace IHPU.
11. Replace IHMEB.
12. Replace MFPB.
13. Replace NFB.

3.15 C4###

3.15.1 C4091 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C4091: I/F communication error
Rank	C
Trouble detection condition	Communication between the controller control unit and the engine control unit is not completed even after the lapse of a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Replace MFPB.

3.15.2 C40A1, C40A2, C40A3, C40A4, C40C3, C40C5 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• C40A1: Mechanical controller sub-CPU communication error • C40A2: Mechanical controller PF communication data error • C40A3: Mechanical controller PF transmission timeout • C40A4: Mechanical controller PF communication pulse error • C40C3: CTL PDF transmission timeout 1 • C40C5: CTL PDF transmission timeout 2

Rank	C
Trouble detection condition	A CPU communication error is detected.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.15.3 C4101 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C4101: Polygon motor's rotation trouble
Rank	B
Trouble detection condition	• The polygon motor fails to turn stably even after the lapse of a given period of time after activating and changing rotation speed the polygon motor. • Motor lock signal detects HIGH for a given period time consecutively during the polygon motor is rotating.
Trouble isolation	-
Relevant electrical parts	• PH unit • Front side board (FRB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between the PH unit-FRB CN17 for proper connection and correct as necessary. (bizhub C368/C308/C258)
2. Check the connector between the PH unit-FRB CN5 for proper connection and correct as necessary. (bizhub C658/C558/C458)
3. Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4. FRB fuse conduction check
5. Replace FRB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.15.4 C4501 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C4501: Laser malfunction
Rank	B
Trouble detection condition	• SOS signal is not detected even after the lapse of a given period of time after starting the laser output. • SOS signal is not detected for a given period of time during printing or IDC sensor adjustment.
Trouble isolation	-
Relevant electrical parts	• PH unit • MFP board (MFPB)

(2) Procedure

1. Check the connector between the PH unit-relay CN63-MFPB CN20E for proper connection and correct as necessary.
2. Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.16 C5### (bizhub C368/C308/C258)

3.16.1 C5102, C5103 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C5102: Transport motor failure to turn • C5103: Transport motor turning at abnormal timing
Rank	B
Trouble detection condition	• C5102: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C5103: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Transport motor (M1) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M1-MFPB CN8E for proper connection and correct as necessary.
2. Check the loading status of the transfer belt drive, and correct the error as necessary.
3. M1 operation check
   - Control signal: MFPB CN8E-3 (REM), MFPB CN8E-6 (LOCK)
   - Location of electrical component: 2-C

4. Replace M1.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.16.2 C5351 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5351: Power supply cooling fan motor failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Power supply cooling fan (FM1) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM1-relay CN26-MFPB CN24EA for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM1 operation check
   - Control signal: MFPB CN24EA-9 (REM), MFPB CN24EA-11 (LOCK)
   - Location of electrical component: 25-J
4. Replace FM1.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.16.3 C5355 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5355: Toner cartridge cooling fan failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge cooling fan (FM4) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM4-relay CN157-MFPB CN15EB for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM4 operation check
   - Control signal: MFPB CN15EB-6 (REM), MFPB CN15EB-8 (LOCK)
   - Location of electrical component: 9-C
4. Replace FM4.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.16.4 C5360 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5360: Clean unit fan failure to turn (When CU-101 is installed)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Exhaust fan/1 (FM14) • Exhaust fan/2 (FM15) • Suction fan (FM16) • Clean unit drive board (CUDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between CUDB CN1-MFPB CN32E for proper connection and correct as necessary.
2. Check the connector between FM14-CUDB CN3, FM15-CUDB CN2, FM16-relay CN183-CUDB CN4 for proper connection and correct as necessary.
3. Check the fan for possible overload and correct as necessary.
4. FM14, FM15, FM16 operation check
   - Load check: Check code42, Multi code 4
   - Control signal: CUDB CN3 (FM14), CUDB CN2 (FM15), CUDB CN4 (FM16)
   - Location of electrical component: 14-X
5. Replace the defective fan. (FM14 / FM15 / FM16)
6. Replace CUDB.
7. MFPB ICP14E conduction check

8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.16.5 C5370 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5370: Rear side cooling fan failure to turn
Rank	C
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Rear side cooling fan (FM3) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM3-relay CN301-MFPB CN13 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM3 operation check
   - Control signal: MFPB CN13-3 (LOCK), MFPB CN13-4 (REM)
   - Location of electrical component: 20-C
4. Replace FM3.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)

3.16.6 C5501 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5501: AC signal abnormality
Rank	C
Trouble detection condition	The zero cross signal is not input during fusing phase control.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • DC power supply (DCPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the fusing unit and DCPU for proper connection and correct or change as necessary.
3. Replace the fusing unit.
4. Replace MFPB.
5. Replace DCPU.

3.16.7 C5601 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5601: Engine control malfunction
Rank	C
Trouble detection condition	Engine control malfunction is detected with port monitor control.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Rewrite the firmware.
3. Replace MFPB.

3.16.8 C5603 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5603: Front side board communication error
Rank	C
Trouble detection condition	Communication error is detected in front side board.
Trouble isolation	-
Relevant electrical parts	• Front side board (FRB) • PH unit • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between FRB CN5-PH unit for proper connection and correct as necessary.
3. Check the connector between FRB CN2-MFPB CN10E for proper connection and correct as necessary.
4. Replace FRB.
5. Replace the PH unit.
6. MFPB ICP8E conduction check
7. Replace MFPB.

3.16.9 C5604 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5604: PH configuration fault
Rank	C
Trouble detection condition	A disagreement in PH unit configuration is detected.
Trouble isolation	-
Relevant electrical parts	• PH unit • MFP board (MFPB)

(2) Procedure

1. Check the type of the installed PH unit and replace it if it is a wrong one.
2. Check the connector between the PH unit-MFPB for proper connection and correct as necessary.
3. Replace MFPB.

3.16.10 C5605, C5606 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C5605: Engine communication data error • C5606: Engine transmission timeout
Rank	C
Trouble detection condition	A communication error is detected between CPUs.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. MFPB ICP8E conduction check
4. Replace MFPB.

3.16.11 C5610 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5610: PH LD drive communication error
Rank	C
Trouble detection condition	LD drive write data and read data disagree with each other a predetermined number of consecutive times.
Trouble isolation	-
Relevant electrical parts	• Front side board (FRB) • PH unit • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between FRB CN5-PH unit for proper connection and correct as necessary.
3. Check the connector between FRB CN2-MFPB CN10E for proper connection and correct as necessary.
4. Replace FRB.
5. Replace the PH unit.
6. Replace MFPB.

3.16.12 C5611 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C5611: PH EEPROM communication error
Rank	C
Trouble detection condition	Results of two readings of the EEPROM data disagree with each other.
Trouble isolation	-
Relevant electrical parts	• Front side board (FRB) • PH unit • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between FRB CN5-PH unit for proper connection and correct as necessary.
3. Check the connector between FRB CN2-MFPB CN10E for proper connection and correct as necessary.
4. Replace FRB.
5. Replace the PH unit.
6. Replace MFPB.

3.17 C5### (bizhub C658/C558/C458)

3.17.1 C5102, C5103 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C5102: Transport motor's failure to turn • C5103: Transport motor's turning at abnormal timing
Rank	B
Trouble detection condition	• C5102: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C5103: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Transport motor (M1) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M1-MFPB CN14E for proper connection and correct as necessary.
2. Check the loading status of the transfer belt drive, and correct the error as necessary.
3. M1 operation check
   - Control signal: MFPB CN14E-3 (REM), MFPB CN14E-6 (LOCK)
   - Location of electrical component: 1-C
4. Replace M1.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.2 C5304 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5304: Fusing power supply cooling fan's failure to turn (bizhub C658/C558)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Fusing power supply cooling fan (FM12) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM12-relay CN146-MFPB CN15E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM12 operation check
   - Control signal: MFPB CN15E<A>-16 (REM), MFPB CN15E<A>-18 (LOCK)
   - Location of electrical component: C658/C558 16-C, C458 20-C
4. Replace FM12.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.3 C5306 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5306: IH coil cooling fan's failure to turn (bizhub C658/C558)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• IH coil cooling fan (FM7) • Expansion control board (EXCB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM7-relay CN77-EXCB CN3 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM7 operation check
   - Control signal: EXCB CN3-1 (REM), EXCB CN3-3 (LOCK)

- Location of electrical component: 26-T

4. Replace FM7.
5. Replace EXCB.
6. MFPB F6E conduction check
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.4 C5351 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5351: Power supply cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Power supply cooling fan (FM1) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM1-relay CN26-MFPB CN31E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM1 operation check
   - Control signal: MFPB CN31E<A>-9 (REM), MFPB CN31E<A>-11 (LOCK)
   - Location of electrical component: 23-J
4. Replace FM1.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.5 C5355 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5355: Toner cartridge cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge cooling fan (FM4) • Expansion control board (EXCB) • MFP board (MFPB)

(2) Procedure

(a) bizhub C658/C558

1. Check the connector between FM4-relay CN78-EXCB CN10 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM4 operation check
   - Control signal: EXCB CN10-1 (REM), EXCB CN10-3 (LOCK)
   - Location of electrical component: 27-T
4. Replace FM4.
5. Replace EXCB.
6. MFPB F6E or F8E conduction check
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

(b) bizhub C458

1. Check the connector between FM4-relay CN111-MFPB CN16E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM4 operation check
   - Control signal: MFPB CN16E-2 (REM), MFPB CN16E-3 (LOCK)
   - Location of electrical component: 26-C
4. Replace FM4.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.6 C5358 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5358: Fusing power supply cooling fan’s failure to turn (bizhub C458)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-

Relevant electrical parts	• Fusing power supply cooling fan (FM12) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM12-relay CN146-MFPB CN15E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM12 operation check
   - Control signal: MFPB CN15E<A>-16 (REM), MFPB CN15E<A>-18 (LOCK)
   - Location of electrical component: C658/C558 16-C, C458 20-C
4. Replace FM12.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.7 C5360 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5360: Clean unit fan's failure to turn (When CU-102 is installed)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Exhaust fan1 (FM14) • Exhaust fan2 (FM15) • Clean unit drive board (CUDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between CUDB CN1-MFPB CN29E for proper connection and correct as necessary.
2. Check the connector between FM14-relay CN200-CUDB CN2 for proper connection and correct as necessary.
3. Check the connector between FM15-relay CN201-CUDB CN3 for proper connection and correct as necessary.
4. Check the fan for possible overload and correct as necessary.
5. FM14 operation check
   - Load check: Check code42, Multi code 9
   - Control signal: CUDB CN2-1 (REM), CUDB CN2-3 (LOCK)
   - Location of electrical component: 15-K
6. FM15 operation check
   - Load check: Check code42, Multi code 9
   - Control signal: CUDB CN3-1 (REM), CUDB CN3-3 (LOCK)
   - Location of electrical component: 15-K
7. Replace the defective fan. (FM14 / FM15)
8. Replace CUDB.
9. MFPB F3E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.8 C5361 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5361: UFP exhaust fan's failure to turn
Rank	C
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• UFP exhaust fan1 (FM17) • UFP exhaust fan2 (FM18) (bizhub C658/C558 only) • Expansion control board (EXCB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM17-relay CN801-relay CN823-EXCB CN9 for proper connection and correct as necessary.
2. Check the connector between FM18-relay CN802-relay CN823-EXCB CN9 for proper connection and correct as necessary.
3. Check the fan for possible overload and correct as necessary.
4. FM17 operation check
   - Control signal: MFPB CN9-4 (LOCK), MFPB CN9-6 (REM)
   - Location of electrical component: 25-P
5. FM18 operation check
   - Control signal: MFPB CN9-7 (LOCK), MFPB CN9-8 (REM)
   - Location of electrical component: 24-P
6. Replace FM17.
7. Replace FM18.
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.9 C5370 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5370: Rear side cooling fan's failure to turn
Rank	C
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Rear side cooling fan (FM3) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM3-relay CN301-MFPB CN19 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM3 operation check
   - Control signal: MFPB CN19-3 (LOCK), MFPB CN19-4 (REM)
   - Location of electrical component: 20-O
4. Replace FM3.
5. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.17.10 C5501 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5501: AC signal abnormality
Rank	C
Trouble detection condition	The zero cross signal is not input during fusing phase control.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • DC power supply (DCPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the fusing unit, DCPU, and MFPB for proper connection and correct or change as necessary.
3. Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
4. Replace MFPB.
5. Replace DCPU.

3.17.11 C5601 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5601: Engine control malfunction
Rank	C
Trouble detection condition	Engine control malfunction is detected with port monitor control.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Rewrite the firmware.
3. Replace MFPB.

3.17.12 C5603 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5603: Front side board communication error
Rank	C
Trouble detection condition	Communication error is detected in front side board.
Trouble isolation	-
Relevant electrical parts	• Front side board (FRB) • PH unit • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between FRB CN5-PH unit for proper connection and correct as necessary.
3. Check the connector between FRB CN2-MFPB CN8E for proper connection and correct as necessary.
4. Replace FRB.
5. Replace the PH unit.

6. MFPB F10E conduction check
7. Replace MFPB.

3.17.13 C5605, C5606 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C5605: Engine communication data error • C5606: Engine transmission timeout
Rank	C
Trouble detection condition	A communication error is detected between CPUs.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. MFPB F10E conduction check
4. Replace MFPB.

3.17.14 C5610 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C5610: PH LD drive communication error
Rank	C
Trouble detection condition	LD drive write data and read data disagree with each other a predetermined number of consecutive times.
Trouble isolation	-
Relevant electrical parts	• Front side board (FRB) • PH unit • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between FRB CN5-PH unit for proper connection and correct as necessary.
3. Check the connector between FRB CN2-MFPB CN8E for proper connection and correct as necessary.
4. Replace FRB.
5. Replace the PH unit.
6. Replace MFPB.

3.18 C6###

3.18.1 C6001 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C6001: DF related configuration error 1
Rank	C
Trouble detection condition	Inconsistency in the configuration with the installed DF is detected on the main body.
Trouble isolation	-
Relevant electrical parts	• DF control board (DFCB) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Check the type of the installed DF and replace it if it is a wrong one.
2. Check to see the [Service mode] -> [System 2] -> [ADF Settings] is correct. It corrects, when a model is different.
3. Correct the harness connection between DFCB and DSIPB if faulty.
4. Check the connector between DSIPB CN01-MFPB CN22 for proper connection and correct as necessary.
5. Replace DFCB.
6. Replace DSIPB.
7. Replace MFPB.

3.18.2 C6001 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C6001: DF related configuration error 1
Rank	C
Trouble detection condition	Inconsistency in the configuration with the installed DF is detected on the main body.
Trouble isolation	-
Relevant electrical parts	• DF control board (DFCB) • Dual scan image processing board (DSIPB)

	• MFP board (MFPB)

(2) Procedure

1. Check the type of the installed DF and replace it if it is a wrong one.
2. Check the connector between DFCB CN12-relay CN47-MFPB CN24E for proper connection and correct as necessary.
3. Check the connector between DSIPB CN1-MFPB CN24 for proper connection and correct as necessary.
4. Replace DFCB.
5. Replace DSIPB.
6. Replace MFPB.

3.18.3 C6002 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C6002: DF related configuration error 2
Rank	C
Trouble detection condition	Inconsistency in the configuration with the installed DF is detected on the main body.
Trouble isolation	-
Relevant electrical parts	• DF control board (DFCB) • Dual scan image processing board (DSIPB)

(2) Procedure

1. Check the type of the installed DF and replace it if it is a wrong one.
2. Correct the harness connection between DFCB and DSIPB if faulty.
3. Check the connectors of the dual scan image processing board (DSIPB) for proper connection, and correct as necessary. (Direction of the point of contact and connection state of the flat cable in particular)

3.18.4 C6102, C6103 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• C6102: Drive system home sensor malfunction • C6103: Slider over running
Rank	B
Trouble detection condition	C6102: • The scanner home sensor (PS201) is unable to detect the scanner located at its home position. • The scanner home sensor (PS201) is unable to detect a scanner even when the scanner motor (M201) has been driven to move the scanner over the maximum travelling distance. • The scanner home sensor (PS201) detects the scanner when the scanner has moved the maximum travelling distance from the position, at which it blocks the scanner home sensor (PS201).
	C6103: The scanner home sensor (PS201) detects the scanner at its home position during a period of time that begins with the time when a prescan command and a scan preparation command are executed and ends when a home return command is executed.
Trouble isolation	Scanner
Relevant electrical parts	• Scanner home sensor (PS201) • Scanner motor (M201) • Scanner drive board (SCDB) • MFP board (MFPB)

(2) Procedure

1. Correct or change the scanner drive (pulley, gear, belt) if it is faulty.
2. Correct the scanner motor set screw if loose.
3. Adjust [Image Position: Leading Edge] and [Sub Scan Zoom Adj.].
4. Check the connector between M201-SCDB CN4 for proper connection and correct as necessary.
5. Check the connector between PS201-SCDB CN6 for proper connection and correct as necessary.
6. Check the connector between SCDB CN2-MFPB CN12E for proper connection and correct as necessary. (bizhub C368/C308/C258)
7. Check the connector between SCDB CN2-MFPB CN6E for proper connection and correct as necessary. (bizhub C658/C558/C458)
8. PS201 I/O check, sensor check
   - Control signal: SCDB CN6-3 (ON)
   - Location of electrical component: C368/C308/C258 25-P, C658/C558/C458 22-P
9. M201 operation check
   - Control signal: SCDB CN4-1 to 4
   - Location of electrical component: C368/C308/C258 25-P, C658/C558/C458 22-P
10. Replace SCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
11. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

NOTICE
- Link to the wiring diagram (N.1 bizhub C368/C308/C258)
- Link to the wiring diagram (N.2 bizhub C658/C558/C458)

3.18.5 C6104, C6105 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C6104: Back side cleaning home sensor abnormality (initial) (When DF-704 is installed) • C6105: Back side cleaning home sensor abnormality (normal) (When DF-704 is installed)

Rank	B
Trouble detection condition	C6104: • The CIS cleaning sensor (PS7) does not change from H to L even after the lapse of a given period of time after the home position detecting operation is started at the initial operation. • The CIS cleaning sensor (PS7) does not change from L to H even after the lapse of a given period of time after the home position detecting operation is started at the initial operation.
	C6105: At the time of operation other than the initial operation, the CIS cleaning sensor (PS7) error is detected.
Trouble isolation	Scanner
Relevant electrical parts	• CIS cleaning sensor (PS7) • CIS cleaning motor (M5) • DF control board (DFCB)

(2) Procedure

1. Check if the opening and closing guide is firmly closed.
2. Check the connector between M5-DFCB J9 for proper connection and correct as necessary.
3. Check the connector of M5 for proper drive coupling and correct as necessary.
4. Check the connector between PS7-DFCB J13 for proper connection and correct as necessary.
5. PS7 I/O check, sensor check
   - Control signal: DFCB J13-3 (ON)
   - Location of electrical component: DF-704 1-G
6. M5 operation check
   - Control signal: DFCB J9-1 to 4
   - Location of electrical component: DF-704 6-G
7. Replace M5.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.2 DF-704)

3.18.6 C6104, C6105 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C6104: Back side cleaning home sensor abnormality (initial) • C6105: Back side cleaning home sensor abnormality (normal)
Rank	B
Trouble detection condition	C6104: • The back side cleaning home sensor (PS9) does not change from H to L even after the lapse of a given period of time after the home position detecting operation is started at the initial operation. • The back side cleaning home sensor (PS9) does not change from H to L even after the lapse of a given period of time after the home position detecting operation is started at the initial operation.
	C6105: At the time of operation other than the initial operation, the back side cleaning home sensor (PS9) error is detected.
Trouble isolation	Scanner
Relevant electrical parts	• Back side cleaning home sensor (PS9) • Back side cleaning motor (M7) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M7-DFCB CN14 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS9-relay CN121-DFCB CN18 for proper connection and correct as necessary.
4. PS9 I/O check, sensor check
   - Control signal: DFCB CN18-6 (ON)
   - Location of electrical component: 3 to 4-C
5. M7 operation check
   - Control signal: DFCB CN14-6 to 9
   - Location of electrical component: 6-C
6. Replace M7.
7. DFCB ICP4 or ICP8 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.18.7 C6704 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C6704: Image input time out
Rank	C
Trouble detection condition	Image data is not input from the scanner to the MFP board (MFPB).
Trouble isolation	Scanner
Relevant electrical parts	• MFP board (MFPB) • CCD board (CCDB)

(2) Procedure

1. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check] -> [Scanner -> Memory], and conduct the memory bus function.
2. Check the connector between CCDB CN3-MFPB CN1 for proper connection and correct as necessary. (bizhub C368/C308/C258)
3. Check the connector between CCDB PJ3-MFPB CN9 for proper connection and correct as necessary. (bizhub C658/C558/C458)
4. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.18.8 C6751 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C6751: CCD gain adjustment failure
Rank	B
Trouble detection condition	• The adjustment value is 0 or 255 during a CCD clamp adjustment. • The peak value of the output data is 64 or less during a CCD gain adjustment.
Trouble isolation	Scanner
Relevant electrical parts	• LED exposure unit • CCD board (CCDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between CCDB CN3-MFPB CN1 for proper connection and correct as necessary. (bizhub C368/C308/C258)
2. Check the connector between CCDB PJ3-MFPB CN9 for proper connection and correct as necessary. (bizhub C658/C558/C458)
3. Check for possible extraneous light and correct as necessary.
4. Clean the lens, mirrors, CCD surface, and shading sheet if dirty.
5. Correct reflective mirror of the scanner if faulty, or change scanner mirror.
6. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.18.9 C6752 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C6752: ASIC clock input error (front side)
Rank	C
Trouble detection condition	When starting the machine, verification on reading and writing the predetermined value for image processing ASIC on CCD board (CCDB) was conducted, and verification failure was detected.
Trouble isolation	-
Relevant electrical parts	• CCD board (CCDB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of CCDB if faulty.
2. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.18.10 C6753 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C6753: ASIC clock input error (back side) (When DF-704 is installed)
Rank	C
Trouble detection condition	When starting the machine, verification on reading and writing the predetermined value for image processing ASIC on dual scan image processing board (DSIPB) was conducted, and verification failure was detected.
Trouble isolation	-
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between DFCB and DSIPB if faulty.
2. Correct the harness connection between DSIPB CN01-MFPB CN22 if faulty.
3. Replace CIS.
4. Replace DSIPB.
5. Replace MFPB.

3.18.11 C6753 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C6753: ASIC clock input error (back side)
Rank	C

Trouble detection condition	When starting the machine, verification on reading and writing the predetermined value for image processing ASIC on dual scan image processing board was conducted, and verification failure was detected.
Trouble isolation	-
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between DSIPB CN1-MFPB CN24 if faulty.
3. Replace CIS.
4. Replace DSIPB.
5. Replace MFPB.

3.18.12 C6754, C6755 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C6754: CIS clamp adjustment failure (When DF-704 is installed) • C6755: CIS gain adjustment failure (When DF-704 is installed)
Rank	B
Trouble detection condition	• C6754: After the gain adjustment is performed at the start-up, the CIS clamp adjustment value is too high or too low. • C6755: After the gain adjustment is performed at the start-up, the peak value of the output data is lower than a given value.
Trouble isolation	Scanner
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • CIS power supply (CISPU) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS and DSIPB if faulty.
2. Correct the harness connection between CIS J222-CISPU J2 if faulty.
3. Check for possible extraneous light and correct as necessary.
4. Clean the back side reading glass and the shading sheet if dirty.
5. Replace CIS.
6. Replace DSIPB.
7. Replace CISPU.
8. Replace MFPB.

3.18.13 C6754, C6755 (bizhub C658/C558/C4588)

(1) Contents

Trouble type	• C6754: CIS clamp adjustment failure • C6755: CIS gain adjustment failure
Rank	B
Trouble detection condition	• C6754: After the gain adjustment is performed at the start-up, the CIS clamp adjustment value is too high or too low. • C6755: After the gain adjustment is performed at the start-up, the peak value of the output data is lower than a given value.
Trouble isolation	Scanner
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • DF power supply (DFPU) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between CIS J102-DFPU CN2 if faulty.
3. Check for possible extraneous light and correct as necessary.
4. Clean the back side reading glass and the shading sheet if dirty.
5. Replace CIS.
6. DFPU ICP1 conduction check.
7. Replace DFPU.
8. Replace DSIPB.
9. Replace MFPB.

3.18.14 C6756 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	C6756: CCD power-supply voltage malfunction
Rank	C

Trouble detection condition	Power is not supplied to CCD after the lapse of a given period of time after the main power switch or power key is turned ON or the machine recovers from the sleep mode.
Trouble isolation	-
Relevant electrical parts	• CCD board (CCDB) • Scanner drive board (SCDB) • DC power supply (DCPU)

(2) Procedure

1. Correct the harness connection between CCDB CN5-SCDB CN5 if faulty. (bizhub C368/C308/C258)
2. Correct the harness connection between CCDB PJ5-SCDB CN5 if faulty. (bizhub C658/C558/C458)
3. Correct the harness connection between SCDB CN1-DCPU CN5 if faulty. (bizhub C368/C308/C258)
4. Correct the harness connection between SCDB CN1-DCPU CN005 if faulty. (bizhub C658/C558/C458)
5. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6. Replace SCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.18.15 C6901, C6902, C6903 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• C6901: DSC board mount failure 1 (When SC-508 is installed) • C6902: DSC board bus check NG1-1 (When SC-508 is installed) • C6903: DSC board bus check NG1-2 (When SC-508 is installed)
Rank	C
Trouble detection condition	• C6901: When MFP detects that DSC board/1 (front side) is not properly installed. • C6902, C6903: When DSC bus check (front side) detects an error.
Trouble isolation	-
Relevant electrical parts	• DSC board/1 (DSCB/1: SC-508) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of DSCB/1 if faulty.
2. Replace DSCB/1.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.18.16 C6911, C6912, C6913 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C6911: DSC board mount failure 2 (When DF-704 + SC-508 is installed) • C6912: DSC board bus check NG2-1 (When DF-704 + SC-508 is installed) • C6913: DSC board bus check NG2-2 (When DF-704 + SC-508 is installed)
Rank	C
Trouble detection condition	• C6911: When MFP detects that DSC board/2 (back side) is not properly installed. • C6912, C6913: When DSC bus check (back side) detects an error.
Trouble isolation	-
Relevant electrical parts	• DSC board/2 (DSCB/2; SC-508) • Dual scan image processing board (DSIPB; DF-704) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of DSCB/2 if faulty.
2. Correct the harness connection of DSIPB if faulty.
3. Replace DSCB/2.
4. Replace DSIPB.
5. Replace MFPB.

3.18.17 C6911, C6912, C6913 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C6911: DSC board mount failure 2 (When SC-508 is installed) • C6912: DSC Bus check NG2-1 (When SC-508 is installed) • C6913: DSC Bus check NG2-2 (When SC-508 is installed)
Rank	C
Trouble detection condition	• C6911: When MFP detects that DSC board2 (back side) is not properly installed. • C6912, C6913: When DSC bus check (back side) detects an error.
Trouble isolation	-
Relevant electrical parts	• DSC board2 (DSCB/2; SC-508) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of DSCB/2 if faulty.
2. Correct the harness connection of DSIPB if faulty.
3. Replace DSCB/2.
4. Replace DSIPB.
5. Replace MFPB.

3.18.18 C6F01, C6F02, C6F03, C6F04, C6F05, C6F07, C6F08, C6F09, C6F0A, C6FFDC, C6FDD (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• C6F01: Scanner sequence trouble 1 • C6F02: Scanner sequence trouble 2 • C6F03: Scanner sequence trouble 3 • C6F04: Scanner sequence trouble 4 • C6F05: Scanner sequence trouble 5 • C6F06: Scanner sequence trouble 6 • C6F07: Scanner sequence trouble 7 • C6F08: Scanner sequence trouble 8 • C6F09: Scanner sequence trouble 9 • C6F0A: Scanner sequence trouble 10 • C6FDC: Scanner sequence trouble DC • C6FDD: Scanner sequence trouble DD
Rank	• CF6F01 to C6F0A: C • C6FDC, C6FDD: B
Trouble detection condition	The original transport interval becomes shorter than the predetermined value due to an original transport control error in original reading in DF.
Trouble isolation	Scanner
Relevant electrical parts	• MFP board (MFPB) • DF control board (DFCB)

(2) Procedure

1. Correct the harness connection between main body and DF if faulty.
2. Replace DFCB. (DF-629 / DF-704 / Dual scan document feeder)
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.19 C8### (bizhub C368/C308/C258)

3.19.1 C8101 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C8101: Before reading pressure welding alienation mechanism (When DF-629 or DF-704 is installed)
Rank	B
Trouble detection condition	<When DF-629 is installed> • During a pressure motion being performed, the document reading sensor (PS4) output does not change from H to L. • During a retraction motion being performed, the document reading sensor (PS4) output does not change from L to H.
	<When DF-704 is installed> • During a pressure motion being performed, the document reading sensor (PS6) output does not change from H to L. • During a retraction motion being performed, the document reading sensor (PS6) output does not change from L to H.
Trouble isolation	-
Relevant electrical parts	<When DF-629 is installed> • Reading roll release motor (M5) • Document reading sensor (PS4) • DF control board (DFCB)
	<When DF-704 is installed> • Reading roller release motor (M4) • Document reading sensor (PS6) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

1. Check the connector between M5-DFCB J18 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS4-DFCB J10 for proper connection and correct as necessary.
4. PS4 I/O check, sensor check
   - Control signal: DFCB J10-3 (ON)
   - Location of electrical component: DF-629 2-G
5. M5 operation check
   - Control signal: DFCB J18-4 to 5

- Location of electrical component: DF-629 2-G

6. Replace M5.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

1. Check the connector between M4-DFCB J18 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-DFCB J10 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: DFCB J10-3 (ON)
   - Location of electrical component: DF-704 2-G
5. M4 operation check
   - Control signal: DFCB J18-4 to 5
   - Location of electrical component: DF-704 1-G
6. Replace M4.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.2 DF-704)

3.19.2 C8107 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C8107: Glass cleaning mechanism trouble (When DF-629 or DF-704 is installed)
Rank	B
Trouble detection condition	<When DF-629 is installed> The document reading glass cleaning sensor (PS12) is not turned ON after the set period of time has elapsed after the glass cleaning motor (M4) is turned ON.
	<When DF-704 is installed> The document reading glass cleaning sensor (PS13) is not turned ON after the set period of time has elapsed after the document reading glass cleaning motor (M6) is turned ON.
Trouble isolation	-
Relevant electrical parts	<When DF-629 is installed> • Glass cleaning motor (M4) • Document reading glass cleaning sensor (PS12) • DF control board (DFCB)
	<When DF-704 is installed> • Document reading glass cleaning motor (M6) • Document reading glass cleaning sensor (PS13) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

1. Check the connector between M4-DFCB J8 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS12-DFCB J15 for proper connection and correct as necessary.
4. PS12 I/O check, sensor check
   - Control signal: DFCB J15-5 (ON)
   - Location of electrical component: DF-629 3-G
5. M4 operation check
   - Control signal: DFCB J8-1 to 4
   - Location of electrical component: DF-629 1 to 2-B
6. Replace M4.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

1. Check the connector between M6-DFCB J8 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS13-DFCB J15 for proper connection and correct as necessary.
4. PS13 I/O check, sensor check
   - Control signal: DFCB J15-5 (ON)
   - Location of electrical component: DF-704 3-G
5. M6 operation check
   - Control signal: DFCB J8-1 to 4
   - Location of electrical component: DF-704 1-B
6. Replace M6.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.2 DF-704)

3.19.3 C8302 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C8302: Cooling fan trouble (When DF-629 or DF-704 is installed)
Rank	B
Trouble detection condition	<When DF-629 is installed> • The lock signal continues to detect H during a given time while the DF cooling fan motor (FM1) is spinning. • The lock signal continues to detect L during a given time while the DF cooling fan motor (FM1) is during halts.
	<When DF-704 is installed> • The lock signal continues to detect H during a given time while the DF cooling fan motor (FM1) is spinning. • The lock signal continues to detect L during a given time while the DF cooling fan motor (FM1) is during halts.
Trouble isolation	-
Relevant electrical parts	<When DF-629 is installed> • DF cooling fan motor (FM1) • DF control board (DFCB)
	<When DF-704 is installed> • DF cooling fan motor (FM1) • DF control board (DFCB)

(2) Procedure

(a) When DF-629 is installed

1. Check the connector between FM1-DFCB J16 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM1 operation check
   - Control signal: DFCB J16-3 (ON)
   - Location of electrical component: DF-629 3-B
4. Replace FM1.
5. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.1 DF-629)

(b) When DF-704 is installed

1. Check the connector between FM1-DFCB J16 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM1 operation check
   - Control signal: DFCB J16-3 (ON)
   - Location of electrical component: DF-704 7-G
4. Replace FM1.
5. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.4.2 DF-704)

3.19.4 C8401 (bizhub C368/C308/C258)

(1) Contents

Trouble type	C8401: Data flash failure
Rank	C
Trouble detection condition	Data flash does not access normally.
Trouble isolation	-
Relevant electrical parts	DF control board (DFCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Check the DFCB connector for proper connection and correct as necessary.
3. Rewrite the firmware.
4. Replace DFCB. (DF-704 / DF-629)

3.20 C8### (bizhub C658/C558/C458)

3.20.1 C8101 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8101: Before reading pressure welding alienation mechanism trouble
Rank	B
Trouble detection condition	• During a pressure motion being performed, the before read sensor (PS6) output does not change from H to L. • During a retraction motion being performed, the before read sensor (PS6) output does not change from L to H.

Trouble isolation	DF
Relevant electrical parts	• Reading roller pressure/retraction motor (M6) • Before read sensor (PS6) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M6-relay CN118-DFCB CN4 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-relay CN120-DFCB CN11 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: DFCB CN11-2 (ON)
   - Location of electrical component: DF 1-C
5. M6 operation check
   - Control signal: DFCB CN4-1 to 2
   - Location of electrical component: DF 10-C
6. Replace M6.
7. DFCB ICP9 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.20.2 C8103 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8103: Lift up mechanism trouble (Upward movement)
Rank	B
Trouble detection condition	The lift up upper sensor (PS2) is not turned ON (unblocked) after a lapse of a given time after the lift-up motor (M5) moves up (is turned forward).
Trouble isolation	DF
Relevant electrical parts	• Lift-up motor (M5) • Lift up upper sensor (PS2) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M5-DFCB CN9 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-DFCB CN6 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: DFCB CN6-3 (ON)
   - Location of electrical component: DF 7-I
5. M5 operation check
   - Control signal: DFCB CN9-1 to 5
   - Location of electrical component: DF 5-C
6. Replace M5.
7. DFCB ICP5 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.20.3 C8106 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8106: Lift up mechanism failure (Downward movement)
Rank	B
Trouble detection condition	The lift up lower sensor (PS3) is not turned ON (unblocked) after a lapse of a given time after the lift-up motor (M5) goes down (is turned backward).
Trouble isolation	DF
Relevant electrical parts	• Lift-up motor (M5) • Lift up lower sensor (PS3) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M5-DFCB CN9 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS3-DFCB CN10 for proper connection and correct as necessary.
4. PS3 I/O check, sensor check
   - Control signal: DFCB CN10-3 (ON)
   - Location of electrical component: DF 10-C
5. M5 operation check
   - Control signal: DFCB CN9-1 to 5
   - Location of electrical component: DF 5-C
6. Replace M5.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.20.4 C8107 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8107: Glass cleaning mechanism trouble
Rank	B
Trouble detection condition	The front side cleaning home sensor (PS18) is not turned ON (unblocked) even after the set period of time has elapsed after the front side cleaning motor (M8) turned ON.
Trouble isolation	DF
Relevant electrical parts	• Front side cleaning motor (M8) • Front side cleaning home sensor (PS18) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M8-DFCB CN14 for proper connection and correct as necessary.
2. Check the connector between PS18-DFCB CN18 for proper connection and correct as necessary.
3. Check the connector of M8 for proper drive coupling and correct as necessary.
4. PS18 I/O check, sensor check
   - Control signal: DFCB CN18-3 (ON)
   - Location of electrical component: DF 3-C
5. M8 operation check
   - Control signal: DFCB CN14-1 to 4
   - Location of electrical component: DF 6-C
6. Replace M8.
7. DFCB ICP8 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.20.5 C8302 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8302: Cooling fan motor's failure
Rank	B
Trouble detection condition	The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning.
Trouble isolation	DF
Relevant electrical parts	• Cooling fan motor (FM) • DF control board (DFCB)

(2) Procedure

1. Check the connector between FM-relay CN115-DFCB CN19 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM operation check
   - Control signal: DFCB CN19-3 (LOCK)
   - Location of electrical component: DF 4-C
4. Replace FM.
5. DFCB ICP10 conduction check.
6. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.20.6 C8401 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8401: Nonvolatile memory error
Rank	C
Trouble detection condition	The EEPROM writing is disabled.
Trouble isolation	DF
Relevant electrical parts	DF control board (DFCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Check the DFCB connector for proper connection and correct as necessary.
3. Rewrite the firmware.
4. Replace DFCB.

3.20.7 C8402 (bizhub C658/C558/C458)

(1) Contents

Trouble type	C8402: Multi feed detection board failure (When UK-501 is installed)
Rank	C
Trouble detection condition	• The AD value went below the predetermined the HI side threshold for two consecutive times. • The AD value went above the predetermined the LOW side threshold for two consecutive times.
Trouble isolation	DF
Relevant electrical parts	• Multi feed detection board/1 (transmitter) (MFDB/1) • Multi feed detection board/2 (receiver) (MFDB/2) • Sensor control board (SCB) • DF control board (DFCB)

(2) Procedure

1. Remove the film stuck on the window of the lower guide assembly.
2. Use the adjustment sheet for double feed detection kit (UK-501), and select [ADF] -> [Multi-Feed DetectionAdj.].
3. Use the misdetected paper, and select [ADF] -> [Multi-Feed DetectionAdj.].
4. Check the connector between MFDB/1-SCB CN104 for proper connection and correct as necessary.
5. Check the connector between MFDB/2-SCB CN103 for proper connection and correct as necessary.
6. Check the connector between SCB CN101-DFCB CN8 for proper connection and correct as necessary.
7. MFDB/1 operation check
   - Control signal: SCB CN104
   - Location of electrical component: DF 11-L
8. MFDB/2 operation check
   - Control signal: SCB CN103
   - Location of electrical component: DF 10-J
9. Replace SCB.
10. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.3 Dual scan document feeder)

3.21 C9###

3.21.1 C9401, C9402 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• C9401: Exposure LED lighting failure • C9402: Exposure LED lighting abnormally
Rank	B
Trouble detection condition	• C9401: The output from the CCD sensor is a predetermined value or less during CCD sensor gain adjustment. • C9402: The average output value of the CCD sensor with the scanner at its standby position is a predetermined value or more at the end of a scan job.
Trouble isolation	Scanner
Relevant electrical parts	• LED exposure unit • Flat cable (LED exposure unit) • CCD board (CCDB) • Scanner drive board (SCDB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between SCDB CN3-LU201 if faulty.
2. Check the connector between SCDB CN2-MFPB CN12E for proper connection and correct as necessary. (bizhub C368/C308/C258)
3. Check the connector between SCDB CN2-MFPB CN6E for proper connection and correct as necessary. (bizhub C658/C558/C458)
4. Check the connector between CCDB CN3-MFPB CN1 for proper connection and correct as necessary. (bizhub C368/C308/C258)
5. Check the connector between CCDB PJ3-MFPB CN9 for proper connection and correct as necessary. (bizhub C658/C558/C458)
6. Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8. Replace SCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
9. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.21.2 C9403, C9404 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• C9403: CIS LED lighting failure (When DF-704 is installed) • C9404: CIS LED lighting abnormally (When DF-704 is installed)
Rank	B
Trouble detection condition	• C9403: At the CIS gain adjustment, the machine detected that the output of the CIS LED is lower than the specified value. • C9404: After a scan job is completed, the machine detected that the average output of the CIS LED is greater than the specified value.
Trouble isolation	Scanner

Relevant electrical parts	• CIS module (CIS) • CIS power supply (CISPU) • Dual scan image processing board (DSIPB) • MFP board (MFPB) • CIS cable

(2) Procedure

1. Check the back side scanning shading shaft for any stain, and clean up it as necessary.
2. Check that the bearing of the back side glass cleaning roller unit is on the standby position.
3. Correct the harness connection between CIS and DSIPB if faulty.
4. Correct the harness connection between CIS J222-CISPU J2 if faulty.
5. Measure the voltage of CISPU J1-1.
   - Control signal: CISPU J1-1 (DC12V)
   - Location of electrical component: DF-704 5-B
6. Measure the voltage of CIS J222-1, J222-2 and J222-5.
   - Control signal: CIS J222-1 (DC5V), CIS J222-2 (DC5V), CIS J222-5 (DC12V)
   - Location of electrical component: DF-704 4-B
7. For any abnormality in the measurement result, replace the CIS cable.
8. Replace CIS.
9. Replace CISPU.
10. Replace DSIPB.
11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.4.2 DF-704)

3.21.3 C9403, C9404 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• C9403: CIS LED lighting failure • C9404: CIS LED lighting abnormally
Rank	B
Trouble detection condition	• C9403: At the CIS gain adjustment, the machine detected that the output of the CIS LED is lower than the specified value. • C9404: After a scan job is completed, the machine detected that the average output of the CIS LED is greater than the specified value.
Trouble isolation	Scanner
Relevant electrical parts	• CIS module (CIS) • DF power supply (DFPU) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between CIS J102-DFPU CN2 if faulty.
3. Replace CIS.
4. DFPU ICP1 conduction check.
5. Replace DFPU.
6. Replace DSIPB.
7. Replace MFPB.

3.22 CA###

3.22.1 CA051, CA052, CA053 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CA051: Standard controller configuration failure • CA052: Controller hardware error • CA053: Controller start failure
Rank	C
Trouble detection condition	• CA051: The controller of the MFP board (MFPB) is faulty. • CA052: A controller hardware error is detected in the network interface. • CA053: A controller start failure is detected in the controller interface.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check to see if the following setting has been correctly made: [Service Mode] -> [System 2] -> [Image Controller Setting].
   If changing the setting, turn OFF the main power switch and turn it ON again after 10 seconds or more.
2. Check the connectors of the MFPB for proper connection and correct as necessary.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23 CC###

3.23.1 CC140 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC140: Trouble related to security
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

NOTE

- **Contact the responsible people of KM before taking some countermeasures.**

3.23.2 CC151, CC152 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CC151: ROM contents error upon startup (MSC) • CC152: ROM contents error upon startup (IR)
Rank	C
Trouble detection condition	A fault is detected in a sequence of ROM contents check of the MFPB during starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the ROM version.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23.3 CC155 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC155: Finisher ROM error (When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, FS-537SD, or JS-506 is installed)
Rank	C
Trouble detection condition	Data of flash ROM of the finishing options is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-
Relevant electrical parts	<When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, or FS-537SD is installed> • FS control board (FSCB)
	<When JS-506 is installed> • JS control board (JSCB)

(2) Procedure

(a) When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, or FS-537SD is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-533 / FS-534/FS-534SD / FS-536/FS-536SD / FS-537/FS-537SD)

(b) When JS-506 is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace JSCB.

3.23.4 CC156 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC156: DF ROM error (bizhub C368/C308/C258 When DF-704 is installed, bizhub C658/C558/C458)
Rank	C
Trouble detection condition	Upgrade of the firmware has not been successful.
Trouble isolation	-
Relevant electrical parts	DF control board (DFCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.

3. Replace DFCB. (DF-629 / DF-704 / Dual scan document feeder)

3.23.5 CC159, CC15A (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CC159: ROM contents error upon startup (DSC1) • CC15A: ROM contents error upon startup (DSC2)
Rank	C
Trouble detection condition	A fault is detected in a sequence of ROM contents check of the DSC board during starting.
Trouble isolation	-
Relevant electrical parts	• DSC board/1 (DSCB/1; SC-508) • DSC board/2 (DSCB/2; bizhub C368/C308/C258 When DF-704 is installed, bizhub C658/C558/C458 only

(2) Procedure

1. Check DSCB/1 or DSCB/2 connector for proper connection and correct as necessary.
2. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
3. Rewrite the firmware.
4. Replace DSCB/1 or DSCB/2.

3.23.6 CC15B (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC15B: Flash ROM error (saddle) (When FS-534SD, FS-536SD, or FS-537SD is installed)
Rank	C
Trouble detection condition	Data of flash ROM of the saddle is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-
Relevant electrical parts	• FS-534SD: SD drive board (SDDB) • FS-536SD, FS-537SD: SD control board (SDCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace SDDB. (FS-534SD only)
4. Replace SDCB. (FS-536SD / FS-537SD) (FS-536SD, FS-537SD only)

3.23.7 CC15C (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC15C: Engine Flash ROM writing error
Rank	C
Trouble detection condition	Data of flash ROM of the engine is determined to be faulty.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23.8 CC163 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC163: ROM contents error (PRT)
Rank	C
Trouble detection condition	The wrong model of firmware is detected in the engine during the initial connection to the engine is being checked.
Trouble isolation	-
Relevant electrical parts	• EEPROM/1 • EEPROM/2 • MFP board (MFPB)

(2) Procedure

1. Rewrite the firmware.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

NOTE

- **When taking the above steps, check whether MFPB is defective or not without replacing the EEPROM.**

1. Turn OFF the main power switch and replace the current MFPB with a new one.
2. Update the firmware.
3. After completing the firmware update, turn OFF and ON the main power switch and check to see that warm-up is started.
4. When the trouble cannot be solved, reinstall the removed MFPB to the original board.

3. If the above actions do not solve the problem, contact KM.

3.23.9 CC164 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC164: ROM contents error (MSC)
Rank	C
Trouble detection condition	• The wrong model of firmware is detected in the MFP board when the main power switch is turned ON. • The machine type information (Machine, Type) registered to the machine differs from the actual machine type.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • eMMC board (eMMC)

(2) Procedure

1. Check the ROM version.
2. Check the machine type information registered and reenter as necessary.
   For details the machine information, see “Entering the machine type information (bizhub C368/C308/C258)” or “Entering the machine type information (bizhub C658/C558/C458)”.
3. Rewrite the firmware.
4. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5. Replace eMMC.
6. If the above actions do not solve the problem, contact KM.

3.23.10 CC170, CC171, CC172, CC173, CC174, CC180, CC181, CC182, CC183, CC184, CC185, CC186 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CC170: Dynamic link error during starting (AP0) • CC171: Dynamic link error during starting (AP1) • CC172: Dynamic link error during starting (AP2) • CC173: Dynamic link error during starting (AP3) • CC174: Dynamic link error during starting (AP4) • CC180: Dynamic link error during starting (LDR) • CC181: Dynamic link error during starting (IBR) • CC182: Dynamic link error during starting (IID) • CC183: Dynamic link error during starting (IPF) • CC184: Dynamic link error during starting (IMY) • CC185: Dynamic link error during starting (SPF) • CC186: Dynamic link error during starting (OAP)
Rank	C
Trouble detection condition	A dynamic link error occurs in the program on the MFP board due to an insufficient memory space available, a ROM fault, or other reason when the main power switch is turned ON.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. If the malfunction code “C-C172” has occurred, access [Service Mode] -> [System 2] -> [Image Controller Setting] and check to see if “Others” is set for image controller.
   If any of these is set, according to the kind of controller, select “Controller 0” or “Controller 1.”
2. If the malfunction code "C-C180" has occurred, check to install the appropriate loadable device driver for an authentication unit which is installed to the MFP.
   When the appropriate loadable device driver is not installed, reinstall the appropriate loadable device driver.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4. If the above actions do not solve the problem, contact KM.

3.23.11 CC190 (bizhub C368/C308/C258)

(1) Contents

Trouble type	CC190: Outline font load error
Rank	C
Trouble detection condition	An error occurred while loading the outline font.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN20, CN26 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN27 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.23.12 CC190 (bizhub C658/C558/C458)

(1) Contents

Trouble type	CC190: Outline font load error
Rank	C
Trouble detection condition	An error occurred while loading the outline font.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk(A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk(B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.23.13 CC191 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC191: Setting parameter load error (LDR)
Rank	C
Trouble detection condition	Upon startup, the processing of the loadable device driver setting data file failed. • RAM disk file creation failed. • Reading from the flash ROM failed. • An error occurred in API of the authentication module.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Reinstall the loadable device driver.
3. Rewrite the firmware.
4. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23.14 CC211 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC211: Authentication device general error
Rank	C
Trouble detection condition	When using the authentication device, authentication data is not to meet the specifications.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

3.23.15 CC212 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC212: User validation error
Rank	C
Trouble detection condition	• An error occurred while validating the user authentication information. • The loadable device driver is not successfully installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. When this trouble code is generated after installing the loadable device driver, check to see if there is any file other than loadable device driver in USB memory used. If there is any file, reinstall the loadable device driver.
2. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
4. Re-register the user authentication information.
5. Replace authentication device.

3.23.16 CC213 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC213: User registration error/Card information setting error
Rank	C
Trouble detection condition	• IC card advanced settings data is not correct when starting-up the authentication device. • Authentication information data is not correct when starting-up the authentication device. • IC card advanced settings data is not correct when setting the IC card advanced settings. • Authentication information data is not correct when setting the IC card advanced settings. • IC card advanced settings data is not correct when registering the authentication information. • Authentication information data is not correct when registering the authentication information. • IC card advanced settings data is not correct when editing the authentication information. • Authentication information data is not correct when editing the authentication information.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
3. Reset the authentication settings. (card type, IC card advanced settings, and etc.)
4. Re-register the user authentication information.

3.23.17 CC214 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC214: User information deletion error
Rank	C
Trouble detection condition	The deletion of the user information is uncompleted.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

3.23.18 CC216 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC216: Acquisition failure of the number of trials/Initialize error of number of authentication
Rank	C
Trouble detection condition	An error occurred during user authentication using optional authentication unit AU-102.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
3. Reset the number of authentication trials.

3.23.19 CC301 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC301: Authentication customize data error
Rank	B
Trouble detection condition	• The master authentication customize data is corrupted upon startup. • Registration of authentication customize data in the main body has failed upon startup.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Reinstall the authentication customize data.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23.20 CC302 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CC302: Authentication customize data version mismatch error
Rank	B
Trouble detection condition	The authentication customize data version is later than the firmware version of the machine.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Rewrite the main body firmware with the latest one and reinstall the authentication customize data.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.23.21 CCC00 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CCC00: Public user account track information error
Rank	B
Trouble detection condition	At the first time of startup, the nonvolatile status is reset incompletely due to any trouble (such as a shut off of the main power).
Trouble isolation	-
Relevant electrical parts	eMMC board (eMMC)

(2) Procedure

1. Replace eMMC. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
   NOTE
   - **Contact Konica Minolta technical support if the eMMC board needs to be replaced.**

3.24 CD###

3.24.1 CD002 (bizhub C368/C308/C258)

(1) Contents

Trouble type	CD002: JOB RAM save error
Rank	C
Trouble detection condition	The error in save of job data to the memory/ hard disk and its read error are detected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN20, CN26 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN27 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.24.2 CD002 (bizhub C658/C558/C458)

(1) Contents

Trouble type	CD002: JOB RAM save error
Rank	C
Trouble detection condition	The error in save of job data to the memory/ hard disk and its read error are detected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk(A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk(B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.24.3 CD004, CD00F, CD020 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• CD004: Hard disk access error (connection failure) • CD00F: Hard disk data transfer error • CD020: Hard disk verify error
Rank	C
Trouble detection condition	• CD004: Unable to communicate between the hard disk and MFP board (MFPB). • CD00F: Data transfer from the hard disk is faulty. • CD020: The data abnormality is detected by the hard disk verify check.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN20, CN26 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN27 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.24.4 CD004, CD00F, CD020 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• CD004: Hard disk access error (connection failure) • CD00F: Hard disk data transfer error • CD020: Hard disk verify error
Rank	C
Trouble detection condition	• CD004: Unable to communicate between the hard disk and MFP board (MFPB). • CD00F: Data transfer from the hard disk is faulty. • CD020: The data abnormality is detected by the hard disk verify check.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk(A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk(B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

3.24.5 CD010 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD010: Hard disk unformat
Rank	C
Trouble detection condition	Unformatted hard disk is connected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Format the hard disk.
2. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.6 CD011 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD011: Hard disk out of specifications mounted
Rank	C
Trouble detection condition	A hard disk that falls outside the specifications is connected.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.
2. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))

3.24.7 CD012 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD012: Mount error due to hard disk being unformatted
Rank	C
Trouble detection condition	• The hard disk is not logically formatted after the whole data in the hard disk has been deleted by overwriting. • The hard disk that has replaced an old one is not logically formatted.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Logically format the hard disk and then upgrade the firmware.
2. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))

3.24.8 CD013, CD014 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD013: HDD mirroring error master CD014: HDD mirroring error slave
Rank	A
Trouble detection condition	CD013: A R/W error occurs in the master drive during mirroring. CD014: A R/W error occurs in the slave drive during mirroring.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild] and perform the function.

3.24.9 CD015 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD015: HDD mirroring error master slave
Rank	A
Trouble detection condition	A R/W error occurs in both drives during mirroring.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Replace both hard disk (A) and hard disk (B) with new ones. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform physical format.
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform logical format.
5. If HDD Data Backup has previously been performed, select [Service Mode] -> [Enhanced Security] -> [HDD Data Backup] -> [Restore] and perform the function.
6. If HDD Data Backup has not been performed previously, install voice data, etc.

3.24.10 CD016 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD016: HDD mirroring error master (rebuild)
Rank	A
Trouble detection condition	A R/W error occurs in the master drive during HDD Mirroring Rebuild.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A))

	• Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON. If no problems are encountered, HDD Mirroring Rebuild is automatically performed.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform physical format.
5. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform logical format.
6. If HDD Data Backup has previously been performed, select [Service Mode] -> [Enhanced Security] -> [HDD Data Backup] -> [Restore] and perform the function.
7. If HDD Data Backup has not been performed previously, install voice data, etc.

3.24.11 CD017 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD017: HDD mirroring error slave (rebuild)
Rank	A
Trouble detection condition	A R/W error occurs in the slave drive during HDD Mirroring Rebuild.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON. If no problems are encountered, HDD Mirroring Rebuild is automatically performed.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild] and perform the function.

3.24.12 CD030 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD030: Hard disk management information reading error
Rank	C
Trouble detection condition	The machine fails to read administrative information data saved in the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

3.24.13 CD041, CD042, CD043, CD044, CD045, CD046 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD041, CD042, CD043, CD044, CD045, CD046: HDD command execution error
Rank	C
Trouble detection condition	The error occurred inside the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.
2. Format the hard disk.
3. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))

3.24.14 CD047, CD048, CD049, CD04A, CD04B (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD047, CD048, CD049, CD04A, CD04B: HDD SCSI library error
Rank	C
Trouble detection condition	The error occurred inside the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.
2. Format the hard disk.
3. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))

3.24.15 CD050 (bizhub C368/C308/C258)

(1) Contents

Trouble type	CD050: Hard disk recovery timeout
Rank	C
Trouble detection condition	The hard disk fails to recover from the power save mode within the predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN20, CN26 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN27 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Format the hard disk.
5. Replace the hard disk. (HDD (A) / HDD (B))

3.24.16 CD050 (bizhub C658/C558/C458)

(1) Contents

Trouble type	CD050: Hard disk recovery timeout
Rank	C
Trouble detection condition	The hard disk fails to recover from the power save mode within the predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk(A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk(B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Format the hard disk.
5. Replace the hard disk. (HDD (A) / HDD (B))

3.24.17 CD110 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD110: Wireless LAN destination initialization error
Rank	C
Trouble detection condition	When an initialization error occurred on the settings of the wireless LAN in the upgrade kit (UK-212/UK-215).
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Check the UK-212 or UK-215 connector for proper connection and correct as necessary.
2. Rewrite the firmware.
3. bizhub C368/C308/C258: Reinstall UK-212 or UK-215.
   bizhub C658/C558/C458: Reinstall UK-212 or UK-215.

3.24.18 CD201, CD202, CD203 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CD201: File memory mounting error • CD202: Memory capacity discrepancy • CD203: Memory capacity discrepancy 2
Rank	C
Trouble detection condition	CD201: • The file memory is not mounted. • The file has any abnormality.
	CD202: • File memory capacity on the MFP board (MFPB) is not enough. • File memory capacity necessary for duplex printing is not enough.

	CD203: File memory capacity on the MFP board (MFPB) is not enough.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Memory board (MEMB; UK-211) (bizhub C368/C308/C258 only)

(2) Procedure

1. Check to see if MEMB on MFPB is installed correctly. (bizhub C368/C308/C258 only)
2. Replace MEMB on MFPB. (bizhub C368/C308/C258 only)
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.19 CD211, CD212 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CD211: PCI-SDRAM DMA operation failure • CD212: Compression/extraction timeout detection
Rank	C
Trouble detection condition	• CD211: Hardware related to the transfer of memory image of the MFP board (MFPB) fails to respond. • CD212: Hardware related to the BTC compression function of the MFP board (MFPB) fails to respond.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.20 CD241, CD242 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD241: Encryption ASIC setting error CD242: Encryption ASIC mounting error
Rank	C
Trouble detection condition	CD241: Initialization error of the encrypted ASIC is detected during the machine is starting. CD242: The faulty of the installation of encrypted ASIC is detected during the machine is starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the MFP board connector for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.21 CD252 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD252: No relay board for IC-416 mounting at IC-416 mount setting
Rank	C
Trouble detection condition	EFI relay circuit boards (VI-508 or VI-510) are not mounted when the IC-416 is set to mount setting at Service Mode.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • EFI relay board (VI-508 or VI-510)

(2) Procedure

1. If the IC-416 is not mounted, access [Service Mode] -> [System 2] -> [Image Controller Setting] and check to see if “Controller 0” is set for image controller.
2. Check the EFI relay board (VI-508 or VI-510) connector for proper connection and correct as necessary.
3. Replace EFI relay board (VI-508 or VI-510).
4. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.22 CD261 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD261: USB host board failure
Rank	C
Trouble detection condition	• When a failure is detected in USB host board included in the local interface kit. • Non-standard USB device is connected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • USB host board (EK-608) • USB host board (EK-609)

(2) Procedure

1. Check the operation with another USB device.
2. Check the USB host board connector for proper connection and correct as necessary.
3. Replace the USB host board.
4. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.23 CD262 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD262: Extension network adapter installation error
Rank	C
Trouble detection condition	• When the 2nd network card settings is set to “Set” but the upgrade kit (UK-212/UK-215) is not installed. • Upgrade Kit (UK-212/UK-215) is faulty.
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Check the settings of [Service Mode] -> [Network Settings] -> [2nd Network Setting] -> [2nd network card settings].
2. Check the UK-212 or UK-215 connector for proper connection and correct as necessary.
3. Rewrite the firmware.
4. bizhub C368/C308/C258: Reinstall UK-212 or UK-215.
   bizhub C658/C558/C458: Reinstall UK-212 or UK-215.

3.24.24 CD271 (bizhub C368/C308/C258)

(1) Contents

Trouble type	CD271: i-Option activated and additional memory not installed
Rank	C
Trouble detection condition	While the i-Option is activated, the additional memory included in UK-211 is not installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Memory board (MEMB; UK-211)

(2) Procedure

1. Check MEMB for proper connection and correct as necessary.
2. Replace MEMB.
3. Replace MFPB.

3.24.25 CD271 (bizhub C658/C558/C458)

(1) Contents

Trouble type	CD271: The memory cannot be recognized with the i-Option activated
Rank	C
Trouble detection condition	While the i-Option is activated, the memory on an MFPB cannot be recognized.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check MFPB for proper connection and correct as necessary.
2. Replace MFPB.

3.24.26 CD272 (bizhub C368/C308/C258)

(1) Contents

Trouble type	CD272: i-Option activated and additional memory and HDD not installed
Rank	C
Trouble detection condition	While the i-Option is activated, the additional memory included in UK-211 and the HDD are not installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Memory board (MEMB; UK-211)

(2) Procedure

1. Check MEMB for proper connection and correct as necessary.
2. Access [Service Mode] -> [System 2] -> [HDD] and check to see if “Installed” is selected.
3. Replace MEMB.
4. Replace the hard disk (A).
5. Replace MFPB.

3.24.27 CD272 (bizhub C658/C558/C458)

(1) Contents

Trouble type	CD272: i-Option activated and HDD not installed
Rank	C
Trouble detection condition	While the i-Option is activated, the hard disk is not installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A))

(2) Procedure

1. Access [Service Mode] -> [System 2] -> [HDD] and check to see if “Installed” is selected.
2. Replace the hard disk (A).
3. Replace MFPB.

3.24.28 CD2D1

(1) Contents

Trouble type	CD2D1: VLAN setting configuration error
Rank	B
Trouble detection condition	At start up of the MFP, the reception condition of VLAN setting activation is not satisfied.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • eMMC board (eMMCB)

(2) Procedure

1. Check if all VLAN setting reception conditions are satisfied.

- A 4GB memory has been installed.
- An HDD has been installed.
- If the IC card reader is connected, the LDD of AU-201S has been installed.
- The software SW12 (bit1) has been set to "PKI unsupported" (0x00). (PKI mode setting unavailable)
- Service Mode -> [Billing Setting] -> [Management Function Choice] is set to "Not installed".
- Utility -> [Administrator Settings] -> [Network Settings] -> [TCP/IP Settings] is set to "ON".
- Utility -> [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration] is set to "Wireless Only".

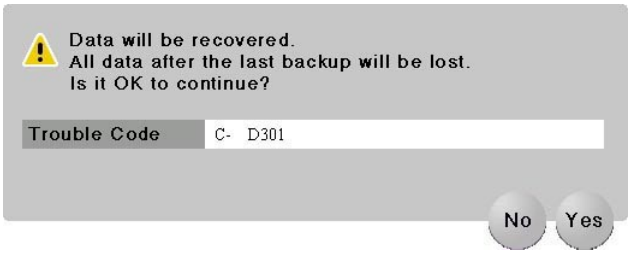
3.24.29 CD3## (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD3##: Nonvolatile data error
Rank	C
Trouble detection condition	CD3##: Abnormality is detected by the abnormal check of each nonvolatile data.
Trouble isolation	-

(2) Action

1. Touch [Recover Data] displayed at the lower right portion on the trouble screen.
2. A screen confirming whether to recover data appears.



3. Select [Yes].
4. The screen will be shifted to the data restoration screen to perform data restoration.
   NOTE
   - **When the restoration is performed in a short time, data restoration screen may not be displayed.**
5. Check the message which indicates that the data restoration was successfully conducted. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
   NOTE
   - **In case it failed to restore data, return to the trouble code screen.**

NOTE

- **Nonvolatile data backup will be automatically performed every hour. Backup can also be performed manually with the following setting. [Service Mode] -> [Enhanced Security] -> [Memory Data Backup]**

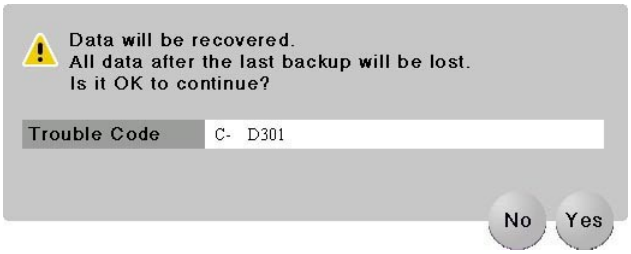
3.24.30 CD313 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD313: TPM key data error
Rank	C
Trouble detection condition	A fault occurs in the TPM key data.
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Touch [Recover Data] displayed at the lower right portion on the trouble screen.
2. A screen confirming whether to recover data appears.



3. Select [Yes].
4. The screen will be shifted to the data restoration screen to perform data restoration.
   NOTE
   - **When the restoration is performed in a short time, data restoration screen may not be displayed.**
5. Check the message which indicates that the data restoration was successfully conducted. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
   NOTE
   - **In case it failed to restore data, return to the trouble code screen.**
6. Replace the current MFPB with a new one. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

NOTE

- **Nonvolatile data backup will be automatically performed every hour. Backup can also be performed manually with the following setting. [Service Mode] -> [Enhanced Security] -> [Memory Data Backup]**

3.24.31 CD38E (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD38E: Nonvolatile data save error (SPI-Flash)
Rank	C
Trouble detection condition	The "ISW download flag" saved in the SPI-Flash has an illegal value.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Rewrite the firmware.
2. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.

3.24.32 CD390 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD390: Nonvolatile data checksum error
Rank	C
Trouble detection condition	C-D390 code is normally shown when the MFP board is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Wait until “Recover Data” appears. (MFP will reboot maximum 2 times by itself, it may take 5 minutes.) Touch the “Recover Data” button and follow the instructions that appear on the control panel to restore (backup) data.

3.24.33 CD391 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD391: Nonvolatile data save error (eMMC)
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

NOTE

- **Contact the responsible people of KM before taking some countermeasures.**

3.24.34 CD392 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD392: Nonvolatile data save error (EEPROM)
Rank	C
Trouble detection condition	The EEPROM is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	• EEPROM/1 • EEPROM/2

(2) Procedure

1. Replace the following components with new ones.
   When the transfer belt unit and the fusing unit have been replaced with new ones, perform [New Release] in the service mode. When the transfer roller has been replaced with a new one, perform [Counter clear].
   - Developing unit/Y,M,C,K
   - Drum unit/Y,M,C,K
   - Toner cartridge/Y,M,C,K
   - Transfer belt unit
   - Fusing unit
   - Transfer roller
   - Feed roller, pick-up roller, separation roller (including options)
2. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
3. Set the various setting values in the service mode again.

3.24.35 CD3A0 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD3A0: Counter error
Rank	C
Trouble detection condition	The total counter values provided by the MFP board and the eMMC board are different.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • eMMC board (eMMC)

(2) Procedure

1. If this error occurs temporarily due to the use of the board removed from another machine, reinstall the original board.
2. Replace the current MFPB with a new one.
3. Replace the current eMMC with a new one.

3.24.36 CD3C0 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD3C0: New board detection
Rank	C
Trouble detection condition	The board is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Wait until “Recover Data” appears. (MFP will reboot maximum 2 times by itself, it may take 5 minutes.) Touch the “Recover Data” button and follow the instructions that appear on the control panel to restore (backup) data.

3.24.37 CD401, CD402, CD403, CD404, CD405, CD406, CD407, CD411, CD412, CD413 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CD401: NACK command incorrect • CD402: ACK command incorrect • CD403: Checksum error • CD404: Receiving packet incorrect • CD405: Receiving packet analysis error • CD406: ACK receiving timeout • CD407: Retransmission timeout • CD411: Touch panel board error • CD412: Touch panel type mismatch • CD413: Electrostatic touch panel operation mode error

Rank	C
Trouble detection condition	When abnormality is found in the communication of controller.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check whether there is a strong electromagnetic noise source near the main body.
2. Check the connectors on MFPB for proper connection and correct as necessary.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.38 CD601, CD602, CD603 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD601, CD602, CD603: Trouble related to security
Rank	-
Trouble detection condition	-
Trouble isolation	-

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch. If the above actions do not solve the problem, contact KM.

3.24.39 CD701, CD702, CD703 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CD701: Mechanical controller flash ROM writing error • CD702: Mechanical controller flash ROM device error • CD703: FW download communication fault
Rank	C
Trouble detection condition	CD701: A mechanical controller flash ROM writing sequence is interrupted in its mid-operation due to, for example, power being shut off.
	CD702: An erase error or other device fault occurs during mechanical controller flash ROM writing.
	CD703: Irregular data is received during FW downloading. • Places are changed in the order of write completion pulses. • A write completion pulse is received for a memory for which binary writing is not permitted. • Final checksum mismatch in FW download • Two-minute timeout (no response from CTL, the number of transfer data items less than the specified)
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.40 CD704 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CD704: Finisher Flash ROM device error (When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, FS-537SD, or JS-506 is installed)
Rank	C
Trouble detection condition	An erase error or other device fault occurs during the finisher flash ROM writing.
Trouble isolation	-
Relevant electrical parts	<When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, or FS-537SD is installed> • FS control board (FSCB)
	<When JS-506 is installed> • JS control board (JSCB)

(2) Procedure

(a) When FS-533, FS-534, FS-534SD, FS-536, FS-536SD, FS-537, or FS-537SD is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-533 / FS-534/FS-534SD / FS-536/FS-536SD / FS-537/FS-537SD)

(b) When JS-506 is installed

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace JSCB.

3.24.41 CD705, CD706 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CD705: Mechanical controller sub-CPU flash ROM device error • CD706: Mechanical controller sub-CPU flash ROM error
Rank	C
Trouble detection condition	• CD705: An erase error or other device fault occurs during mechanical controller sub-CPU flash ROM writing. • CD706: A data error is determined to exist in the mechanical controller sub-CPU flash ROM during starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.42 CDC## (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CDC##: Trouble related to security
Rank	-
Trouble detection condition	-
Trouble isolation	-

(2) Procedure

NOTE

- **Contact the responsible people of KM before taking some countermeasures.**

3.24.43 CDF50, CDF70, CDFA0 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CDF50: ASIC image version failure • CDF70: ASIC image access failure • CDFA0: ASIC image error
Rank	C
Trouble detection condition	Communication error is detected between the MFP board (MFPB) and the CCD board (CCDB).
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • CCD board (CCDB)

(2) Procedure

1. Check the connector between MFPB CN1-CCDB CN3 for proper connection and correct as necessary. (bizhub C368/C308/C258)
2. Check the connector between MFPB CN9-CCDB PJ3 for proper connection and correct as necessary. (bizhub C658/C558/C458)
3. Rewrite the firmware.
4. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.24.44 CDF51, CDF71, CDFA1 (bizhub C368/C308/C258)

(1) Contents

Trouble type	• CDF51: ASIC image version failure (back side) (When DF-704 is installed) • CDF71: ASIC image access failure (back side) (When DF-704 is installed) • CDFA1: ASIC image error (back side) (When DF-704 is installed)
Rank	C
Trouble detection condition	Communication error is detected between the MFP board (MFPB) and the dual scan image processing board (DSIPB).
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Dual scan image processing board (DSIPB; DF-704)

(2) Procedure

1. Check the connector between MFPB CN22-DSIPB CN01 for proper connection and correct as necessary.

2. Rewrite the firmware.
3. Replace DSIPB.
4. Replace MFPB.

3.24.45 CDF51, CDF71, CDFA1 (bizhub C658/C558/C458)

(1) Contents

Trouble type	• CDF51: ASIC image version failure (back side) • CDF71: ASIC image access failure (back side) • CDFA1: ASIC image error (back side)
Rank	C
Trouble detection condition	Communication error is detected between the MFP board (MFPB) and the dual scan image processing board (DSIPB).
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Dual scan image processing board (DSIPB)

(2) Procedure

1. Check the connector between MFPB CN24-DSIPB CN1 for proper connection and correct as necessary.
2. Update the firmware.
3. Replace DSIPB.
4. Replace MFPB.

3.25 CE###

3.25.1 CE001, CE003, CE004, CE005, CE006, CE007, CE009 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CE001: Abnormal message queue • CE003: Task error • CE004: Event error • CE005: Memory access error • CE006: Header access error • CE007: DIMM initialize error • CE009: Memory resource shortage error
Rank	C
Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.25.2 CE002 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CE002: Message and method parameter failure
Rank	C
Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch and turn it ON again, and conduct the following setting. [Service Mode] -> [System 1] -> [Initialization] -> [Clear All Data].
2. Format the hard disk.
3. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
4. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.25.3 CE101 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CE101: Browser finish detected
Rank	C
Trouble detection condition	• The browser is automatically recovered (restarted) after the main body detected that the browser (separate process) has stopped with fault.

	• When the “Malfunction finish is detected over predetermined number of times” or “the browser task process is except in idle (printing, etc)”.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.25.4 CE201 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CE201: Transmission operation log storage fault
Rank	C
Trouble detection condition	When the transmission log storage failed, it repeats retrial until transmission operation log is stored. The trouble is detected when the retrial failed for predetermined number of times.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.25.5 CE301, CE302, CE303, CE304, CE305 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CE301: Referring incorrect memory • CE302: Incorrect command • CE303: Finished due to error inside Qt library • CE304: Finished due to error outside Qt library • CE305: Program forced to stop
Rank	C
Trouble detection condition	Error occurred with the process inside the MFP controller.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Acquire the debug logs in [Service Mode] -> [Debug Settings] and analyze them.

3.25.6 CED01 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CED01: The authentication application information does not exist in the hard disk/eMMC board in the enhanced server authentication state.
Rank	C
Trouble detection condition	With “Enhanced Server Authentication” set, no authentication application registration information is found in the hard disk or the eMMC board (eMMC).
Trouble isolation	-
Relevant electrical parts	• eMMC board (eMMC) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF and ON the main power switch.
2. Check the connector from MFPB to hard disk for proper connection and correct as necessary.
3. Check the connector from eMMC to MFPB for proper connection and correct as necessary.
4. Logically format the hard disk.
5. Replace the hard disk. (HDD (A) (bizhub C368/C308/C258) / HDD (A) (bizhub C658/C558/C458) / HDD (B) (bizhub C368/C308/C258) / HDD (B) (bizhub C658/C558/C458))
6. If the above actions do not solve the problem, contact KM.

3.25.7 CEEE1, CEEE3 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	• CEEE1: MFP board (MSC) malfunction • CEEE3: MFP board (ENG) malfunction
Rank	C

Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

3.25.8 CEEE2 (bizhub C658/C558/C458/C368/C308/C258)

(1) Contents

Trouble type	CEEE2: Scanner section malfunction
Rank	A
Trouble detection condition	A scanner part is faulty.
Trouble isolation	-
Relevant electrical parts	• LED exposure unit • CCD board (CCDB) • Scanner drive board (SCDB)

(2) Procedure

1. Correct the connector connection between CCDB and SCDB if faulty.
2. Replace SCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3. Replace CCDB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

4. Troubleshooting using Self-diag. (Full)

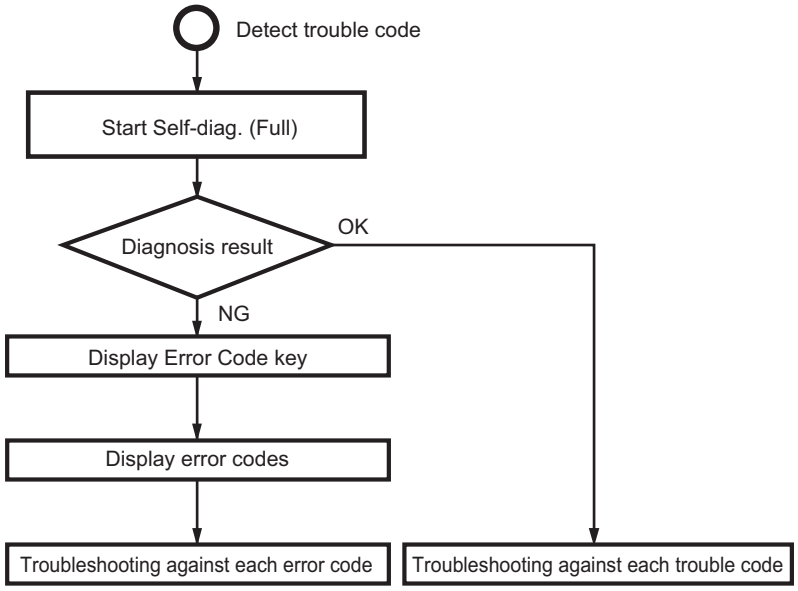
4.1 Overview of Self-diag. (Full) function

- If a trouble code occurs or the machine cannot operate normally due to defects of the control system hardware parts, by executing the "Self-diag. (Full)", the defective areas on the control system hardware parts can be identified.
- The reason for troubles is broadly divided into the control system hardware trouble and the firmware trouble, and it is difficult to identify where the trouble occurs with the trouble code.
  In the "Self-diag. (Full)", two functions are provided, the one diagnoses if troubles occur on the control system hardware, and the other one detects defective parts and displays the "error code" corresponding to the defective parts on the control panel.

NOTE

- **Before replacing the control system hardware parts like the MFP board, make sure to execute the "Self-diag. (Full)".**

Self-diag. (Full) flow for a trouble code



4.2 Self-diag. (Full) Procedure

1. When a trouble code is displayed, turn OFF the main power switch after the MFP is stopped.
2. Execute the Self-diag. (Full). For details of the method for executing the Self-diag. (Full), refer to I.5.19.12 (4) Procedure (from main power switch ON).
3. After completing the Self-diag. (Full), the diagnosis result will be displayed for each item. (OK/NG)
4. If [OK] is displayed for all items, turn OFF the main power switch.
5. If [NG] is included in the diagnosis result, after completing the diagnosis for all items, the [Error Code] key is displayed.
6. Touch the [Error Code] key to display the [Error Code].
7. Check the displayed [Error Code], then turn OFF the main power switch, and disconnect power cord from the outlet.
8. Refer to the Service Manual [Error Code List], and perform the troubleshooting against each error code.
   NOTE
   - **Perform the troubleshooting in the sequence from step 1 of "Corrective action procedure" against each item while checking that if each trouble has been resolved. Do not perform the troubleshooting against all troubles at once.**
   - **If no error code is displayed, perform the troubleshooting against each trouble code in "Trouble Code" displayed in step 1.**
9. Even if no [NG] is displayed (no trouble is reproduced) after executing the troubleshooting against each error code or the Self-diag. (Full), execute the "Self-diag. (Full)" again, and make sure that all troubles on each device have been resolved.

4.2.1 Auto Execution of Self-diag. (Full)

- Set the [Switch NO.163] to [00000010] at [Bit assignment] and [02] at [HEX assignment] in [Service Mode] -> [System 2] -> [Software Switch Setting], so that the "Self-diag. (Full)" can be executed automatically when an "trouble code" occurred.
  Refer to [Service Mode] -> [System 2] -> [State Confirmation] -> [Self-diag. (Full)].

4.2.2 Error code resetting procedures

1. Stop the machine with the Error Code screen being displayed.
2. Turn OFF the main power switch. After waiting 10 seconds, turn ON the main power switch again.
3. Reboot the machine.

NOTE

- **If the error has not been resolved, the trouble code will reappear after rebooting the machine.**

4.3 Error Code List

Error code	Target device	Diagnosis item	Reason of error	Relevant parts
E1-1	Prog. device	R/W Check	Engagement/mounting failure	eMMC board (eMMC) MFP board (MFPB)
E1-2		MFP FW checksum	eMMC error (data failure)	MFP Firmware eMMC board (eMMC)
E1-3		Partition check	eMMC error (data failure)	eMMC board (eMMC)
E2-1	SPI	R/W Check	Mounting failure	MFP board (MFPB)
E3-1	HDD	SATA ID verification	MFP board SPI for SATA (data failure)	MFP board (MFPB)
E3-2		I/F Test	HDD error	Connection cable Hard disk (HDD) MFP board (MFPB)
E3-3		Memory Check R/W Check S.M.A.R.T diag.	HDD error	Hard disk (HDD)
E3-4		Partition check	HDD error	Hard disk (HDD)
E4-1	System/image memory	WORK0 FILE0 FILE1	Engagement failure Mounting failure DRAM failure	MFP board (MFPB)
E4-2		WORK1	Engagement failure Mounting failure DRAM failure	DIMM(DIMM) MFP board (MFPB)
E4-3		FILE2 FILE3	Engagement failure Mounting failure DRAM failure	DS image processing board (DSIPB) Fiery IF board MFP board (MFPB)
E4-4		FILE4 FILE5	Engagement failure Mounting failure DRAM failure	DS image processing board (DSIPB) MFP board (MFPB)
E5-1	Various USB devices	USB3.0Host #0 USB3.0Host #1 USB2.0Host	Connection failure Parts defect	MFP board (MFPB)
E5-2		HUB chip (MFP board on-board)	Connection failure Parts defect	MFP board (MFPB)
E5-3		RAID controller	Connection failure Parts defect	MFP board (MFPB)
E5-4		HUB chip (USB board on-board)	Connection failure Parts defect	USB board (USBB) MFP board (MFPB)
E5-6		DAC-IC	Connection failure Parts defect	USB board (USBB)
E5-7		HUB chip (FAX expansion board on-board)	Connection failure Parts defect	Connection cable FAX expansion board
E5-8		FAX board (line 1)	Connection failure Parts defect	Connection cable FAX board/1 (FAXB/1) FAX expansion board
E5-9		FAX board (line 2)	Connection failure Parts defect	Connection cable FAX board/2 (FAXB/2) FAX expansion board
E5-10		FAX board (line 3)	Connection failure Parts defect	Connection cable FAX board/3 (FAXB/3) FAX expansion board
E5-11		FAX board (line 4)	Connection failure Parts defect	Connection cable FAX board/4 (FAXB/4) FAX expansion board
E5-12		Upgrade kit (UK-212/UK-215)	Connection failure Parts defect	Connection cable Wireless LAN board (PWB-WLAN) Wireless LAN module (WLAN) MFP board (MFPB)
E5-13		Authentication unit	Connection failure Parts defect	Authentication unit MFP board (MFPB)
E6-1	CCD board	I/P Image Bus Check	Image bus failure	Connection cable CCD board (CCDB) MFP board (MFPB)
E6-2		Line RAM Comparison	CCD sensor failure	Connection cable CCD board (CCDB) MFP board (MFPB)

Error code	Target device	Diagnosis item	Reason of error	Relevant parts
E7-1	CIS Module	I/P Image Bus Check	Image bus failure	CIS cable CIS module (CIS) DS image processing board (DSIPB)
E7-2		Line RAM Comparison	CIS sensor failure	CIS module (CIS)
E8-1	DF control board	MINET communication check	ADF microcomputer communication failure	Connection cable DF control board (DFCB) MFP board (MFPB)
E9-1	DS image processing board (DSIPB)	Compress/exp check	ASIC image error	DS image processing board (DSIPB)
		Memory path check	Image memory error	
E10-1	DSC board	Image Bus Check (Front Side)	Engagement failure Mounting failure	DSC board1 (DSCB/1) MFP board (MFPB)
E10-2		Image Bus Check (Back Side)	Engagement failure Mounting failure	DSC board2 (DSCB/2) MFP board (MFPB)
E11-1	Fiery IF board	Compress/exp check	Image bus failure	DS image processing board (DSIPB) Fiery IF board
E13-1	MFP Board	Compress/exp check O/P Image Bus Check	ASIC image error	MFP board (MFPB)
		Memory path check	Image memory error	
E14-1	PCIe	PCIe device check	PCIe device error	MFP board (MFPB)
E14-2				DS image processing board (DSIPB) MFP board (MFPB)
E14-3				Fiery IF board MFP board (MFPB)

Troubleshooting against multiple error codes

Error code	Corrective action
E3-2, E5-3	Execute E3-2
E7-1, E9-1, E11-1, E14-1	Execute E14-1
E7-1, E9-1, E14-2	Execute E14-2
E11-1, E14-3	Execute E14-3

4.4 E1-1

Description

Error code	E1-1
Target device	Prog. device
Diagnosis item	R/W Check
Reason of error	Engagement failure Mounting failure
Relevant parts	eMMC board (eMMC) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the eMMC board if faulty.
3. Correct the mounting of the MFP board and the connection of connectors if faulty.
4. Replace the eMMC board.
5. Replace the MFP board.

4.5 E1-2

Description

Error code	E1-2
Target device	Prog. device
Diagnosis item	MFP FW checksum
Reason of error	eMMC error (data failure)
Relevant parts	eMMC board (eMMC)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the eMMC board if faulty.
3. Rewrite the firmware.

4. Perform re-installation of the firmware.

4.6 E1-3

Description

Error code	E1-3
Target device	Prog. device
Diagnosis item	Partition check
Reason of error	eMMC error (data failure)
Relevant parts	eMMC board (eMMC)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the eMMC board if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Replace the eMMC board.

4.7 E2-1

Description

Error code	E2-1
Target device	SPI
Diagnosis item	R/W Check
Reason of error	Mounting failure
Relevant parts	MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the MFP board or the connection of connectors if faulty.
3. Replace the MFP board.

4.8 E3-1

Description

Error code	E3-1
Target device	HDD
Diagnosis item	SATA ID verification
Reason of error	MFP board SPI for SATA (data failure)
Relevant parts	MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the MFP board or the connection of connectors if faulty.
3. Replace the MFP board.

4.9 E3-2, E3-3, E3-4

Description

Error code	E3-2, E3-3	
Target device	HDD	
Diagnosis item	E3-2	I/F Test
	E3-3	Memory Check R/W Check S.M.A.R.T diag.
	E3-4	Partition check
Reason of error	HDD error	
Relevant parts	Connection cable Hard disk (HDD) MFP board (MFPB)	

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the hard disk and the connection cable if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Execute Logically format of the hard disk.
5. Replace the connection cable of the hard disk.
6. Replace the hard disk.
7. Replace the MFP board.

4.10 E4-1, E4-2, E4-3, E4-4

NOTE

- **When executing the Self-diag. (Full) after the trouble code (CE301, CE304) is displayed, the self diagnosis may not complete. In that case, finish the Self-diag. (Full) forcibly, and perform the troubleshooting against the trouble code.**
- **Turning OFF the main power switch will finish the Self-diag. (Full) forcibly.**
- **"E4-2" will also be displayed if no DIMM is mounted. If an additional DIMM is not used, no error occurs even if "E4-2" is displayed with the self diagnosis function, and no troubleshooting is required.**

Description

Error code	E4-1, E4-2, E4-3, E4-4	
Target device	System/image memory	
Diagnosis item	E4-1	WORK0 FILE0 FILE1
	E4-2	WORK1
	E4-3	FILE2 FILE3
	E4-4	FILE4 FILE5
Reason of error	Engagement failure Mounting failure DRAM failure	
Relevant parts	E4-1	MFP board (MFPB)
	E4-2	DIMM(DIMM) MFP board (MFPB)
	E4-3	DS image processing board (DSIPB) Fiery IF board MFP board (MFPB)
	E4-4	DS image processing board (DSIPB) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DIMM if faulty.
3. Correct the mounting of the DS image processing board (DSIPB) or the connection of connectors if faulty.
4. Correct the mounting of the Fiery IF board or the connection of connectors if faulty.
5. Correct the mounting of the MFP board or the connection of connectors if faulty.
6. Replace the DIMM.
7. Replace the DS image processing board (DSIPB).
8. Replace the Fiery IF board.
9. Replace the MFP board.

4.11 E5-1, E5-2, E5-3

Description

Error code	E5-1, E5-2, E5-3	
Target device	Various USB devices	
Diagnosis item	E5-1	USB3.0Host #0 USB3.0Host #1 USB2.0Host
	E5-2	HUB chip (MFP board on-board)
	E5-3	RAID controller
Reason of error	Connection failure Parts defect	
Relevant parts	MFP board (MFPB)	

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the MFP board or the connection of connectors if faulty.
3. Replace the MFP board.

4.12 E5-4

Description

Error code	E5-4
Target device	Various USB devices
Diagnosis item	HUB chip (USB board on-board)
Reason of error	Connection failure Parts defect

Relevant parts	USB board (USBB) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the USB board or the connection of connectors if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Replace the USB board.
5. Replace the MFP board.

4.13 E5-6

Description

Error code	E-5-6
Target device	Various USB devices
Diagnosis item	DAC-IC
Reason of error	Connection failure Parts defect
Relevant parts	USB board (USBB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the USB board or the connection of connectors if faulty.
3. Replace the USB board.

4.14 E5-7, E5-8, E5-9, E5-10, E5-11

Description

Error code	E5-7, E5-8, E5-9, E5-10, E5-11	
Target device	Various USB devices	
Diagnosis item	E5-7	HUB chip (FAX expansion board on-board)
	E5-8	FAX board (line 1)
	E5-9	FAX board (line 2)
	E5-10	FAX board (line 3)
	E5-11	FAX board (line 4)
Reason of error	Connection failure Parts defect	
Relevant parts	Connection cable FAX board/1 (FAXB/1) FAX board/2 (FAXB/2) FAX board/3 (FAXB/3) FAX board/4 (FAXB/4) FAX expansion board	

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the FAX board or the connection of connectors if faulty.
3. Correct the mounting of the FAX expansion board or the connection of connectors if faulty.
4. Correct the mounting of the connection cable if faulty.
5. Replace the connection cable.
6. Replace the FAX board.
7. Replace the FAX expansion board.

4.15 E5-12

Description

Error code	E5-12
Target device	Various USB devices
Diagnosis item	Upgrade kit (UK-212) Upgrade kit (UK-215)
Reason of error	Connection failure Parts defect
Relevant parts	Connection cable Wireless LAN board (PWB-WLAN) Wireless LAN module (WLAN) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the upgrade kit (UK-212/UK-215) or the connection of connectors if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.

4. Correct the mounting of the connection cable if faulty.
5. Replace the connection cable.
6. Replace the wireless LAN board.
7. Replace the Wireless LAN module.
8. Replace the MFP board.

4.16 E5-13

Description

Error code	E5-13
Target device	Various USB devices
Diagnosis item	Authentication unit
Reason of error	Connection failure Parts defect
Relevant parts	Authentication unit MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting and connection of the authentication unit if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Replace the authentication unit.
5. Replace the MFP board.

4.17 E6-1, E6-2

Description

NOTE

- **When executing the Self-diag. (Full) after the trouble code (C6###, C91##) is displayed, the self diagnosis may not complete. In that case, finish the Self-diag. (Full) forcibly, and perform the troubleshooting against the trouble code.**
- **Turning OFF the main power switch will finish the Self-diag. (Full) forcibly.**

Error code	E6-1, E6-2	
Target device	CCD board	
Diagnosis item	E6-1	O/P Image Bus Check
	E6-2	Line RAM Comparison
Reason of error	E6-1	Image bus failure
	E6-2	CCD sensor failure
Relevant parts	Connection cable CCD board (CCDB) MFP board (MFPB)	

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the CCD board and the connection cable if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Replace the connection cable.
5. Replace the CCD unit.
6. Replace the MFP board.

4.18 E7-1, E7-2

Description

NOTE

- **When executing the Self-diag. (Full) after the trouble code (C6###, C91##) is displayed, the self diagnosis may not complete. In that case, finish the Self-diag. (Full) forcibly, and perform the troubleshooting against the trouble code.**
- **Turning OFF the main power switch will finish the Self-diag. (Full) forcibly.**

Error code	E7-1, E7-2	
Target device	CCD board	
Diagnosis item	E7-1	O/P Image Bus Check
	E7-2	Line RAM Comparison
Reason of error	E7-1	Image bus failure
	E7-2	CIS sensor failure
Relevant parts	CIS cable CIS module (CIS) DS image processing board (DSIPB)	

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the CIS module and the CIS cable if faulty.
3. Correct the mounting of the DS image processing board or the connection of connectors if faulty.
4. Replace the CIS cable.

5. Replace the CIS module.
6. Replace the DS image processing board.

4.19 E8-1

Description

Error code	E8-1
Target device	DF control board
Diagnosis item	MINET communication check
Reason of error	ADF microcomputer communication failure
Relevant parts	Connection cable DF control board (DFCB) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DF control board and the connection of connectors if faulty.
3. Correct the mounting of the MFP board or the connection of connectors if faulty.
4. Correct the mounting of the connection cable if faulty.
5. Replace the connection cable.
6. Replace the DF control board.
7. Replace the MFP board.

4.20 E9-1

Description

Error code	E9-1
Target device	DS image processing board (DSIPB)
Diagnosis item	Compress/exp check
	Memory path check
Reason of error	ASIC image error
	Image memory error
Relevant parts	DS image processing board (DSIPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DS image processing board and the connection of connectors if faulty.
3. Replace the DS image processing board.

4.21 E10-1, E10-2

Description

Error code	E10-1, E10-2	
Target device	System/image memory	
Diagnosis item	E10-1	Image Bus Check (Front Side)
	E10-2	Image Bus Check (Back Side)
Reason of error	Engagement failure Mounting failure	
Relevant parts	E10-1	DSC board1 (DSCB/1) MFP board (MFPB)
	E10-2	DSC board2 (DSCB/2) MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DSC board1 if faulty.
3. Correct the mounting of the DSC board2 if faulty.
4. Correct the mounting of the MFP board or the connection of connectors if faulty.
5. Replace the DSC board1. (E10-1 only)
6. Replace the DSC board2. (E10-2 only)
7. Replace the MFP board.

4.22 E11-1

Description

Error code	E11-1
Target device	Fiery IF board
Diagnosis item	Compress/exp check
Reason of error	Image bus failure

Relevant parts	DS image processing board (DSIPB) Fiery IF board

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DS image processing board (DSIPB) or the connection of connectors if faulty.
3. Correct the mounting of the Fiery IF board and the connection of connectors if faulty.
4. Replace the DS image processing board (DSIPB).
5. Replace the Fiery IF board.

4.23 E13-1

Description

Error code	E13-1
Target device	MFP Board
Diagnosis item	Compress/exp check O/P Image Bus Check
	Memory path check
Reason of error	ASIC image error
	Image memory error
Relevant parts	MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the MFP board or the connection of connectors if faulty.
3. Replace the MFP board.

4.24 E14-1, E14-2, E14-3

Description

Error code	E14-1, E14-2, E14-3	
Target device	PCIe	
Diagnosis item	PCIe device check	
Reason of error	PCIe device error	
Relevant parts	E14-1	MFP board (MFPB)
	E14-2	DS image processing board (DSIPB) MFP board (MFPB)
	E14-3	Fiery IF board MFP board (MFPB)

Corrective action procedure

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the DS image processing board or the connection of connectors if faulty.
3. Correct the mounting of the Fiery IF board or the connection of connectors if faulty.
4. Correct the mounting of the MFP board or the connection of connectors if faulty.
5. Replace the DS image processing board.
6. Replace the Fiery IF board.
7. Replace the MFP board.

5. Troubleshooting when NG is displayed on the Self-diag. (Individual)

5.1 Various USB Check

5.1.1 Troubleshooting when NG is displayed for Keyboard

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the keyboard if faulty.
3. Correct the mounting of the USB board if faulty.
4. Replace the keyboard.
5. Replace the USB board.

5.1.2 Troubleshooting when NG is displayed for USB Memory

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Correct the mounting of the USB memory if faulty.
3. Correct the mounting of the USB board if faulty.
4. Replace the USB memory.
5. Replace the USB board.

5.2 MFP Board Check

5.2.1 Troubleshooting when NG is displayed for Ping Test

1. Turn OFF the main power switch, disconnect power cord from the outlet.
2. Check, and correct the MFP network settings if faulty.
3. Correct the mounting of the LAN cable if faulty.
4. Correct the mounting of the MFP board if faulty.
5. Replace the LAN cable.
6. Replace the MFP board.

6. ABORT CODE

6.1 Troubleshooting of the abort code (bizhub C368/C308/C258)

- The machine displays an abort code (CF###) on the control panel as it becomes unable to process tasks properly through its software control.
- When the system program is aborted, check the electrical component, unit, option, and connection relating to the specific type of the abort condition.

6.1.1 Contents

Trouble type	Abort code
Trouble code	CF001 to CFFE0
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Memory board (MEMB: UK-211) • EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

6.1.2 Procedure

- When an abort code occurs, take a check and action in the following procedure.

Step	Section	Check Item	Result	Action
1	Main power switch	Turn OFF and ON the main power switch, and check if the Abort code appears again.	NO	When not reappearing, continuous use is carried out, and it is checked whether an abort code occurs.
2	Connector connection	Check the connector for proper connection and correct as necessary. • MFP board (MFPB) • Memory board (MEMB: UK-211, Expansion memory) • EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	NO	It will correct, if connector connection has abnormalities.
3	Firmware	Update the firmware to the latest version, and check if the Abort code appears again.	NO	Select [Service Mode] -> [Firmware Version] and make sure that the firmware has been updated to the correct version.
4	Memory Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the appropriate memory or PWB. • WORK0: Standard memory (MFPB) • WORK1: Memory board (MEMB: UK-211) • FILE0,1: MFP board (MFPB) • FILE2,3: EFI relay board (VI-508) • FILE4,5: Dual scan image processing board (DSIPB: DF-704)
5	Storage R/W Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the hard disk (HDD).
6	MFP board	Replace the MFP board (MFPB), and then check the MFPB.	NO	Other electric parts indicated to Component of abort code list are replaced.

6.2 Troubleshooting of the abort code (bizhub C658/C558/C458)

- The machine displays an abort code (CF###) on the control panel as it becomes unable to process tasks properly through its software control.
- When the system program is aborted, check the electrical component, unit, option, and connection relating to the specific type of the abort condition.

6.2.1 Contents

Trouble type	Abort code
Trouble code	CF001 to CFFB5
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB)

	• EFI relay board (VI-510) • Dual scan image processing board (DSIPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

6.2.2 Procedure

- When an abort code occurs, take a check and action in the following procedure.

Step	Section	Check Item	Result	Action
1	Main power switch	Turn OFF and ON the main power switch, and check if the Abort code appears again.	NO	When not reappearing, continuous use is carried out, and it is checked whether an abort code occurs.
2	Connector connection	Check the connector for proper connection and correct as necessary. • MFP board (MFPB) • EFI relay board (VI-510) • Dual scan image processing board (DSIPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	NO	It will correct, if connector connection has abnormalities.
3	Firmware	Update the firmware to the latest version, and check if the Abort code appears again.	NO	Select [Service Mode] -> [Firmware Version] and make sure that the firmware has been updated to the correct version.
4	Memory Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the appropriate memory or PWB. • WORK0: Standard memory (MFPB) • WORK1: Expansion memory • FILE0,1: MFP board (MFPB) • FILE2,3: EFI relay board (VI-510) • FILE4,5: Dual scan image processing board (DSIPB)
5	Storage R/W Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the hard disk (HDD).
6	MFP board	Replace the MFP board (MFPB), and then check the MFPB.	NO	Other electric parts indicated to Component of abort code list are replaced.

6.3 CF0##

Error code	Item		Component	Rank
CF001	CT_singleList table abnormal	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CF004	CT_queue full abnormal			
CF011	Array link abnormal			
CF012	FAT link abnormal			
CF013	File size abnormal			
CF021	setDelayMessage Table OverFlow			
CF023	MsgQue OverFlow			
CF033	setDivTbl() limitation over			
CF061	IdeCommand_Set() status Abnormal			
CF062	IdeCommand_Set() parameter Abnormal			

6.4 CF1##

Error code	Item		Component	Rank
CF112	Compress table OverFlow	Compression malfunctions	MFP board (MFPB)	C
CF113	Compress table check			
CF122	Expand Table OverFlow			

6.5 CF2##

Error code	Item		Component	Rank
CF211	setParameterBandColorPlane() Table OverFlow	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C

6.6 CF3##

Error code	Item		Component	Rank
CF300	IR Bus Check Timeout	Image transfer error on IR input bus	MFP board (MFPB)	C

6.7 CF4##

Error code	Item		Component	Rank
CF411	Parity error	Communication error (between IR-systems)	MFP board (MFPB)	C
CF412	Parity error			
CF421	Overrun error			
CF422	Overrun error			
CF431	Parity error + Overrun error			
CF432	Parity error + Overrun error			
CF441	Framing error			
CF442	Framing error			
CF451	Parity error + Framing error			
CF452	Parity error + Framing error			
CF461	Overrun error + Framing error			
CF462	Overrun error + Framing error			
CF471	Parity error + Overrun error + Framing error			
CF472	Parity error + Overrun error + Framing error			

6.8 CF5##

Error code	Item		Component	Rank
CF510	Parity error	Communication error (IR detected)	MFP board (MFPB)	C
CF520	Framing error			
CF530	Parity error + Framing error			
CF540	Overrun error			
CF550	Parity error + Overrun error			
CF560	Overrun error + Framing error			
CF570	Parity error + Overrun error + Framing error			
CF580	Frame distortion of DF			

6.9 CF6##

Error code	Item		Component	Rank
CF600	Report receiving of print start that is out of sequence	An exceptional instance occurred due to the unexpected parameter in the system F/W.	• MFP board (MFPB) • Engine	C
CF601	Report receiving of paper feeding that is out of sequence			
CF604	Outside IF/Command queue		MFP board (MFPB)	
CF614	“Output sequence” queue			
CF624	Panel LCD date queue			

6.10 CF7##

Error code	Item		Component	Rank
CF704	Common data “Delete-waiting HDD accumulated job ID” queue	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CF714	IRC/Command queue			
CF724	Engine/Command queue		• MFP board (MFPB) • Engine	
CF734	Panel/Command queue		• MFP board (MFPB) • Control panel	
CF744	File memory transfer start-waiting command queue		MFP board (MFPB)	
CF754	File memory compression requesting command queue			
CF764	Panel instruction delete job queue			

Error code	Item		Component	Rank
CF774	Warning delete job queue			
CF784	Application instruction delete job queue			
CF794	Output page information for duplex back side queue			
CF7A4	Paper feed completion output pate information queue			
CF7B4	Exposure compaction output page information queue			
CF7C4	Pre-discharge completion output page information queue			
CF7D4	Touch panel coordinate data queue			
CF7E4	Direct key data queue			
CF7F4	Scan sequence queue			

6.11 CFA##

Error code	Item		Component	Rank
CFA01	getOneImgTransInfoFromTh ( ) (Thread ID and thread common parameters used) No applied thread	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CFA03	setTransBandAndRepeatNum() error			
CFA06	getOneImgIndexNumFromTh ( ) No applied thread			
CFA11	cancelTransExec ( ) No applied thread			
CFA12	ImgTransInfo No space			
CFA13	Clear Buffer Sequence error			
CFA14	Application error inside the MFP board		• MFP board (MFPB) • Memory board (MEMB: UK-211) (bizhub C368/C308/C458 only) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	
CFA15	Global semaphore time out (ten seconds)		• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	
CFA16	Thread software error (upper parameter error)			
CFA17	Thread error caused by buffer sequence error			
CFA18	Thread error detected in the VD state at DMA00 startup.			
CFA50	IGC control error	DB error		
CFA51		IGC internal error		

6.12 CFB## (bizhub C368/C308/C258)

6.12.1 CFB0# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB00	ASIC777 DMA00	MFP board (MFPB)	C
CFB01	ASIC777 DMA01		
CFB02	ASIC777 DMA02		
CFB03	ASIC777 DMA03		
CFB04	ASIC777 DMA04		
CFB05	ASIC777 DMA05		
CFB06	ASIC777 DMA06		
CFB07	ASIC777 DMA07		
CFB08	ASIC777 DMA08		
CFB09	ASIC777 DMA09		
CFB0A	ASIC777 DMA10		
CFB0B	ASIC777 DMA11		
CFB0C	ASIC777 DMA12		

Error code	Item	Component	Rank
CFB0D	ASIC777 DMA13		
CFB0E	ASIC777 DMA14		
CFB0F	ASIC777 DMA15		

6.12.2 CFB1# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB10	ASIC777 DMA16	MFP board (MFPB)	C
CFB11	ASIC777 DMA17		
CFB12	ASIC777 DMA18		
CFB13	ASIC777 DMA19		
CFB14	ASIC777 DMA20		
CFB15	ASIC777 DMA21		
CFB16	ASIC777 DMA22		
CFB17	ASIC777 DMA23		
CFB18	ASIC777 DMA24		
CFB19	ASIC777 DMA25		
CFB1A	ASIC777 DMA26		
CFB1B	ASIC777 DMA27		
CFB1C	ASIC777 DMA28		
CFB1D	ASIC777 DMA29		
CFB1E	ASIC777 DMA30		
CFB1F	ASIC777 DMA31		

6.12.3 CFB2# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB20	ASIC777 DMA32	MFP board (MFPB)	C
CFB21	ASIC777 DMA33		
CFB22	ASIC777 DMA34		
CFB23	ASIC777 DMA35		
CFB24	ASIC777 DMA36		
CFB25	ASIC777 DMA37		
CFB26	ASIC777 DMA38		
CFB27	ASIC777 DMA39		
CFB28	ASIC777 DMA40		
CFB29	ASIC777 DMA41		
CFB2A	ASIC777 DMA42		
CFB2B	ASIC777 DMA43		
CFB2C	ASIC777 DMA44		
CFB2D	ASIC777 DMA45		
CFB2E	ASIC777 DMA46		
CFB2F	ASIC777 DMA47		

6.12.4 CFB3# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB30	ASIC777 DMA48	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFB31	ASIC777 DMA49		
CFB32	ASIC777 DMA50		
CFB33	ASIC777 DMA51		
CFB34	ASIC777 DMA52		
CFB35	ASIC777 DMA53		
CFB36	ASIC777 DMA54		
CFB37	ASIC777 DMA55		
CFB38	EFI relay board (Asic30) DMA00		
CFB39	EFI relay board (Asic30) DMA01		
CFB3A	EFI relay board (Asic30) DMA02		
CFB3B	EFI relay board (Asic30) DMA03		
CFB3C	EFI relay board (Asic30) DMA04		

Error code	Item	Component	Rank
CFB3D	EFI relay board (Asic30) DMA05		
CFB3E	EFI relay board (Asic30) DMA06		
CFB3F	EFI relay board (Asic30) DMA07		

6.12.5 CFB4# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB40	EFI relay board (Asic30) DMA08	EFI relay board (VI-508)	C
CFB41	EFI relay board (Asic30) DMA09		
CFB42	EFI relay board (Asic30) DMA10		
CFB43	EFI relay board (Asic30) DMA11		
CFB44	EFI relay board (Asic30) DMA12		
CFB45	EFI relay board (Asic30) DMA13		
CFB46	EFI relay board (Asic30) DMA14		
CFB47	EFI relay board (Asic30) DMA15		
CFB48	EFI relay board (Asic30) DMA16		
CFB49	EFI relay board (Asic30) DMA17		
CFB4A	EFI relay board (Asic30) DMA18		
CFB4B	EFI relay board (Asic30) DMA19		
CFB4C	EFI relay board (Asic30) DMA20		
CFB4D	EFI relay board (Asic30) DMA21		
CFB4E	EFI relay board (Asic30) DMA22		
CFB4F	EFI relay board (Asic30) DMA23		

6.12.6 CFB5# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB50	EFI relay board (Asic30) DMA24	• Dual scan image processing board (DSIPB: DF-704) • EFI relay board (VI-508)	C
CFB51	EFI relay board (Asic30) DMA25		
CFB52	EFI relay board (Asic30) DMA26		
CFB53	EFI relay board (Asic30) DMA27		
CFB54	EFI relay board (Asic30) DMA28		
CFB55	EFI relay board (Asic30) DMA29		
CFB56	EFI relay board (Asic30) DMA30		
CFB57	EFI relay board (Asic30) DMA31		
CFB58	Dual scan image processing board (Asic30/Asic777) DMA00		
CFB59	Dual scan image processing board (Asic30/Asic777) DMA01		
CFB5A	Dual scan image processing board (Asic30/Asic777) DMA02		
CFB5B	Dual scan image processing board (Asic30/Asic777) DMA03		
CFB5C	Dual scan image processing board (Asic30/Asic777) DMA04		
CFB5D	Dual scan image processing board (Asic30/Asic777) DMA05		
CFB5E	Dual scan image processing board (Asic30/Asic777) DMA06		
CFB5F	Dual scan image processing board (Asic30/Asic777) DMA07		

6.12.7 CFB6# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB60	Dual scan image processing board (Asic30/Asic777) DMA08	Dual scan image processing board (DSIPB: DF-704)	C
CFB61	Dual scan image processing board (Asic30/Asic777) DMA09		
CFB62	Dual scan image processing board (Asic30/Asic777) DMA10		
CFB63	Dual scan image processing board (Asic30/Asic777) DMA11		
CFB64	Dual scan image processing board (Asic30/Asic777) DMA12		
CFB65	Dual scan image processing board (Asic30/Asic777) DMA13		
CFB66	Dual scan image processing board (Asic30/Asic777) DMA14		
CFB67	Dual scan image processing board (Asic30/Asic777) DMA15		
CFB68	Dual scan image processing board (Asic30/Asic777) DMA16		
CFB69	Dual scan image processing board (Asic30/Asic777) DMA17		
CFB6A	Dual scan image processing board (Asic30/Asic777) DMA18		
CFB6B	Dual scan image processing board (Asic30/Asic777) DMA19		
CFB6C	Dual scan image processing board (Asic30/Asic777) DMA20		

Error code	Item	Component	Rank
CFB6D	Dual scan image processing board (Asic30/Asic777) DMA21		
CFB6E	Dual scan image processing board (Asic30/Asic777) DMA22		
CFB6F	Dual scan image processing board (Asic30/Asic777) DMA23		

6.12.8 CFB7# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB70	Dual scan image processing board (Asic30/Asic777) DMA24	Dual scan image processing board (DSIPB: DF-704)	C
CFB71	Dual scan image processing board (Asic30/Asic777) DMA25		
CFB72	Dual scan image processing board (Asic30/Asic777) DMA26		
CFB73	Dual scan image processing board (Asic30/Asic777) DMA27		
CFB74	Dual scan image processing board (Asic30/Asic777) DMA28		
CFB75	Dual scan image processing board (Asic30/Asic777) DMA29		
CFB76	Dual scan image processing board (Asic30/Asic777) DMA30		
CFB77	Dual scan image processing board (Asic30/Asic777) DMA31		
CFB78	Dual scan image processing board (Asic777) DMA32		
CFB79	Dual scan image processing board (Asic777) DMA33		
CFB7A	Dual scan image processing board (Asic777) DMA34		
CFB7B	Dual scan image processing board (Asic777) DMA35		
CFB7C	Dual scan image processing board (Asic777) DMA36		
CFB7D	Dual scan image processing board (Asic777) DMA37		
CFB7E	Dual scan image processing board (Asic777) DMA38		
CFB7F	Dual scan image processing board (Asic777) DMA39		

6.12.9 CFB8# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB80	Dual scan image processing board (Asic777) DMA40	Dual scan image processing board (DSIPB: DF-704)	C
CFB81	Dual scan image processing board (Asic777) DMA41		
CFB82	Dual scan image processing board (Asic777) DMA42		
CFB83	Dual scan image processing board (Asic777) DMA43		
CFB84	Dual scan image processing board (Asic777) DMA44		
CFB85	Dual scan image processing board (Asic777) DMA45		
CFB86	Dual scan image processing board (Asic777) DMA46		
CFB87	Dual scan image processing board (Asic777) DMA47		
CFB88	Dual scan image processing board (Asic777) DMA48		
CFB89	Dual scan image processing board (Asic777) DMA49		
CFB8A	Dual scan image processing board (Asic777) DMA50		
CFB8B	Dual scan image processing board (Asic777) DMA51		
CFB8C	Dual scan image processing board (Asic777) DMA52		
CFB8D	Dual scan image processing board (Asic777) DMA53		
CFB8E	Dual scan image processing board (Asic777) DMA54		
CFB8F	Dual scan image processing board (Asic777) DMA55		

6.12.10 CFB9# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFB93	Asic (PMS) DMA03	MFP board (MFPB)	C
CFB97	Asic (PMS) DMA07		

6.12.11 CFBA# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBA2	Asic (PMS) DMA18	MFP board (MFPB)	C
CFBA3	Asic (PMS) DMA19		
CFBA4	Asic (PMS) DMA32		
CFBA5	Asic (PMS) DMA33		
CFBA6	Asic (PMS) DMA34		
CFBA7	Asic (PMS) DMA35		
CFBA8	Asic (PMS) DMA36		
CFBA9	Asic (PMS) DMA37		

Error code	Item	Component	Rank
CFBAA	Asic (PMS) DMA38		
CFBAB	Asic (PMS) DMA39		
CFBAC	Asic (PMS) DMA40		
CFBAD	Asic (PMS) DMA41		
CFBAE	Asic (PMS) DMA42		
CFBAF	Asic (PMS) DMA43		

6.12.12 CFBB# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBB0	EFI relay board (second Asic30) DMA00	EFI relay board (VI-508)	C
CFBB1	EFI relay board (second Asic30) DMA01		
CFBB2	EFI relay board (second Asic30) DMA02		
CFBB3	EFI relay board (second Asic30) DMA03		
CFBB4	EFI relay board (second Asic30) DMA04		
CFBB5	EFI relay board (second Asic30) DMA05		
CFBB6	EFI relay board (second Asic30) DMA06		
CFBB7	EFI relay board (second Asic30) DMA07		
CFBB8	EFI relay board (second Asic30) DMA08		
CFBB9	EFI relay board (second Asic30) DMA09		
CFBBA	EFI relay board (second Asic30) DMA10		
CFBBB	EFI relay board (second Asic30) DMA11		
CFBBC	EFI relay board (second Asic30) DMA12		
CFBBD	EFI relay board (second Asic30) DMA13		
CFBBE	EFI relay board (second Asic30) DMA14		
CFBBF	EFI relay board (second Asic30) DMA15		

6.12.13 CFBC# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBC0	EFI relay board (second Asic30) DMA16	EFI relay board (VI-508)	C
CFBC1	EFI relay board (second Asic30) DMA17		
CFBC2	EFI relay board (second Asic30) DMA18		
CFBC3	EFI relay board (second Asic30) DMA19		
CFBC4	EFI relay board (second Asic30) DMA20		
CFBC5	EFI relay board (second Asic30) DMA21		
CFBC6	EFI relay board (second Asic30) DMA22		
CFBC7	EFI relay board (second Asic30) DMA23		
CFBC8	EFI relay board (second Asic30) DMA24		
CFBC9	EFI relay board (second Asic30) DMA25		
CFBCA	EFI relay board (second Asic30) DMA26		
CFBCB	EFI relay board (second Asic30) DMA27		
CFBCC	EFI relay board (second Asic30) DMA28		
CFBCD	EFI relay board (second Asic30) DMA29		
CFBCE	EFI relay board (second Asic30) DMA30		
CFBCF	EFI relay board (second Asic30) DMA31		

6.12.14 CFBD# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBD0	Dual scan image processing board JPEG DMA_A	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704) • EFI relay board (VI-508)	C
CFBD1	Dual scan image processing board JPEG DMA_C		
CFBD2	Dual scan image processing board JPEG DMA_D		
CFBD3	ASIC777 interruption		
CFBD4	EFI relay board (Asic30) interruption		
CFBD5	Dual scan image processing board (Asic30) interruption		
CFBD6	Asic (PMS) interruption		
CFBD7	EFI relay board (second Asic30) interruption		
CFBD8	Dual scan image processing board JPEG interruption		
CFBD9	ASIC777 common register setting		

Error code	Item	Component	Rank
CFBDA	EFI relay board (Asic30) common register setting		
CFBDB	Dual scan image processing board (Asic30) common register setting		
CFBDC	Asic (PMS) common register setting		
CFBDD	EFI relay board (Asic30) common register setting		
CFBDE	Dual scan image processing board JPEG common register setting		
CFBDF	ASIC777 BTC compression/extension unit		

6.12.15 CFBE# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBE0	EFI relay board (Asic30) BTC compression/extension unit	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704) • EFI relay board (VI-508)	C
CFBE1	Dual scan image processing board (Asic30) BTC compression/ extension unit		
CFBE2	Asic (PMS) BTC compression/extension unit		
CFBE3	EFI relay board (second Asic30) BTC compression/extension unit		
CFBE4	Dual scan image processing board JPEG BTC compression/extension unit		
CFBE5	ASIC777 DMA00 error interruption		
CFBE6	ASIC777 DMA01 error interruption		
CFBE7	ASIC777 DMA02 error interruption		
CFBE8	ASIC777 DMA03 error interruption		
CFBE9	ASIC777 DMA04 error interruption		
CFBEA	ASIC777 DMA05 error interruption		
CFBEB	ASIC777 DMA06 error interruption		
CFBEC	ASIC777 DMA07 error interruption		
CFBED	ASIC777 DMA08 error interruption		
CFBEE	ASIC777 DMA09 error interruption		
CFBEF	ASIC777 DMA10 error interruption		

6.12.16 CFBF# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFBF0	ASIC777 DMA11 error interruption	MFP board (MFPB)	C
CFBF1	ASIC777 DMA12 error interruption		
CFBF2	ASIC777 DMA13 error interruption		
CFBF3	ASIC777 DMA14 error interruption		
CFBF4	ASIC777 DMA15 error interruption		
CFBF5	ASIC777 DMA16 error interruption		
CFBF6	ASIC777 DMA17 error interruption		
CFBF7	ASIC777 DMA18 error interruption		
CFBF8	ASIC777 DMA19 error interruption		
CFBF9	ASIC777 DMA20 error interruption		
CFBFA	ASIC777 DMA21 error interruption		
CFBFB	ASIC777 DMA22 error interruption		
CFBFC	ASIC777 DMA23 error interruption		
CFBFD	ASIC777 DMA24 error interruption		
CFBFE	ASIC777 DMA25 error interruption		
CFBFF	ASIC777 DMA26 error interruption		

6.13 CFB## (bizhub C658/C558/C458)

6.13.1 CFB0# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB00	ASIC777 DMA00	MFP board (MFPB)	C
CFB01	ASIC777 DMA01		
CFB02	ASIC777 DMA02		
CFB03	ASIC777 DMA03		
CFB04	ASIC777 DMA04		
CFB05	ASIC777 DMA05		
CFB06	ASIC777 DMA06		

Error code	Item	Component	Rank
CFB07	ASIC777 DMA07		
CFB08	ASIC777 DMA08		
CFB09	ASIC777 DMA09		
CFB0A	ASIC777 DMA10		
CFB0B	ASIC777 DMA11		
CFB0C	ASIC777 DMA12		
CFB0D	ASIC777 DMA13		
CFB0E	ASIC777 DMA14		
CFB0F	ASIC777 DMA15		

6.13.2 CFB1# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB10	ASIC777 DMA16	MFP board (MFPB)	C
CFB11	ASIC777 DMA17		
CFB12	ASIC777 DMA18		
CFB13	ASIC777 DMA19		
CFB14	ASIC777 DMA20		
CFB15	ASIC777 DMA21		
CFB16	ASIC777 DMA22		
CFB17	ASIC777 DMA23		
CFB18	ASIC777 DMA24		
CFB19	ASIC777 DMA25		
CFB1A	ASIC777 DMA26		
CFB1B	ASIC777 DMA27		
CFB1C	ASIC777 DMA28		
CFB1D	ASIC777 DMA29		
CFB1E	ASIC777 DMA30		
CFB1F	ASIC777 DMA31		

6.13.3 CFB2# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB20	ASIC777 DMA32	MFP board (MFPB)	C
CFB21	ASIC777 DMA33		
CFB22	ASIC777 DMA34		
CFB23	ASIC777 DMA35		
CFB24	ASIC777 DMA36		
CFB25	ASIC777 DMA37		
CFB26	ASIC777 DMA38		
CFB27	ASIC777 DMA39		
CFB28	ASIC777 DMA40		
CFB29	ASIC777 DMA41		
CFB2A	ASIC777 DMA42		
CFB2B	ASIC777 DMA43		
CFB2C	ASIC777 DMA44		
CFB2D	ASIC777 DMA45		
CFB2E	ASIC777 DMA46		
CFB2F	ASIC777 DMA47		

6.13.4 CFB3# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB30	ASIC777 DMA48	MFP board (MFPB)	C
CFB31	ASIC777 DMA49		
CFB32	ASIC777 DMA50		
CFB33	ASIC777 DMA51		
CFB34	ASIC777 DMA52		
CFB35	ASIC777 DMA53		
CFB36	ASIC777 DMA54		

Error code	Item	Component	Rank
CFB37	ASIC777 DMA55		

6.13.5 CFB6# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB68	Dual scan image processing board (Asic2014/Asic777) DMA00	Dual scan image processing board (DSIPB)	C
CFB69	Dual scan image processing board (Asic2014/Asic777) DMA01		
CFB6A	Dual scan image processing board (Asic2014/Asic777) DMA02		
CFB6B	Dual scan image processing board (Asic2014/Asic777) DMA03		
CFB6C	Dual scan image processing board (Asic2014/Asic777) DMA04		
CFB6D	Dual scan image processing board (Asic2014/Asic777) DMA05		
CFB6E	Dual scan image processing board (Asic2014/Asic777) DMA06		
CFB6F	Dual scan image processing board (Asic2014/Asic777) DMA07		

6.13.6 CFB7# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB70	Dual scan image processing board (Asic2014/Asic777) DMA08	Dual scan image processing board (DSIPB)	C
CFB71	Dual scan image processing board (Asic2014/Asic777) DMA09		
CFB72	Dual scan image processing board (Asic2014/Asic777) DMA10		
CFB73	Dual scan image processing board (Asic2014/Asic777) DMA11		
CFB74	Dual scan image processing board (Asic2014/Asic777) DMA12		
CFB75	Dual scan image processing board (Asic2014/Asic777) DMA13		
CFB76	Dual scan image processing board (Asic2014/Asic777) DMA14		
CFB77	Dual scan image processing board (Asic2014/Asic777) DMA15		
CFB78	Dual scan image processing board (Asic2014/Asic777) DMA16		
CFB79	Dual scan image processing board (Asic2014/Asic777) DMA17		
CFB7A	Dual scan image processing board (Asic2014/Asic777) DMA18		
CFB7B	Dual scan image processing board (Asic2014/Asic777) DMA19		
CFB7C	Dual scan image processing board (Asic2014/Asic777) DMA20		
CFB7D	Dual scan image processing board (Asic2014/Asic777) DMA21		
CFB7E	Dual scan image processing board (Asic2014/Asic777) DMA22		
CFB7F	Dual scan image processing board (Asic2014/Asic777) DMA23		

6.13.7 CFB8# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB80	Dual scan image processing board (Asic2014/Asic777) DMA24	Dual scan image processing board (DSIPB)	C
CFB81	Dual scan image processing board (Asic2014/Asic777) DMA25		
CFB82	Dual scan image processing board (Asic2014/Asic777) DMA26		
CFB83	Dual scan image processing board (Asic2014/Asic777) DMA27		
CFB84	Dual scan image processing board (Asic2014/Asic777) DMA28		
CFB85	Dual scan image processing board (Asic2014/Asic777) DMA29		
CFB86	Dual scan image processing board (Asic2014/Asic777) DMA30		
CFB87	Dual scan image processing board (Asic2014/Asic777) DMA31		
CFB88	Dual scan image processing board (Asic2014/Asic777) DMA32		
CFB89	Dual scan image processing board (Asic2014/Asic777) DMA33		
CFB8A	Dual scan image processing board (Asic2014/Asic777) DMA34		
CFB8B	Dual scan image processing board (Asic2014/Asic777) DMA35		
CFB8C	Dual scan image processing board (Asic2014/Asic777) DMA36		
CFB8D	Dual scan image processing board (Asic2014/Asic777) DMA37		
CFB8E	Dual scan image processing board (Asic2014/Asic777) DMA38		
CFB8F	Dual scan image processing board (Asic2014/Asic777) DMA39		

6.13.8 CFB9# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFB90	Dual scan image processing board (Asic2014/Asic777) DMA40	Dual scan image processing board (DSIPB)	C
CFB91	Dual scan image processing board (Asic2014/Asic777) DMA41		
CFB92	Dual scan image processing board (Asic2014/Asic777) DMA42		
CFB93	Dual scan image processing board (Asic2014/Asic777) DMA43		

Error code	Item	Component	Rank
CFB94	Dual scan image processing board (Asic2014/Asic777) DMA44		
CFB95	Dual scan image processing board (Asic2014/Asic777) DMA45		
CFB96	Dual scan image processing board (Asic2014/Asic777) DMA46		
CFB97	Dual scan image processing board (Asic2014/Asic777) DMA47		

6.13.9 CFBA# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBA3	Asic (PMS) DMA03	MFP board (MFPB)	C
CFBA7	Asic (PMS) DMA07		

6.13.10 CFBB# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBB2	Asic (PMS) DMA18	MFP board (MFPB)	C
CFBB3	Asic (PMS) DMA19		
CFBB4	Asic (PMS) DMA32		
CFBB5	Asic (PMS) DMA33		
CFBB6	Asic (PMS) DMA34		
CFBB7	Asic (PMS) DMA35		
CFBB8	Asic (PMS) DMA36		
CFBB9	Asic (PMS) DMA37		
CFBBA	Asic (PMS) DMA38		
CFBBB	Asic (PMS) DMA39		
CFBBC	Asic (PMS) DMA40		
CFBBD	Asic (PMS) DMA41		
CFBBE	Asic (PMS) DMA42		
CFBBF	Asic (PMS) DMA43		

6.13.11 CFBC# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBC0	ASIC777 interruption	• MFP board (MFPB) • Dual scan image processing board (DSIPB)	C
CFBC2	Dual scan image processing board (Asic2014/Asic777) DMA17 interruption		
CFBC3	Asic (PMS) interruption		
CFBC4	ASIC777 common register setting		
CFBC6	Dual scan image processing board (Asic2014/Asic777) common register setting		
CFBC7	Asic (PMS) common register setting		
CFBC8	ASIC777 BTC compression/extension unit		
CFBCA	Dual scan image processing board (Asic2014/Asic777) BTC compression/extension unit		
CFBCB	Asic (PMS) BTC compression/extension unit		
CFBCC	ASIC777 DMA00 error interruption		
CFBCD	ASIC777 DMA01 error interruption		
CFBCE	ASIC777 DMA02 error interruption		
CFBCF	ASIC777 DMA03 error interruption		

6.13.12 CFBD# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBD0	ASIC777 DMA04 error interruption	MFP board (MFPB)	C
CFBD1	ASIC777 DMA05 error interruption		
CFBD2	ASIC777 DMA06 error interruption		
CFBD3	ASIC777 DMA07 error interruption		
CFBD4	ASIC777 DMA08 error interruption		
CFBD5	ASIC777 DMA09 error interruption		
CFBD6	ASIC777 DMA10 error interruption		
CFBD7	ASIC777 DMA11 error interruption		
CFBD8	ASIC777 DMA12 error interruption		
CFBD9	ASIC777 DMA13 error interruption		

Error code	Item	Component	Rank
CFBDA	ASIC777 DMA14 error interruption		
CFBDB	ASIC777 DMA15 error interruption		
CFBDC	ASIC777 DMA16 error interruption		
CFBDD	ASIC777 DMA17 error interruption		
CFBDE	ASIC777 DMA18 error interruption		
CFBDF	ASIC777 DMA19 error interruption		

6.13.13 CFBE# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBE0	ASIC777 DMA20 error interruption	MFP board (MFPB)	C
CFBE1	ASIC777 DMA21 error interruption		
CFBE2	ASIC777 DMA22 error interruption		
CFBE3	ASIC777 DMA23 error interruption		
CFBE4	ASIC777 DMA24 error interruption		
CFBE5	ASIC777 DMA25 error interruption		
CFBE6	ASIC777 DMA26 error interruption		
CFBE7	ASIC777 DMA27 error interruption		
CFBE8	ASIC777 DMA28 error interruption		
CFBE9	ASIC777 DMA29 error interruption		
CFBEA	ASIC777 DMA30 error interruption		
CFBEB	ASIC777 DMA31 error interruption		
CFBEC	ASIC777 DMA32 error interruption		
CFBED	ASIC777 DMA33 error interruption		
CFBEE	ASIC777 DMA34 error interruption		
CFBEF	ASIC777 DMA35 error interruption		

6.13.14 CFBF# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFBF0	ASIC777 DMA36 error interruption	MFP board (MFPB)	C
CFBF1	ASIC777 DMA37 error interruption		
CFBF2	ASIC777 DMA38 error interruption		
CFBF3	ASIC777 DMA39 error interruption		
CFBF4	ASIC777 DMA40 error interruption		
CFBF5	ASIC777 DMA41 error interruption		
CFBF6	ASIC777 DMA42 error interruption		
CFBF7	ASIC777 DMA43 error interruption		
CFBF8	ASIC777 DMA44 error interruption		
CFBF9	ASIC777 DMA45 error interruption		
CFBFA	ASIC777 DMA46 error interruption		
CFBFB	ASIC777 DMA47 error interruption		
CFBFC	ASIC777 DMA48 error interruption		
CFBFD	ASIC777 DMA49 error interruption		
CFBFE	ASIC777 DMA50 error interruption		
CFBFF	ASIC777 DMA51 error interruption		

6.14 CFC## (bizhub C368/C308/C258)

6.14.1 CFC0# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC00	ASIC777 DMA27 error interruption	MFP board (MFPB)	C
CFC01	ASIC777 DMA28 error interruption		
CFC02	ASIC777 DMA29 error interruption		
CFC03	ASIC777 DMA30 error interruption		
CFC04	ASIC777 DMA31 error interruption		
CFC05	ASIC777 DMA32 error interruption		
CFC06	ASIC777 DMA33 error interruption		
CFC07	ASIC777 DMA34 error interruption		
CFC08	ASIC777 DMA35 error interruption		

Error code	Item	Component	Rank
CFC09	ASIC777 DMA36 error interruption		
CFC0A	ASIC777 DMA37 error interruption		
CFC0B	ASIC777 DMA38 error interruption		
CFC0C	ASIC777 DMA39 error interruption		
CFC0D	ASIC777 DMA40 error interruption		
CFC0E	ASIC777 DMA41 error interruption		
CFC0F	ASIC777 DMA42 error interruption		

6.14.2 CFC1# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC10	ASIC777 DMA43 error interruption	MFP board (MFPB)	C
CFC11	ASIC777 DMA44 error interruption		
CFC12	ASIC777 DMA45 error interruption		
CFC13	ASIC777 DMA46 error interruption		
CFC14	ASIC777 DMA47 error interruption		
CFC15	ASIC777 DMA48 error interruption		
CFC16	ASIC777 DMA49 error interruption		
CFC17	ASIC777 DMA50 error interruption		
CFC18	ASIC777 DMA51 error interruption		
CFC19	ASIC777 DMA52 error interruption		
CFC1A	ASIC777 DMA53 error interruption		
CFC1B	ASIC777 DMA54 error interruption		
CFC1C	ASIC777 DMA55 error interruption		
CFC1D	ASIC777 watchdog timer error interruption		
CFC1E	ASIC777 image output interface had underrun		
CFC1F	ASIC777 image input interface had overflow		

6.14.3 CFC2# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC20	ASIC777 LCD output interface had underrun	MFP board (MFPB)	C
CFC21	ASIC777 JBIG core detected unknown marker		
CFC22	ASIC777 JBIG core detected SC count overflow		
CFC23	SDTMDT is accessed during ASIC777 soft reset active		
CFC24	DMA04 (table) is accessed during ASIC777 soft reset active		
CFC25	DMA06 (FAX debug) is accessed during ASIC777 soft reset active		
CFC26	ASIC777 SDTMDT had a timeout error		
CFC27	ASIC777 SDTAAA had a timeout error		
CFC28	ASIC777 SDTAAA had an access lock error		
CFC29	An error to access to the invalid area of sub-CPU via ASIC777 SDTAAA		
CFC2A	An overflow detected in ASIC777 DMA14 mdt_ctr_14o		
CFC2B	Compression data size over detected during ASIC777 DMA14 JPEG compression		
CFC2C	ASIC777 DMA14 EOI yet to be detected		
CFC2D	A "1" is set when access is made to the CMM table of DMA14 while the ASIC777 soft reset is being active		
CFC2E	A "1" is set when access is made to the JPEG core slave space of DMA14 while the ASIC777 soft reset is being active		
CFC2F	A "1" is set when access is made to the comment table of DMA14 while the ASIC777 soft reset is being active		

6.14.4 CFC3# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC30	An overflow detected in ASIC777 DMA15 mdt_ctr_15o	MFP board (MFPB)	C
CFC31	Compression data size over detected during ASIC777 DMA15 JPEG compression		
CFC32	ASIC777 DMA15 EOI yet to be detected		
CFC33	A "1" is set when access is made to the CMM table of DMA15 while the ASIC777 soft reset is being active		

Error code	Item	Component	Rank
CFC34	A "1" is set when access is made to the JPEG core slave space of DMA15 while the ASIC777 soft reset is being active		
CFC35	A "1" is set when access is made to the comment table of DMA15 while the ASIC777 soft reset is being active		
CFC36	Completer Abort exists in ASIC777 memory master access		
CFC37	Unsupported Request exists in ASIC777 memory master access		
CFC38	Completion Timeout exists in ASIC777 memory master access		
CFC39	Poisoned TLP exists in ASIC777 memory master access		
CFC3A	Unsupported Request exists in ASIC777 memory target access		
CFC3B	Poisoned TLP exists in ASIC777 memory target access		
CFC3C	Unsupported Request TLP exists in ASIC777 config target access		
CFC3D	Poisoned TLP exists in ASIC777 config target access		
CFC3E	A "1" is set when a rising edge is detected of VD output from the ASIC777 CPS		
CFC3F	A "1" is set when a falling edge is detected of VD output from the ASIC777 CPS		

6.14.5 CFC4# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC40	A "1" is set when a rising edge is detected of VD output from the ASIC777 DMA03	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFC41	A "1" is set when a falling edge is detected of VD output from the ASIC777 DMA03		
CFC42	A "1" is set when a falling edge is detected of VSYNC input to the ASIC777 DMA03		
CFC43	ASIC777 Emepror-IP error		
CFC44	ASIC777 external bus error		
CFC45	ASIC777 PC delay interrupt (INT_PCD0)		
CFC46	ASIC777 PC delay interrupt (INT_PCD1)		
CFC47	ASIC777 PC delay interrupt (INT_PCD2)		
CFC48	EFI relay board (Asic30) DMA00 error interruption		
CFC49	EFI relay board (Asic30) DMA01 error interruption		
CFC4A	EFI relay board (Asic30) DMA02 error interruption		
CFC4B	EFI relay board (Asic30) DMA03 error interruption		
CFC4C	EFI relay board (Asic30) DMA04 error interruption		
CFC4D	EFI relay board (Asic30) DMA05 error interruption		
CFC4E	EFI relay board (Asic30) DMA06 error interruption		
CFC4F	EFI relay board (Asic30) DMA07 error interruption		

6.14.6 CFC5# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC50	EFI relay board (Asic30) DMA08 error interruption	EFI relay board (VI-508)	C
CFC51	EFI relay board (Asic30) DMA09 error interruption		
CFC52	EFI relay board (Asic30) DMA10 error interruption		
CFC53	EFI relay board (Asic30) DMA11 error interruption		
CFC54	EFI relay board (Asic30) DMA12 error interruption		
CFC55	EFI relay board (Asic30) DMA13 error interruption		
CFC56	EFI relay board (Asic30) DMA14 error interruption		
CFC57	EFI relay board (Asic30) DMA15 error interruption		
CFC58	EFI relay board (Asic30) DMA16 error interruption		
CFC59	EFI relay board (Asic30) DMA17 error interruption		
CFC5A	EFI relay board (Asic30) DMA18 error interruption		
CFC5B	EFI relay board (Asic30) DMA19 error interruption		
CFC5C	EFI relay board (Asic30) DMA20 error interruption		
CFC5D	EFI relay board (Asic30) DMA21 error interruption		
CFC5E	EFI relay board (Asic30) DMA22 error interruption		
CFC5F	EFI relay board (Asic30) DMA23 error interruption		

6.14.7 CFC6# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC60	EFI relay board (Asic30) DMA24 error interruption	EFI relay board (VI-508)	C
CFC61	EFI relay board (Asic30) DMA25 error interruption		
CFC62	EFI relay board (Asic30) DMA26 error interruption		
CFC63	EFI relay board (Asic30) DMA27 error interruption		
CFC64	EFI relay board (Asic30) DMA28 error interruption		
CFC65	EFI relay board (Asic30) DMA29 error interruption		
CFC66	EFI relay board (Asic30) DMA30 error interruption		
CFC67	EFI relay board (Asic30) DMA31 error interruption		
CFC68	EFI relay board (Asic30) image input interface had overflow		
CFC69	EFI relay board (Asic30) JBIG core detected unknown marker		
CFC6A	EFI relay board (Asic30) JBIG core detected SC count overflow		
CFC6B	SDTMDT is accessed during EFI relay board (Asic30) soft reset active		
CFC6C	EmperorIP is accessed during EFI relay board (Asic30) soft reset active		
CFC6D	EFI relay board (Asic30) SDTMDT had a timeout error		
CFC6E	Completer Abort exists in EFI relay board (Asic30) memory master access		
CFC6F	supported Request exists in EFI relay board (Asic30) memory master access		

6.14.8 CFC7# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC70	Completion Timeout exists in EFI relay board (Asic30) memory master access	• EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFC71	Poisoned TLP exists in EFI relay board (Asic30) memory master access		
CFC72	Unsupported Request exists in EFI relay board (Asic30) memory target access		
CFC73	Poisoned TLP exists in EFI relay board (Asic30) memory target access		
CFC74	Unsupported Request TLP exists in EFI relay board (Asic30) config target access		
CFC75	Poisoned TLP exists in EFI relay board (Asic30) config target access		
CFC76	EFI relay board (Asic30) Emepror-IP error		
CFC77	Dual scan image processing board (Asic30/Asic777) DMA00 error interruption		
CFC78	Dual scan image processing board (Asic30/Asic777) DMA01 error interruption		
CFC79	Dual scan image processing board (Asic30/Asic777) DMA02 error interruption		
CFC7A	Dual scan image processing board (Asic30/Asic777) DMA03 error interruption		
CFC7B	Dual scan image processing board (Asic30/Asic777) DMA04 error interruption		
CFC7C	Dual scan image processing board (Asic30/Asic777) DMA05 error interruption		
CFC7D	Dual scan image processing board (Asic30/Asic777) DMA06 error interruption		
CFC7E	Dual scan image processing board (Asic30/Asic777) DMA07 error interruption		
CFC7F	Dual scan image processing board (Asic30/Asic777) DMA08 error interruption		

6.14.9 CFC8# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC80	Dual scan image processing board (Asic30/Asic777) DMA09 error interruption	Dual scan image processing board (DSIPB: DF-704)	C
CFC81	Dual scan image processing board (Asic30/Asic777) DMA10 error interruption		
CFC82	Dual scan image processing board (Asic30/Asic777) DMA11 error interruption		

Error code	Item	Component	Rank
CFC83	Dual scan image processing board (Asic30/Asic777) DMA12 error interruption		
CFC84	Dual scan image processing board (Asic30/Asic777) DMA13 error interruption		
CFC85	Dual scan image processing board (Asic30/Asic777) DMA14 error interruption		
CFC86	Dual scan image processing board (Asic30/Asic777) DMA15 error interruption		
CFC87	Dual scan image processing board (Asic30/Asic777) DMA16 error interruption		
CFC88	Dual scan image processing board (Asic30/Asic777) DMA17 error interruption		
CFC89	Dual scan image processing board (Asic30/Asic777) DMA18 error interruption		
CFC8A	Dual scan image processing board (Asic30/Asic777) DMA19 error interruption		
CFC8B	Dual scan image processing board (Asic30/Asic777) DMA20 error interruption		
CFC8C	Dual scan image processing board (Asic30/Asic777) DMA21 error interruption		
CFC8D	Dual scan image processing board (Asic30/Asic777) DMA22 error interruption		
CFC8E	Dual scan image processing board (Asic30/Asic777) DMA23 error interruption		
CFC8F	Dual scan image processing board (Asic30/Asic777) DMA24 error interruption		

6.14.10 CFC9# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFC90	Dual scan image processing board (Asic30/Asic777) DMA25 error interruption	Dual scan image processing board (DSIPB: DF-704)	C
CFC91	Dual scan image processing board (Asic30/Asic777) DMA26 error interruption		
CFC92	Dual scan image processing board (Asic30/Asic777) DMA27 error interruption		
CFC93	Dual scan image processing board (Asic30/Asic777) DMA28 error interruption		
CFC94	Dual scan image processing board (Asic30/Asic777) DMA29 error interruption		
CFC95	Dual scan image processing board (Asic30/Asic777) DMA30 error interruption		
CFC96	Dual scan image processing board (Asic30/Asic777) DMA31 error interruption		
CFC97	Dual scan image processing board (Asic777) DMA32 error interruption		
CFC98	Dual scan image processing board (Asic777) DMA33 error interruption		
CFC99	Dual scan image processing board (Asic777) DMA34 error interruption		
CFC9A	Dual scan image processing board (Asic777) DMA35 error interruption		
CFC9B	Dual scan image processing board (Asic777) DMA36 error interruption		
CFC9C	Dual scan image processing board (Asic777) DMA37 error interruption		
CFC9D	Dual scan image processing board (Asic777) DMA38 error interruption		
CFC9E	Dual scan image processing board (Asic777) DMA39 error interruption		
CFC9F	Dual scan image processing board (Asic777) DMA40 error interruption		

6.14.11 CFCA# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCA0	Dual scan image processing board (Asic777) DMA41 error interruption	Dual scan image processing board (DSIPB: DF-704)	C
CFCA1	Dual scan image processing board (Asic777) DMA42 error interruption		
CFCA2	Dual scan image processing board (Asic777) DMA43 error interruption		
CFCA3	Dual scan image processing board (Asic777) DMA44 error interruption		
CFCA4	Dual scan image processing board (Asic777) DMA45 error interruption		
CFCA5	Dual scan image processing board (Asic777) DMA46 error interruption		
CFCA6	Dual scan image processing board (Asic777) DMA47 error interruption		

Error code	Item	Component	Rank
CFCA7	Dual scan image processing board (Asic777) DMA48 error interruption		
CFCA8	Dual scan image processing board (Asic777) DMA49 error interruption		
CFCA9	Dual scan image processing board (Asic777) DMA50 error interruption		
CFCAA	Dual scan image processing board (Asic777) DMA51 error interruption		
CFCAB	Dual scan image processing board (Asic777) DMA52 error interruption		
CFCAC	Dual scan image processing board (Asic777) DMA53 error interruption		
CFCAD	Dual scan image processing board (Asic777) DMA54 error interruption		
CFCAE	Dual scan image processing board (Asic777) DMA55 error interruption		
CFCAF	Dual scan image processing board (Asic777) watchdog timer error interruption		

6.14.12 CFCB# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCB0	Dual scan image processing board (Asic777) image output interface had underrun	Dual scan image processing board (DSIPB: DF-704)	C
CFCB1	Dual scan image processing board (Asic777) image input interface had overflow		
CFCB2	Dual scan image processing board (Asic777) LCD output interface had underrun		
CFCB3	Dual scan image processing board (Asic777) JBIG core detected unknown marker		
CFCB4	Dual scan image processing board (Asic777) JBIG core detected SC count overflow		
CFCB5	SDTMDT is accessed during dual scan image processing board (Asic777) soft reset active		
CFCB6	DMA04 (table) is accessed during dual scan image processing board (Asic777) soft reset active		
CFCB7	DMA06 (FAX debug) is accessed during dual scan image processing board (Asic777) soft reset active		
CFCB8	Dual scan image processing board (Asic777) SDTMDT had a timeout error		
CFCB9	Dual scan image processing board (Asic777) SDTAAA had a timeout error		
CFCBA	Dual scan image processing board (Asic777) SDTAAA had an access lock error		
CFCBB	An error to access to the invalid area of sub-CPU via dual scan image processing board (Asic777) SDTAAA		
CFCBC	An overflow detected in dual scan image processing board (Asic777) DMA14 mdt_ctr_14o		
CFCBD	Compression data size over detected during dual scan image processing board (Asic777) DMA14 JPEG compression		
CFCBE	Dual scan image processing board (Asic777) DMA14 EOI yet to be detected		
CFCBF	A "1" is set when access is made to the CMM table of DMA14 while the dual scan image processing board (Asic777) soft reset is being active		

6.14.13 CFCC# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCC0	A "1" is set when access is made to the JPEG core slave space of DMA14 while the dual scan image processing board (Asic777) soft reset is being active	Dual scan image processing board (DSIPB: DF-704)	C
CFCC1	A "1" is set when access is made to the comment table of DMA14 while the dual scan image processing board (Asic777) soft reset is being active		
CFCC2	An overflow detected in dual scan image processing board (Asic777) DMA15 mdt_ctr_15o		
CFCC3	Compression data size over detected during dual scan image processing board (Asic777) DMA15 JPEG compression		
CFCC4	Dual scan image processing board (Asic777) DMA15 EOI yet to be detected		
CFCC5	A "1" is set when access is made to the CMM table of DMA15 while the dual scan image processing board (Asic777) soft reset is being active		

Error code	Item	Component	Rank
CFCC6	A "1" is set when access is made to the JPEG core slave space of DMA15 while the dual scan image processing board (Asic777) soft reset is being active		
CFCC7	A "1" is set when access is made to the comment table of DMA15 while the dual scan image processing board (Asic777) soft reset is being active		
CFCC8	Completer Abort exists in dual scan image processing board (Asic777) memory master access		
CFCC9	Unsupported Request exists in dual scan image processing board (Asic777) memory master access		
CFCCA	Completion Timeout exists in dual scan image processing board (Asic777) memory master access		
CFCCB	Poisoned TLP exists in dual scan image processing board (Asic777) memory master access		
CFCCC	Unsupported Request exists in dual scan image processing board (Asic777) memory target access		
CFCCD	Poisoned TLP exists in dual scan image processing board (Asic777) memory target access		
CFCCE	Unsupported Request TLP exists in dual scan image processing board (Asic777) config target access		
CFCCF	Poisoned TLP exists in dual scan image processing board (Asic777) config target access		

6.14.14 CFCD# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCD0	A "1" is set when a rising edge is detected of VD output from the dual scan image processing board (Asic777) CPS	Dual scan image processing board (DSIPB: DF-704)	C
CFCD1	A "1" is set when a falling edge is detected of VD output from the dual scan image processing board (Asic777) CPS		
CFCD2	A "1" is set when a rising edge is detected of VD output from the dual scan image processing board (Asic777) DMA03		
CFCD3	A "1" is set when a falling edge is detected of VD output from the dual scan image processing board (Asic777) DMA03		
CFCD4	A "1" is set when a falling edge is detected of VSYNC input to the dual scan image processing board (Asic777) DMA03		
CFCD5	Dual scan image processing board (Asic777) Emepror-IP error		
CFCD6	Dual scan image processing board (Asic777) external bus error		
CFCD7	Dual scan image processing board (Asic777) PC delay interrupt (INT_PCD0)		
CFCD8	Dual scan image processing board (Asic777) PC delay interrupt (INT_PCD1)		
CFCD9	Dual scan image processing board (Asic777) PC delay interrupt (INT_PCD2)		
CFCDA	Dual scan image processing board (Asic30) image input interface had overflow		
CFCDB	Dual scan image processing board (Asic30) JBIG core detected unknown marker		
CFCDC	Dual scan image processing board (Asic30) JBIG core detected SC count overflow		
CFCDD	SDTMDT is accessed during dual scan image processing board (Asic30) soft reset active		
CFCDE	EmperorIP is accessed during dual scan image processing board (Asic30) soft reset active		
CFCDF	Dual scan image processing board (Asic30) SDTMDT had a timeout error		

6.14.15 CFCE# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCE0	Completer Abort exists in dual scan image processing board (Asic30) memory master access	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704)	C
CFCE1	supported Request exists in dual scan image processing board (Asic30) memory master access		
CFCE2	Completion Timeout exists in dual scan image processing board (Asic30) memory master access		

Error code	Item	Component	Rank
CFCE3	Poisoned TLP exists in dual scan image processing board (Asic30) memory master access		
CFCE4	Unsupported Request exists in dual scan image processing board (Asic30) memory target access		
CFCE5	Poisoned TLP exists in dual scan image processing board (Asic30) memory target access		
CFCE6	Unsupported Request TLP exists in dual scan image processing board (Asic30) config target access		
CFCE7	Poisoned TLP exists in dual scan image processing board (Asic30) config target access		
CFCE8	Dual scan image processing board (Asic30) Emepror-IP error		
CFCEC	Asic (PMS) DMA03 error interruption		

6.14.16 CFCF# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFCF0	Asic (PMS) DMA07 error interruption	MFP board (MFPB)	C
CFCFB	Asic (PMS) DMA18 error interruption		
CFCFC	Asic (PMS) DMA19 error interruption		
CFCFD	Asic (PMS) DMA32 error interruption		
CFCFE	Asic (PMS) DMA33 error interruption		
CFCFF	Asic (PMS) DMA34 error interruption		

6.15 CFC## (bizhub C658/C558/C458)

6.15.1 CFC0# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFC00	ASIC777 DMA52 error interruption	MFP board (MFPB)	C
CFC01	ASIC777 DMA53 error interruption		
CFC02	ASIC777 DMA54 error interruption		
CFC03	ASIC777 DMA55 error interruption		
CFC04	ASIC777 watchdog timer error interruption		
CFC05	ASIC777 image output interface had underrun		
CFC06	ASIC777 image input interface had overflow		
CFC07	ASIC777 LCD output interface had underrun		
CFC08	ASIC777 JBIG core detected unknown marker		
CFC09	ASIC777 JBIG core detected SC count overflow		
CFC0A	SDTMDT is accessed during ASIC777 soft reset active		
CFC0B	DMA04 (table) is accessed during ASIC777 soft reset active		
CFC0C	DMA06 (FAX debug) is accessed during ASIC777 soft reset active		
CFC0D	ASIC777 SDTMDT had a timeout error		
CFC0E	ASIC777 SDTAAA had a timeout error		
CFC0F	ASIC777 SDTAAA had an access lock error		

6.15.2 CFC1# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFC10	An error to access to the invalid area of sub-CPU via ASIC777 SDTAAA	MFP board (MFPB)	C
CFC11	An overflow detected in ASIC777 DMA14 mdt_ctr_14o		
CFC12	Compression data size over detected during ASIC777 DMA14 JPEG compression		
CFC13	ASIC777 DMA14 EOI yet to be detected		
CFC14	A "1" is set when access is made to the CMM table of DMA14 while the ASIC777 soft reset is being active		
CFC15	A "1" is set when access is made to the JPEG core slave space of DMA14 while the ASIC777 soft reset is being active		
CFC16	A "1" is set when access is made to the comment table of DMA14 while the ASIC777 soft reset is being active		
CFC17	An overflow detected in ASIC777 DMA15 mdt_ctr_15o		
CFC18	Compression data size over detected during ASIC777 DMA15 JPEG compression		
CFC19	ASIC777 DMA15 EOI yet to be detected		

Error code	Item	Component	Rank
CFC1A	A "1" is set when access is made to the CMM table of DMA15 while the ASIC777 soft reset is being active		
CFC1B	A "1" is set when access is made to the JPEG core slave space of DMA15 while the ASIC777 soft reset is being active		
CFC1C	A "1" is set when access is made to the comment table of DMA15 while the ASIC777 soft reset is being active		
CFC1D	Completer Abort exists in ASIC777 memory master access		
CFC1E	Unsupported Request exists in ASIC777 memory master access		
CFC1F	Completion Timeout exists in ASIC777 memory master access		

6.15.3 CFC2# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFC20	Poisoned TLP exists in ASIC777 memory master access	MFP board (MFPB)	C
CFC21	Unsupported Request exists in ASIC777 memory target access		
CFC22	Poisoned TLP exists in ASIC777 memory target access		
CFC23	Unsupported Request TLP exists in ASIC777 config target access		
CFC24	Poisoned TLP exists in ASIC777 config target access		
CFC25	A "1" is set when a rising edge is detected of VD output from the ASIC777 CPS		
CFC26	A "1" is set when a falling edge is detected of VD output from the ASIC777 CPS		
CFC27	A "1" is set when a rising edge is detected of VD output from the ASIC777 DMA03		
CFC28	A "1" is set when a falling edge is detected of VD output from the ASIC777 DMA03		
CFC29	A "1" is set when a falling edge is detected of VSYNC input to the ASIC777 DMA03		
CFC2A	ASIC777 Emepror-IP error		
CFC2B	ASIC777 external bus error		
CFC2C	ASIC777 PC delay interrupt (INT_PCD0)		
CFC2D	ASIC777 PC delay interrupt (INT_PCD1)		
CFC2E	ASIC777 PC delay interrupt (INT_PCD2)		

6.15.4 CFCA# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFCA6	Dual scan image processing board (Asic2014/Asic777) DMA00 error interruption	Dual scan image processing board (DSIPB)	C
CFCA7	Dual scan image processing board (Asic2014/Asic777) DMA01 error interruption		
CFCA8	Dual scan image processing board (Asic2014/Asic777) DMA02 error interruption		
CFCA9	Dual scan image processing board (Asic2014/Asic777) DMA03 error interruption		
CFCAA	Dual scan image processing board (Asic2014/Asic777) DMA04 error interruption		
CFCAB	Dual scan image processing board (Asic2014/Asic777) DMA05 error interruption		
CFCAC	Dual scan image processing board (Asic2014/Asic777) DMA06 error interruption		
CFCAD	Dual scan image processing board (Asic2014/Asic777) DMA07 error interruption		
CFCAE	Dual scan image processing board (Asic2014/Asic777) DMA08 error interruption		
CFCAF	Dual scan image processing board (Asic2014/Asic777) DMA09 error interruption		

6.15.5 CFCB# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFCB0	Dual scan image processing board (Asic2014/Asic777) DMA10 error interruption	Dual scan image processing board (DSIPB)	C
CFCB1	Dual scan image processing board (Asic2014/Asic777) DMA11 error interruption		

Error code	Item	Component	Rank
CFCB2	Dual scan image processing board (Asic2014/Asic777) DMA12 error interruption		
CFCB3	Dual scan image processing board (Asic2014/Asic777) DMA13 error interruption		
CFCB4	Dual scan image processing board (Asic2014/Asic777) DMA14 error interruption		
CFCB5	Dual scan image processing board (Asic2014/Asic777) DMA15 error interruption		
CFCB6	Dual scan image processing board (Asic2014/Asic777) DMA16 error interruption		
CFCB7	Dual scan image processing board (Asic2014/Asic777) DMA17 error interruption		
CFCB8	Dual scan image processing board (Asic2014/Asic777) DMA18 error interruption		
CFCB9	Dual scan image processing board (Asic2014/Asic777) DMA19 error interruption		
CFCBA	Dual scan image processing board (Asic2014/Asic777) DMA20 error interruption		
CFCBB	Dual scan image processing board (Asic2014/Asic777) DMA21 error interruption		
CFCBC	Dual scan image processing board (Asic2014/Asic777) DMA22 error interruption		
CFCBD	Dual scan image processing board (Asic2014/Asic777) DMA23 error interruption		
CFCBE	Dual scan image processing board (Asic2014/Asic777) DMA24 error interruption		
CFCBF	Dual scan image processing board (Asic2014/Asic777) DMA25 error interruption		

6.15.6 CFCC# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFCC0	Dual scan image processing board (Asic2014/Asic777) DMA26 error interruption	Dual scan image processing board (DSIPB)	C
CFCC1	Dual scan image processing board (Asic2014/Asic777) DMA27 error interruption		
CFCC2	Dual scan image processing board (Asic2014/Asic777) DMA28 error interruption		
CFCC3	Dual scan image processing board (Asic2014/Asic777) DMA29 error interruption		
CFCC4	Dual scan image processing board (Asic2014/Asic777) DMA30 error interruption		
CFCC5	Dual scan image processing board (Asic2014/Asic777) DMA31 error interruption		
CFCC6	Dual scan image processing board (Asic2014/Asic777) DMA32 error interruption		
CFCC7	Dual scan image processing board (Asic2014/Asic777) DMA33 error interruption		
CFCC8	Dual scan image processing board (Asic2014/Asic777) DMA34 error interruption		
CFCC9	Dual scan image processing board (Asic2014/Asic777) DMA35 error interruption		
CFCCA	Dual scan image processing board (Asic2014/Asic777) DMA36 error interruption		
CFCCB	Dual scan image processing board (Asic2014/Asic777) DMA37 error interruption		
CFCCC	Dual scan image processing board (Asic2014/Asic777) DMA38 error interruption		
CFCCD	Dual scan image processing board (Asic2014/Asic777) DMA39 error interruption		
CFCCE	Dual scan image processing board (Asic2014/Asic777) DMA40 error interruption		
CFCCF	Dual scan image processing board (Asic2014/Asic777) DMA41 error interruption		

6.15.7 CFCD# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFCD0	Dual scan image processing board (Asic2014/Asic777) DMA42 error interruption	Dual scan image processing board (DSIPB)	C
CFCD1	Dual scan image processing board (Asic2014/Asic777) DMA43 error interruption		
CFCD2	Dual scan image processing board (Asic2014/Asic777) DMA44 error interruption		
CFCD3	Dual scan image processing board (Asic2014/Asic777) DMA45 error interruption		
CFCD4	Dual scan image processing board (Asic2014/Asic777) DMA46 error interruption		
CFCD5	Dual scan image processing board (Asic2014/Asic777) DMA47 error interruption		
CFCDE	Dual scan image processing board (Asic2014/Asic777) watchdog timer error interruption		

6.16 CFD## (bizhub C368/C308/C258)

6.16.1 CFD0# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD00	Asic (PMS) DMA35 error interruption	MFP board (MFPB)	C
CFD01	Asic (PMS) DMA36 error interruption		
CFD02	Asic (PMS) DMA37 error interruption		
CFD03	Asic (PMS) DMA38 error interruption		
CFD04	Asic (PMS) DMA39 error interruption		
CFD05	Asic (PMS) DMA40 error interruption		
CFD06	Asic (PMS) DMA41 error interruption		
CFD07	Asic (PMS) DMA42 error interruption		
CFD08	Asic (PMS) DMA43 error interruption		
CFD09	Asic (PMS) watchdog timer error interruption		
CFD0A	Asic (PMS) image output interface had underrun		
CFD0B	Asic (PMS) JBIG core detected unknown marker		
CFD0C	Asic (PMS) JBIG core detected SC count overflow		
CFD0D	SDTMDT is accessed during Asic (PMS) soft reset active		
CFD0E	Asic (PMS) SDTMDT had a timeout error		
CFD0F	Completer Abort exists in Asic (PMS) memory master access		

6.16.2 CFD1# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD10	Unsupported Request exists in Asic (PMS) memory master access	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFD11	Completion Timeout exists in Asic (PMS) memory master access		
CFD12	Poisoned TLP exists in Asic (PMS) memory master access		
CFD13	Unsupported Request exists in Asic (PMS) memory target access		
CFD14	Poisoned TLP exists in Asic (PMS) memory target access		
CFD15	Unsupported Request TLP exists in Asic (PMS) config target access		
CFD16	Unsupported Poisoned TLP exists in Asic (PMS) config target access		
CFD17	Asic (PMS) external bus error		
CFD18	EEI relay board (second Asic30) DMA00 error interruption		
CFD19	EFI relay board (second Asic30) DMA01 error interruption		
CFD1A	EFI relay board (second Asic30) DMA02 error interruption		
CFD1B	EFI relay board (second Asic30) DMA03 error interruption		
CFD1C	EFI relay board (second Asic30) DMA04 error interruption		
CFD1D	EFI relay board (second Asic30) DMA05 error interruption		
CFD1E	EFI relay board (second Asic30) DMA06 error interruption		
CFD1F	EFI relay board (second Asic30) DMA07 error interruption		

6.16.3 CFD2# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD20	EFI relay board (second Asic30) DMA08 error interruption	EFI relay board (VI-508)	C

Error code	Item	Component	Rank
CFD21	EFI relay board (second Asic30) DMA09 error interruption		
CFD22	EFI relay board (second Asic30) DMA10 error interruption		
CFD23	EFI relay board (second Asic30) DMA11 error interruption		
CFD24	EFI relay board (second Asic30) DMA12 error interruption		
CFD25	EFI relay board (second Asic30) DMA13 error interruption		
CFD26	EFI relay board (second Asic30) DMA14 error interruption		
CFD27	EFI relay board (second Asic30) DMA15 error interruption		
CFD28	EFI relay board (second Asic30) DMA16 error interruption		
CFD29	EFI relay board (second Asic30) DMA17 error interruption		
CFD2A	EFI relay board (second Asic30) DMA18 error interruption		
CFD2B	EFI relay board (second Asic30) DMA19 error interruption		
CFD2C	EFI relay board (second Asic30) DMA20 error interruption		
CFD2D	EFI relay board (second Asic30) DMA21 error interruption		
CFD2E	EFI relay board (second Asic30) DMA22 error interruption		
CFD2F	EFI relay board (second Asic30) DMA23 error interruption		

6.16.4 CFD3# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD30	EFI relay board (second Asic30) DMA24 error interruption	EFI relay board (VI-508)	C
CFD31	EFI relay board (second Asic30) DMA25 error interruption		
CFD32	EFI relay board (second Asic30) DMA26 error interruption		
CFD33	EFI relay board (second Asic30) DMA27 error interruption		
CFD34	EFI relay board (second Asic30) DMA28 error interruption		
CFD35	EFI relay board (second Asic30) DMA29 error interruption		
CFD36	EEI relay board (second Asic30) DMA30 error interruption		
CFD37	EEI relay board (second Asic30) DMA31 error interruption		
CFD38	EFI relay board (second Asic30) image input interface had overflow		
CFD39	EFI relay board (second Asic30) JBIG core detected unknown marker		
CFD3A	EFI relay board (second Asic30) JBIG core detected SC count overflow		
CFD3B	SDTMDT is accessed during EFI relay board (second Asic30) soft reset active		
CFD3C	EmperorIP is accessed during EFI relay board (second Asic30) soft reset active		
CFD3D	EFI relay board (second Asic30) SDTMDT had a timeout error		
CFD3E	Completer Abort exists in EFI relay board (second Asic30) memory master access		
CFD3F	supported Request exists in EFI relay board (second Asic30) memory master access		

6.16.5 CFD4# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD40	Completion Timeout exists in EFI relay board (second Asic30) memory master access	• EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFD41	Poisoned TLP exists in EFI relay board (second Asic30) memory master access		
CFD42	Unsupported Request exists in EFI relay board (second Asic30) memory target access		
CFD43	Poisoned TLP exists in EFI relay board (second Asic30) memory target access		
CFD44	Unsupported Request TLP exists in EFI relay board (second Asic30) config target access		
CFD45	Poisoned TLP exists in EFI relay board (second Asic30) config target access		
CFD46	EFI relay board (second Asic30) Emepror-IP error		
CFD47	Dual scan image processing board JPEG DMA_A error interruption		
CFD48	Dual scan image processing board JPEG DMA_C error interruption		
CFD49	Dual scan image processing board JPEG DMA_D error interruption		
CFD4A	Dual scan image processing board JPEG watchdog timer error		
CFD4B	Dual scan image processing board JPEG PCI slave error		

Error code	Item	Component	Rank
CFD4C	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD4D	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD4E	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD4F	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		

6.16.6 CFD5# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD50	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A	Dual scan image processing board (DSIPB: DF-704)	C
CFD51	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD52	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD53	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD54	Dual scan image processing board JPEG, JPEG related interruption during internal processing at DMA_A		
CFD55	Dual scan image processing board JPEG, JPEG related interruption with multiple statuses during internal processing at DMA_A		
CFD56	Dual scan image processing board JPEG no EOI marker after the completion of transmitting the amount of codes set during expansion at DMA_A		
CFD57	Dual scan image processing board JPEG compressed data go beyond the set value during compression at DMA_A		
CFD58	Dual scan image processing board JPEG no EOI marker after the completion of transmitting the amount of codes set during compression at DMA_A		
CFD59	Dual scan image processing board JPEG target abort		
CFD5A	Dual scan image processing board JPEG master abort		
CFD5B	Dual scan image processing board JPEG forced suspension		
CFD5C	Dual scan image processing board JPEG PCI master detects retry error		
CFD5D	Dual scan image processing board JPEG master read data parity error		
CFD5E	Dual scan image processing board JPEG master write data parity error		
CFD5F	Dual scan image processing board JPEG system error		

6.16.7 CFD6# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD60	Dual scan image processing board JPEG slave read data parity error occurred	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704)	C
CFD61	Dual scan image processing board JPEG slave write data parity error occurred		
CFD62	Dual scan image processing board JPEG address parity error occurred		
CFD63	CPS2007 PCI slave illegal access error occurred		
CFD64	CPS2007 watchdog timer error occurred		
CFD65	CPS2007 address parity error occurred		
CFD66	CPS2007 slave write data parity error occurred		
CFD67	CPS2007 slave read data parity error occurred		
CFD68	ASIC777 DMA00 time out		
CFD69	ASIC777 DMA01 time out		
CFD6A	ASIC777 DMA02 time out		
CFD6B	ASIC777 DMA03 time out		
CFD6C	ASIC777 DMA04 time out		
CFD6D	ASIC777 DMA05 time out		
CFD6E	ASIC777 DMA06 time out		
CFD6F	ASIC777 DMA07 time out		

6.16.8 CFD7# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD70	ASIC777 DMA08 time out	MFP board (MFPB)	C
CFD71	ASIC777 DMA09 time out		
CFD72	ASIC777 DMA10 time out		
CFD73	ASIC777 DMA11 time out		
CFD74	ASIC777 DMA12 time out		
CFD75	ASIC777 DMA13 time out		
CFD76	ASIC777 DMA14 time out		
CFD77	ASIC777 DMA15 time out		
CFD78	ASIC777 DMA16 time out		
CFD79	ASIC777 DMA17 time out		
CFD7A	ASIC777 DMA18 time out		
CFD7B	ASIC777 DMA19 time out		
CFD7C	ASIC777 DMA20 time out		
CFD7D	ASIC777 DMA21 time out		
CFD7E	ASIC777 DMA22 time out		
CFD7F	ASIC777 DMA23 time out		

6.16.9 CFD8# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD80	ASIC777 DMA24 time out	MFP board (MFPB)	C
CFD81	ASIC777 DMA25 time out		
CFD82	ASIC777 DMA26 time out		
CFD83	ASIC777 DMA27 time out		
CFD84	ASIC777 DMA28 time out		
CFD85	ASIC777 DMA29 time out		
CFD86	ASIC777 DMA30 time out		
CFD87	ASIC777 DMA31 time out		
CFD88	ASIC777 DMA32 time out		
CFD89	ASIC777 DMA33 time out		
CFD8A	ASIC777 DMA34 time out		
CFD8B	ASIC777 DMA35 time out		
CFD8C	ASIC777 DMA36 time out		
CFD8D	ASIC777 DMA37 time out		
CFD8E	ASIC777 DMA38 time out		
CFD8F	ASIC777 DMA39 time out		

6.16.10 CFD9# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFD90	ASIC777 DMA40 time out	MFP board (MFPB)	C
CFD91	ASIC777 DMA41 time out		
CFD92	ASIC777 DMA42 time out		
CFD93	ASIC777 DMA43 time out		
CFD94	ASIC777 DMA44 time out		
CFD95	ASIC777 DMA45 time out		
CFD96	ASIC777 DMA46 time out		
CFD97	ASIC777 DMA47 time out		
CFD98	ASIC777 DMA48 time out		
CFD99	ASIC777 DMA49 time out		
CFD9A	ASIC777 DMA50 time out		
CFD9B	ASIC777 DMA51 time out		
CFD9C	ASIC777 DMA52 time out		
CFD9D	ASIC777 DMA53 time out		
CFD9E	ASIC777 DMA54 time out		
CFD9F	ASIC777 DMA55 time out		

6.16.11 CFDA# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDA0	EFI relay board (Asic30) DMA00 time out	EFI relay board (VI-508)	C
CFDA1	EFI relay board (Asic30) DMA01 time out		
CFDA2	EFI relay board (Asic30) DMA02 time out		
CFDA3	EFI relay board (Asic30) DMA03 time out		
CFDA4	EFI relay board (Asic30) DMA04 time out		
CFDA5	EFI relay board (Asic30) DMA05 time out		
CFDA6	EFI relay board (Asic30) DMA06 time out		
CFDA7	EFI relay board (Asic30) DMA07 time out		
CFDA8	EFI relay board (Asic30) DMA08 time out		
CFDA9	EFI relay board (Asic30) DMA09 time out		
CFDAA	EFI relay board (Asic30) DMA10 time out		
CFDAB	EFI relay board (Asic30) DMA11 time out		
CFDAC	EFI relay board (Asic30) DMA12 time out		
CFDAD	EFI relay board (Asic30) DMA13 time out		
CFDAE	EFI relay board (Asic30) DMA14 time out		
CFDAF	EFI relay board (Asic30) DMA15 time out		

6.16.12 CFDB# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDB0	EFI relay board (Asic30) DMA16 time out	EFI relay board (VI-508)	C
CFDB1	EFI relay board (Asic30) DMA17 time out		
CFDB2	EFI relay board (Asic30) DMA18 time out		
CFDB3	EFI relay board (Asic30) DMA19 time out		
CFDB4	EFI relay board (Asic30) DMA20 time out		
CFDB5	EFI relay board (Asic30) DMA21 time out		
CFDB6	EFI relay board (Asic30) DMA22 time out		
CFDB7	EFI relay board (Asic30) DMA23 time out		
CFDB8	EFI relay board (Asic30) DMA24 time out		
CFDB9	EFI relay board (Asic30) DMA25 time out		
CFDBA	EFI relay board (Asic30) DMA26 time out		
CFDBB	EFI relay board (Asic30) DMA27 time out		
CFDBC	EFI relay board (Asic30) DMA28 time out		
CFDBD	EFI relay board (Asic30) DMA29 time out		
CFDBE	EFI relay board (Asic30) DMA30 time out		
CFDBF	EFI relay board (Asic30) DMA31 time out		

6.16.13 CFDC# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDC0	Dual scan image processing board (Asic30/Asic777) DMA00 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFDC1	Dual scan image processing board (Asic30/Asic777) DMA01 time out		
CFDC2	Dual scan image processing board (Asic30/Asic777) DMA02 time out		
CFDC3	Dual scan image processing board (Asic30/Asic777) DMA03 time out		
CFDC4	Dual scan image processing board (Asic30/Asic777) DMA04 time out		
CFDC5	Dual scan image processing board (Asic30/Asic777) DMA05 time out		
CFDC6	Dual scan image processing board (Asic30/Asic777) DMA06 time out		
CFDC7	Dual scan image processing board (Asic30/Asic777) DMA07 time out		
CFDC8	Dual scan image processing board (Asic30/Asic777) DMA08 time out		
CFDC9	Dual scan image processing board (Asic30/Asic777) DMA09 time out		
CFDCA	Dual scan image processing board (Asic30/Asic777) DMA10 time out		
CFDCB	Dual scan image processing board (Asic30/Asic777) DMA11 time out		
CFDCC	Dual scan image processing board (Asic30/Asic777) DMA12 time out		
CFDCD	Dual scan image processing board (Asic30/Asic777) DMA13 time out		
CFDCE	Dual scan image processing board (Asic30/Asic777) DMA14 time out		
CFDCF	Dual scan image processing board (Asic30/Asic777) DMA15 time out		

6.16.14 CFDD# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDD0	Dual scan image processing board (Asic30/Asic777) DMA16 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFDD1	Dual scan image processing board (Asic30/Asic777) DMA17 time out		
CFDD2	Dual scan image processing board (Asic30/Asic777) DMA18 time out		
CFDD3	Dual scan image processing board (Asic30/Asic777) DMA19 time out		
CFDD4	Dual scan image processing board (Asic30/Asic777) DMA20 time out		
CFDD5	Dual scan image processing board (Asic30/Asic777) DMA21 time out		
CFDD6	Dual scan image processing board (Asic30/Asic777) DMA22 time out		
CFDD7	Dual scan image processing board (Asic30/Asic777) DMA23 time out		
CFDD8	Dual scan image processing board (Asic30/Asic777) DMA24 time out		
CFDD9	Dual scan image processing board (Asic30/Asic777) DMA25 time out		
CFDDA	Dual scan image processing board (Asic30/Asic777) DMA26 time out		
CFDDB	Dual scan image processing board (Asic30/Asic777) DMA27 time out		
CFDDC	Dual scan image processing board (Asic30/Asic777) DMA28 time out		
CFDDD	Dual scan image processing board (Asic30/Asic777) DMA29 time out		
CFDDE	Dual scan image processing board (Asic30/Asic777) DMA30 time out		
CFDDF	Dual scan image processing board (Asic30/Asic777) DMA31 time out		

6.16.15 CFDE# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDE0	Dual scan image processing board (Asic777) DMA32 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFDE1	Dual scan image processing board (Asic777) DMA33 time out		
CFDE2	Dual scan image processing board (Asic777) DMA34 time out		
CFDE3	Dual scan image processing board (Asic777) DMA35 time out		
CFDE4	Dual scan image processing board (Asic777) DMA36 time out		
CFDE5	Dual scan image processing board (Asic777) DMA37 time out		
CFDE6	Dual scan image processing board (Asic777) DMA38 time out		
CFDE7	Dual scan image processing board (Asic777) DMA39 time out		
CFDE8	Dual scan image processing board (Asic777) DMA40 time out		
CFDE9	Dual scan image processing board (Asic777) DMA41 time out		
CFDEA	Dual scan image processing board (Asic777) DMA42 time out		
CFDEB	Dual scan image processing board (Asic777) DMA43 time out		
CFDEC	Dual scan image processing board (Asic777) DMA44 time out		
CFDED	Dual scan image processing board (Asic777) DMA45 time out		
CFDEE	Dual scan image processing board (Asic777) DMA46 time out		
CFDEF	Dual scan image processing board (Asic777) DMA47 time out		

6.16.16 CFDF# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFDF0	Dual scan image processing board (Asic777) DMA48 time out	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704)	C
CFDF1	Dual scan image processing board (Asic777) DMA49 time out		
CFDF2	Dual scan image processing board (Asic777) DMA50 time out		
CFDF3	Dual scan image processing board (Asic777) DMA51 time out		
CFDF4	Dual scan image processing board (Asic777) DMA52 time out		
CFDF5	Dual scan image processing board (Asic777) DMA53 time out		
CFDF6	Dual scan image processing board (Asic777) DMA54 time out		
CFDF7	Dual scan image processing board (Asic777) DMA55 time out		
CFDFB	Asic (PMS) DMA03 time out		
CFDFF	Asic (PMS) DMA07 time out		

6.17 CFD## (bizhub C658/C558/C458)

6.17.1 CFD0# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD09	Dual scan image processing board (Asic2014) image output interface (DMA03) had underrun	Dual scan image processing board (DSIPB)	C
CFD0A	Dual scan image processing board (Asic2014) image input interface (DMA00) had overflow		

Error code	Item	Component	Rank
CFD0B	Dual scan image processing board (Asic2014) LCD output interface had underrun		
CFD0C	Dual scan image processing board (Asic2014) JBIG core detected unknown marker		
CFD0D	Dual scan image processing board (Asic2014) JBIG core detected SC count overflow		
CFD0E	Dual scan image processing board (Asic2014) image output interface (DMA23) had underrun		
CFD0F	Dual scan image processing board (Asic2014) image input interface (DMA16) had overflow		

6.17.2 CFD1# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD10	SDTMDT is accessed during dual scan image processing board (Asic2014) soft reset active	Dual scan image processing board (DSIPB)	C
CFD11	DMA04 (table) is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD12	DMA13 (FAX debug) is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD13	SDTAAA is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD14	A time out error is received on the dual scan image processing board (Asic2014) SDTMDT.		
CFD15	A time out error is received on the dual scan image processing board (Asic2014) SDTAAA.		
CFD16	An access lock error is received on the dual scan image processing board (Asic2014) SDTAAA.		
CFD17	An failed access to the invalid field of the sub CPU is received via the dual scan image processing board (Asic2014) SDTAAA.		
CFD18	An overflow detected in dual scan image processing board (Asic2014) DMA14 mdt_ctr_14o		
CFD19	Compression data size over detected during dual scan image processing board (Asic2014) DMA14 JPEG compression		
CFD1A	Dual scan image processing board (Asic2014) DMA14 EOI yet to be detected		
CFD1B	The CMM table of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD1C	The JPEG core slave space of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD1D	The comment table of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD1E	An overflow detected in dual scan image processing board (Asic2014) DMA15 mdt_ctr_15o		
CFD1F	Compression data size over detected during dual scan image processing board (Asic2014) DMA15 JPEG compression		

6.17.3 CFD2# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD20	Dual scan image processing board (Asic2014) DMA15 EOI yet to be detected	Dual scan image processing board (DSIPB)	C
CFD21	The CMM table of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD22	The JPEG core slave space of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD23	The comment table of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD24	Completer Abort exists in dual scan image processing board (Asic2014) memory master access		
CFD25	Unsupported Request exists in dual scan image processing board (Asic2014) memory master access		
CFD26	Completion Timeout exists in dual scan image processing board (Asic2014) memory master access		
CFD27	Poisoned TLP exists in dual scan image processing board (Asic2014) memory master access		

Error code	Item	Component	Rank
CFD28	Unsupported Request exists in dual scan image processing board (Asic2014) memory target access		
CFD29	Poisoned TLP exists in dual scan image processing board (Asic2014) memory target access		
CFD2A	Unsupported Request TLP exists in dual scan image processing board (Asic2014) config target access		
CFD2B	Poisoned TLP exists in dual scan image processing board (Asic2014) config target access		
CFD2C	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) CPS		
CFD2D	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) CPS		
CFD2E	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) DMA03		
CFD2F	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) DMA03		

6.17.4 CFD3# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD30	A falling edge is detected of VSYNC input to the dual scan image processing board (Asic2014) DMA03	Dual scan image processing board (DSIPB)	C
CFD31	The PP image processing control section register field is accessed during soft reset active of the PP image processing control section of the dual scan image processing board (Asic2014).		
CFD32	The input image processing control section register field is accessed during soft reset active of the input image processing control section of the dual scan image processing board (Asic2014).		
CFD33	The output image processing control section register field is accessed during soft reset active of the output image processing control section of the dual scan image processing board (Asic2014).		
CFD34	The UART register in the controller IO control section is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD35	The UART00 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD36	The UART01 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD37	The UART02 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD38	The UART03 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD39	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) FieryIF		
CFD3A	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) FieryIF		
CFD3B	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) DMA23		
CFD3C	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) DMA23		
CFD3D	A falling edge is detected of VSYNC input to the dual scan image processing board (Asic2014) DMA23		
CFD3E	EmperorIP is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD3F	Dual scan image processing board (Asic2014) Emepror-IP error		

6.17.5 CFD4# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD40	Dual scan image processing board (Asic2014) external bus error	• MFP board (MFPB) • Dual scan image processing board (DSIPB)	C
CFD41	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption during internal processing at DMA14		
CFD42	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption during internal processing at DMA15		
CFD43	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption with multiple statuses during internal processing at DMA14		

Error code	Item	Component	Rank
CFD44	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption with multiple statuses during internal processing at DMA15		
CFD45	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption at DMA14		
CFD46	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption at DMA15		
CFD4A	Asic (PMS) DMA03 error interruption		
CFD4E	Asic (PMS) DMA07 error interruption		

6.17.6 CFD5# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD59	Asic (PMS) DMA18 error interruption	MFP board (MFPB)	C
CFD5A	Asic (PMS) DMA19 error interruption		
CFD5B	Asic (PMS) DMA32 error interruption		
CFD5C	Asic (PMS) DMA33 error interruption		
CFD5D	Asic (PMS) DMA34 error interruption		
CFD5E	Asic (PMS) DMA35 error interruption		
CFD5F	Asic (PMS) DMA36 error interruption		

6.17.7 CFD6# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD60	Asic (PMS) DMA37 error interruption	MFP board (MFPB)	C
CFD61	Asic (PMS) DMA38 error interruption		
CFD62	Asic (PMS) DMA39 error interruption		
CFD63	Asic (PMS) DMA40 error interruption		
CFD64	Asic (PMS) DMA41 error interruption		
CFD65	Asic (PMS) DMA42 error interruption		
CFD66	Asic (PMS) DMA43 error interruption		
CFD67	Asic (PMS) watchdog timer error interruption		
CFD68	Asic (PMS) image output interface had underrun		
CFD69	Asic (PMS) JBIG core detected unknown marker		
CFD6A	Asic (PMS) JBIG core detected SC count overflow		
CFD6B	SDTMDT is accessed during Asic (PMS) soft reset active		
CFD6C	Asic (PMS) SDTMDT had a timeout error		
CFD6D	Completer Abort exists in Asic (PMS) memory master access		
CFD6E	Unsupported Request exists in Asic (PMS) memory master access		
CFD6F	Completion Timeout exists in Asic (PMS) memory master access		

6.17.8 CFD7# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD70	Poisoned TLP exists in Asic (PMS) memory master access	MFP board (MFPB)	C
CFD71	Unsupported Request exists in Asic (PMS) memory target access		
CFD72	Poisoned TLP exists in Asic (PMS) memory target access		
CFD73	Unsupported Request TLP exists in Asic (PMS) config target access		
CFD74	Poisoned TLP exists in Asic (PMS) config target access		
CFD75	Asic (PMS) external bus error		
CFD76	ASIC777 DMA00 time out		
CFD77	ASIC777 DMA01 time out		
CFD78	ASIC777 DMA02 time out		
CFD79	ASIC777 DMA03 time out		
CFD7A	ASIC777 DMA04 time out		
CFD7B	ASIC777 DMA05 time out		
CFD7C	ASIC777 DMA06 time out		
CFD7D	ASIC777 DMA07 time out		
CFD7E	ASIC777 DMA08 time out		
CFD7F	ASIC777 DMA09 time out		

6.17.9 CFD8# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD80	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFD81	ASIC777 DMA11 time out		
CFD82	ASIC777 DMA12 time out		
CFD83	ASIC777 DMA13 time out		
CFD84	ASIC777 DMA14 time out		
CFD85	ASIC777 DMA15 time out		
CFD86	ASIC777 DMA16 time out		
CFD87	ASIC777 DMA17 time out		
CFD88	ASIC777 DMA18 time out		
CFD89	ASIC777 DMA19 time out		
CFD8A	ASIC777 DMA20 time out		
CFD8B	ASIC777 DMA21 time out		
CFD8C	ASIC777 DMA22 time out		
CFD8D	ASIC777 DMA23 time out		
CFD8E	ASIC777 DMA24 time out		
CFD8F	ASIC777 DMA25 time out		

6.17.10 CFD9# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFD90	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFD91	ASIC777 DMA27 time out		
CFD92	ASIC777 DMA28 time out		
CFD93	ASIC777 DMA29 time out		
CFD94	ASIC777 DMA30 time out		
CFD95	ASIC777 DMA31 time out		
CFD96	ASIC777 DMA32 time out		
CFD97	ASIC777 DMA33 time out		
CFD98	ASIC777 DMA34 time out		
CFD99	ASIC777 DMA35 time out		
CFD9A	ASIC777 DMA36 time out		
CFD9B	ASIC777 DMA37 time out		
CFD9C	ASIC777 DMA38 time out		
CFD9D	ASIC777 DMA39 time out		
CFD9E	ASIC777 DMA40 time out		
CFD9F	ASIC777 DMA41 time out		

6.17.11 CFDA# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFDA0	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFDA1	ASIC777 DMA43 time out		
CFDA2	ASIC777 DMA44 time out		
CFDA3	ASIC777 DMA45 time out		
CFDA4	ASIC777 DMA46 time out		
CFDA5	ASIC777 DMA47 time out		
CFDA6	ASIC777 DMA48 time out		
CFDA7	ASIC777 DMA49 time out		
CFDA8	ASIC777 DMA50 time out		
CFDA9	ASIC777 DMA51 time out		
CFDAA	ASIC777 DMA52 time out		
CFDAB	ASIC777 DMA53 time out		
CFDAC	ASIC777 DMA54 time out		
CFDAD	ASIC777 DMA55 time out		

6.17.12 CFDD# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFDDE	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFDDF	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

6.17.13 CFDE# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFDE0	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFDE1	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFDE2	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFDE3	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFDE4	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFDE5	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFDE6	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFDE7	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		
CFDE8	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFDE9	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFDEA	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFDEB	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFDEC	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFDED	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFDEE	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFDEF	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

6.17.14 CFDF# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFDF0	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFDF1	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFDF2	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFDF3	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		
CFDF4	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFDF5	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFDF6	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFDF7	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFDF8	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFDF9	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		

Error code	Item	Component	Rank
CFDFA	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFDFB	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFDFC	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFDFD	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		
CFDFE	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFDFF	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

6.18 CFE## (bizhub C368/C308/C258)

6.18.1 CFE0# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE0A	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFE0B	Asic (PMS) DMA19 time out		
CFE0C	Asic (PMS) DMA32 time out		
CFE0D	Asic (PMS) DMA33 time out		
CFE0E	Asic (PMS) DMA34 time out		
CFE0F	Asic (PMS) DMA35 time out		

6.18.2 CFE1# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE10	Asic (PMS) DMA36 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFE11	Asic (PMS) DMA37 time out		
CFE12	Asic (PMS) DMA38 time out		
CFE13	Asic (PMS) DMA39 time out		
CFE14	Asic (PMS) DMA40 time out		
CFE15	Asic (PMS) DMA41 time out		
CFE16	Asic (PMS) DMA42 time out		
CFE17	Asic (PMS) DMA43 time out		
CFE18	EFI relay board (second Asic30) DMA00 time out		
CFE19	EFI relay board (second Asic30) DMA01 time out		
CFE1A	EFI relay board (second Asic30) DMA02 time out		
CFE1B	EFI relay board (second Asic30) DMA03 time out		
CFE1C	EFI relay board (second Asic30) DMA04 time out		
CFE1D	EFI relay board (second Asic30) DMA05 time out		
CFE1E	EFI relay board (second Asic30) DMA06 time out		
CFE1F	EFI relay board (second Asic30) DMA07 time out		

6.18.3 CFE2# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE20	EFI relay board (second Asic30) DMA08 time out	EFI relay board (VI-508)	C
CFE21	EFI relay board (second Asic30) DMA09 time out		
CFE22	EFI relay board (second Asic30) DMA10 time out		
CFE23	EFI relay board (second Asic30) DMA11 time out		
CFE24	EFI relay board (second Asic30) DMA12 time out		
CFE25	EFI relay board (second Asic30) DMA13 time out		
CFE26	EFI relay board (second Asic30) DMA14 time out		
CFE27	EFI relay board (second Asic30) DMA15 time out		
CFE28	EFI relay board (second Asic30) DMA16 time out		
CFE29	EFI relay board (second Asic30) DMA17 time out		
CFE2A	EFI relay board (second Asic30) DMA18 time out		
CFE2B	EFI relay board (second Asic30) DMA19 time out		
CFE2C	EFI relay board (second Asic30) DMA20 time out		
CFE2D	EFI relay board (second Asic30) DMA21 time out		

Error code	Item	Component	Rank
CFE2E	EFI relay board (second Asic30) DMA22 time out		
CFE2F	EFI relay board (second Asic30) DMA23 time out		

6.18.4 CFE3# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE30	EFI relay board (second Asic30) DMA24 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFE31	EFI relay board (second Asic30) DMA25 time out		
CFE32	EFI relay board (second Asic30) DMA26 time out		
CFE33	EFI relay board (second Asic30) DMA27 time out		
CFE34	EFI relay board (second Asic30) DMA28 time out		
CFE35	EFI relay board (second Asic30) DMA29 time out		
CFE36	EFI relay board (second Asic30) DMA30 time out		
CFE37	EFI relay board (second Asic30) DMA31 time out		
CFE38	Dual scan image processing board JPEG DMA_A time out		
CFE39	Dual scan image processing board JPEG DMA_C time out		
CFE3A	Dual scan image processing board JPEG DMA_D time out		
CFE3B	ASIC777 DMA00 time out		
CFE3C	ASIC777 DMA01 time out		
CFE3D	ASIC777 DMA02 time out		
CFE3E	ASIC777 DMA03 time out		
CFE3F	ASIC777 DMA04 time out		

6.18.5 CFE4# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE40	ASIC777 DMA05 time out	MFP board (MFPB)	C
CFE41	ASIC777 DMA06 time out		
CFE42	ASIC777 DMA07 time out		
CFE43	ASIC777 DMA08 time out		
CFE44	ASIC777 DMA09 time out		
CFE45	ASIC777 DMA10 time out		
CFE46	ASIC777 DMA11 time out		
CFE47	ASIC777 DMA12 time out		
CFE48	ASIC777 DMA13 time out		
CFE49	ASIC777 DMA14 time out		
CFE4A	ASIC777 DMA15 time out		
CFE4B	ASIC777 DMA16 time out		
CFE4C	ASIC777 DMA17 time out		
CFE4D	ASIC777 DMA18 time out		
CFE4E	ASIC777 DMA19 time out		
CFE4F	ASIC777 DMA20 time out		

6.18.6 CFE5# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE50	ASIC777 DMA21 time out	MFP board (MFPB)	C
CFE51	ASIC777 DMA22 time out		
CFE52	ASIC777 DMA23 time out		
CFE53	ASIC777 DMA24 time out		
CFE54	ASIC777 DMA25 time out		
CFE55	ASIC777 DMA26 time out		
CFE56	ASIC777 DMA27 time out		
CFE57	ASIC777 DMA28 time out		
CFE58	ASIC777 DMA29 time out		
CFE59	ASIC777 DMA30 time out		
CFE5A	ASIC777 DMA31 time out		
CFE5B	ASIC777 DMA32 time out		
CFE5C	ASIC777 DMA33 time out		
CFE5D	ASIC777 DMA34 time out		

Error code	Item	Component	Rank
CFE5E	ASIC777 DMA35 time out		
CFE5F	ASIC777 DMA36 time out		

6.18.7 CFE6# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE60	ASIC777 DMA37 time out	MFP board (MFPB)	C
CFE61	ASIC777 DMA38 time out		
CFE62	ASIC777 DMA39 time out		
CFE63	ASIC777 DMA40 time out		
CFE64	ASIC777 DMA41 time out		
CFE65	ASIC777 DMA42 time out		
CFE66	ASIC777 DMA43 time out		
CFE67	ASIC777 DMA44 time out		
CFE68	ASIC777 DMA45 time out		
CFE69	ASIC777 DMA46 time out		
CFE6A	ASIC777 DMA47 time out		
CFE6B	ASIC777 DMA48 time out		
CFE6C	ASIC777 DMA49 time out		
CFE6D	ASIC777 DMA50 time out		
CFE6E	ASIC777 DMA51 time out		
CFE6F	ASIC777 DMA52 time out		

6.18.8 CFE7# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE70	ASIC777 DMA53 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFE71	ASIC777 DMA54 time out		
CFE72	ASIC777 DMA55 time out		
CFE73	EFI relay board (Asic30) DMA00 time out		
CFE74	EFI relay board (Asic30) DMA01 time out		
CFE75	EFI relay board (Asic30) DMA02 time out		
CFE76	EFI relay board (Asic30) DMA03 time out		
CFE77	EFI relay board (Asic30) DMA04 time out		
CFE78	EFI relay board (Asic30) DMA05 time out		
CFE79	EFI relay board (Asic30) DMA06 time out		
CFE7A	EFI relay board (Asic30) DMA07 time out		
CFE7B	EFI relay board (Asic30) DMA08 time out		
CFE7C	EFI relay board (Asic30) DMA09 time out		
CFE7D	EFI relay board (Asic30) DMA10 time out		
CFE7E	EFI relay board (Asic30) DMA11 time out		
CFE7F	EFI relay board (Asic30) DMA12 time out		

6.18.9 CFE8# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE80	EFI relay board (Asic30) DMA13 time out	EFI relay board (VI-508)	C
CFE81	EFI relay board (Asic30) DMA14 time out		
CFE82	EFI relay board (Asic30) DMA15 time out		
CFE83	EFI relay board (Asic30) DMA16 time out		
CFE84	EFI relay board (Asic30) DMA17 time out		
CFE85	EFI relay board (Asic30) DMA18 time out		
CFE86	EFI relay board (Asic30) DMA19 time out		
CFE87	EFI relay board (Asic30) DMA20 time out		
CFE88	EFI relay board (Asic30) DMA21 time out		
CFE89	EFI relay board (Asic30) DMA22 time out		
CFE8A	EFI relay board (Asic30) DMA23 time out		
CFE8B	EFI relay board (Asic30) DMA24 time out		
CFE8C	EFI relay board (Asic30) DMA25 time out		
CFE8D	EFI relay board (Asic30) DMA26 time out		

Error code	Item	Component	Rank
CFE8E	EFI relay board (Asic30) DMA27 time out		
CFE8F	EFI relay board (Asic30) DMA28 time out		

6.18.10 CFE9# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFE90	EFI relay board (Asic30) DMA29 time out	• EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFE91	EFI relay board (Asic30) DMA30 time out		
CFE92	EFI relay board (Asic30) DMA31 time out		
CFE93	Dual scan image processing board (Asic30/Asic777) DMA00 time out		
CFE94	Dual scan image processing board (Asic30/Asic777) DMA01 time out		
CFE95	Dual scan image processing board (Asic30/Asic777) DMA02 time out		
CFE96	Dual scan image processing board (Asic30/Asic777) DMA03 time out		
CFE97	Dual scan image processing board (Asic30/Asic777) DMA04 time out		
CFE98	Dual scan image processing board (Asic30/Asic777) DMA05 time out		
CFE99	Dual scan image processing board (Asic30/Asic777) DMA06 time out		
CFE9A	Dual scan image processing board (Asic30/Asic777) DMA07 time out		
CFE9B	Dual scan image processing board (Asic30/Asic777) DMA08 time out		
CFE9C	Dual scan image processing board (Asic30/Asic777) DMA09 time out		
CFE9D	Dual scan image processing board (Asic30/Asic777) DMA10 time out		
CFE9E	Dual scan image processing board (Asic30/Asic777) DMA11 time out		
CFE9F	Dual scan image processing board (Asic30/Asic777) DMA12 time out		

6.18.11 CFEA# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFEA0	Dual scan image processing board (Asic30/Asic777) DMA13 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFEA1	Dual scan image processing board (Asic30/Asic777) DMA14 time out		
CFEA2	Dual scan image processing board (Asic30/Asic777) DMA15 time out		
CFEA3	Dual scan image processing board (Asic30/Asic777) DMA16 time out		
CFEA4	Dual scan image processing board (Asic30/Asic777) DMA17 time out		
CFEA5	Dual scan image processing board (Asic30/Asic777) DMA18 time out		
CFEA6	Dual scan image processing board (Asic30/Asic777) DMA19 time out		
CFEA7	Dual scan image processing board (Asic30/Asic777) DMA20 time out		
CFEA8	Dual scan image processing board (Asic30/Asic777) DMA21 time out		
CFEA9	Dual scan image processing board (Asic30/Asic777) DMA22 time out		
CFEAA	Dual scan image processing board (Asic30/Asic777) DMA23 time out		
CFEAB	Dual scan image processing board (Asic30/Asic777) DMA24 time out		
CFEAC	Dual scan image processing board (Asic30/Asic777) DMA25 time out		
CFEAD	Dual scan image processing board (Asic30/Asic777) DMA26 time out		
CFEAE	Dual scan image processing board (Asic30/Asic777) DMA27 time out		
CFEAF	Dual scan image processing board (Asic30/Asic777) DMA28 time out		

6.18.12 CFEB# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFEB0	Dual scan image processing board (Asic30/Asic777) DMA29 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFEB1	Dual scan image processing board (Asic30/Asic777) DMA30 time out		
CFEB2	Dual scan image processing board (Asic30/Asic777) DMA31 time out		
CFEB3	Dual scan image processing board (Asic777) DMA32 time out		
CFEB4	Dual scan image processing board (Asic777) DMA33 time out		
CFEB5	Dual scan image processing board (Asic777) DMA34 time out		
CFEB6	Dual scan image processing board (Asic777) DMA35 time out		
CFEB7	Dual scan image processing board (Asic777) DMA36 time out		
CFEB8	Dual scan image processing board (Asic777) DMA37 time out		
CFEB9	Dual scan image processing board (Asic777) DMA38 time out		
CFEBA	Dual scan image processing board (Asic777) DMA39 time out		
CFEBB	Dual scan image processing board (Asic777) DMA40 time out		
CFEBC	Dual scan image processing board (Asic777) DMA41 time out		
CFEBD	Dual scan image processing board (Asic777) DMA42 time out		

Error code	Item	Component	Rank
CFEBE	Dual scan image processing board (Asic777) DMA43 time out		
CFEBF	Dual scan image processing board (Asic777) DMA44 time out		

6.18.13 CFEC# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFEC0	Dual scan image processing board (Asic777) DMA45 time out	• MFP board (MFPB) • Dual scan image processing board (DSIPB: DF-704)	C
CFEC1	Dual scan image processing board (Asic777) DMA46 time out		
CFEC2	Dual scan image processing board (Asic777) DMA47 time out		
CFEC3	Dual scan image processing board (Asic777) DMA48 time out		
CFEC4	Dual scan image processing board (Asic777) DMA49 time out		
CFEC5	Dual scan image processing board (Asic777) DMA50 time out		
CFEC6	Dual scan image processing board (Asic777) DMA51 time out		
CFEC7	Dual scan image processing board (Asic777) DMA52 time out		
CFEC8	Dual scan image processing board (Asic777) DMA53 time out		
CFEC9	Dual scan image processing board (Asic777) DMA54 time out		
CFECA	Dual scan image processing board (Asic777) DMA55 time out		
CFECE	Asic (PMS) DMA03 time out		

6.18.14 CFED# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFED2	Asic (PMS) DMA07 time out	MFP board (MFPB)	C
CFEDD	Asic (PMS) DMA18 time out		
CFEDE	Asic (PMS) DMA19 time out		
CFEDF	Asic (PMS) DMA32 time out		

6.18.15 CFEE# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFEE0	Asic (PMS) DMA33 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFEE1	Asic (PMS) DMA34 time out		
CFEE2	Asic (PMS) DMA35 time out		
CFEE3	Asic (PMS) DMA36 time out		
CFEE4	Asic (PMS) DMA37 time out		
CFEE5	Asic (PMS) DMA38 time out		
CFEE6	Asic (PMS) DMA39 time out		
CFEE7	Asic (PMS) DMA40 time out		
CFEE8	Asic (PMS) DMA41 time out		
CFEE9	Asic (PMS) DMA42 time out		
CFEEA	Asic (PMS) DMA43 time out		
CFEEB	EFI relay board (second Asic30) DMA00 time out		
CFEEC	EFI relay board (second Asic30) DMA01 time out		
CFEED	EFI relay board (second Asic30) DMA02 time out		
CFEEE	EFI relay board (second Asic30) DMA03 time out		
CFEEF	EFI relay board (second Asic30) DMA04 time out		

6.18.16 CFEF# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFEF0	EFI relay board (second Asic30) DMA05 time out	MFP board (MFPB)	C
CFEF1	EFI relay board (second Asic30) DMA06 time out		
CFEF2	EFI relay board (second Asic30) DMA07 time out		
CFEF3	EFI relay board (second Asic30) DMA08 time out		
CFEF4	EFI relay board (second Asic30) DMA09 time out		
CFEF5	EFI relay board (second Asic30) DMA10 time out		
CFEF6	EFI relay board (second Asic30) DMA11 time out		
CFEF7	EFI relay board (second Asic30) DMA12 time out		
CFEF8	EFI relay board (second Asic30) DMA13 time out		
CFEF9	EFI relay board (second Asic30) DMA14 time out		
CFEFA	EFI relay board (second Asic30) DMA15 time out		

Error code	Item	Component	Rank
CFEFB	EFI relay board (second Asic30) DMA16 time out		
CFEFC	EFI relay board (second Asic30) DMA17 time out		
CFEFD	EFI relay board (second Asic30) DMA18 time out		
CFEFE	EFI relay board (second Asic30) DMA19 time out		
CFEFF	EFI relay board (second Asic30) DMA20 time out		

6.19 CFE## (bizhub C658/C558/C458)

6.19.1 CFE0# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE00	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFE01	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFE02	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFE03	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFE04	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		
CFE05	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFE06	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFE07	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFE08	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFE09	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFE0A	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFE0B	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFE0C	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		
CFE0D	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

6.19.2 CFE1# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE19	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFE1D	Asic (PMS) DMA07 time out		

6.19.3 CFE2# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE28	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFE29	Asic (PMS) DMA19 time out		
CFE2A	Asic (PMS) DMA32 time out		
CFE2B	Asic (PMS) DMA33 time out		
CFE2C	Asic (PMS) DMA34 time out		
CFE2D	Asic (PMS) DMA35 time out		
CFE2E	Asic (PMS) DMA36 time out		
CFE2F	Asic (PMS) DMA37 time out		

6.19.4 CFE3# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE30	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFE31	Asic (PMS) DMA39 time out		
CFE32	Asic (PMS) DMA40 time out		
CFE33	Asic (PMS) DMA41 time out		

Error code	Item	Component	Rank
CFE34	Asic (PMS) DMA42 time out		
CFE35	Asic (PMS) DMA43 time out		
CFE36	ASIC777 DMA00 time out		
CFE37	ASIC777 DMA01 time out		
CFE38	ASIC777 DMA02 time out		
CFE39	ASIC777 DMA03 time out		
CFE3A	ASIC777 DMA04 time out		
CFE3B	ASIC777 DMA05 time out		
CFE3C	ASIC777 DMA06 time out		
CFE3D	ASIC777 DMA07 time out		
CFE3E	ASIC777 DMA08 time out		
CFE3F	ASIC777 DMA09 time out		

6.19.5 CFE4# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE40	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFE41	ASIC777 DMA11 time out		
CFE42	ASIC777 DMA12 time out		
CFE43	ASIC777 DMA13 time out		
CFE44	ASIC777 DMA14 time out		
CFE45	ASIC777 DMA15 time out		
CFE46	ASIC777 DMA16 time out		
CFE47	ASIC777 DMA17 time out		
CFE48	ASIC777 DMA18 time out		
CFE49	ASIC777 DMA19 time out		
CFE4A	ASIC777 DMA20 time out		
CFE4B	ASIC777 DMA21 time out		
CFE4C	ASIC777 DMA22 time out		
CFE4D	ASIC777 DMA23 time out		
CFE4E	ASIC777 DMA24 time out		
CFE4F	ASIC777 DMA25 time out		

6.19.6 CFE5# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE50	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFE51	ASIC777 DMA27 time out		
CFE52	ASIC777 DMA28 time out		
CFE53	ASIC777 DMA29 time out		
CFE54	ASIC777 DMA30 time out		
CFE55	ASIC777 DMA31 time out		
CFE56	ASIC777 DMA32 time out		
CFE57	ASIC777 DMA33 time out		
CFE58	ASIC777 DMA34 time out		
CFE59	ASIC777 DMA35 time out		
CFE5A	ASIC777 DMA36 time out		
CFE5B	ASIC777 DMA37 time out		
CFE5C	ASIC777 DMA38 time out		
CFE5D	ASIC777 DMA39 time out		
CFE5E	ASIC777 DMA40 time out		
CFE5F	ASIC777 DMA41 time out		

6.19.7 CFE6# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE60	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFE61	ASIC777 DMA43 time out		
CFE62	ASIC777 DMA44 time out		
CFE63	ASIC777 DMA45 time out		

Error code	Item	Component	Rank
CFE64	ASIC777 DMA46 time out		
CFE65	ASIC777 DMA47 time out		
CFE66	ASIC777 DMA48 time out		
CFE67	ASIC777 DMA49 time out		
CFE68	ASIC777 DMA50 time out		
CFE69	ASIC777 DMA51 time out		
CFE6A	ASIC777 DMA52 time out		
CFE6B	ASIC777 DMA53 time out		
CFE6C	ASIC777 DMA54 time out		
CFE6D	ASIC777 DMA55 time out		

6.19.8 CFE9# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFE9E	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFE9F	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

6.19.9 CFEA# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFEA0	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFEA1	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFEA2	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFEA3	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFEA4	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFEA5	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFEA6	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFEA7	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		
CFEA8	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFEA9	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFEAA	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFEAB	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFEAC	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFEAD	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFEAE	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFEAF	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

6.19.10 CFEB# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFEB0	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFEB1	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFEB2	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFEB3	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		

Error code	Item	Component	Rank
CFEB4	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFEB5	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFEB6	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFEB7	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFEB8	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFEB9	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		
CFEBA	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFEBB	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFEBC	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFEBD	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		
CFEBE	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFEBF	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

6.19.11 CFEC# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFEC0	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFEC1	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFEC2	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFEC3	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFEC4	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		
CFEC5	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFEC6	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFEC7	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFEC8	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFEC9	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFECA	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFECB	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFECC	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		
CFECD	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

6.19.12 CFED# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFED9	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFEDD	Asic (PMS) DMA07 time out		

6.19.13 CFEE# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFEE8	Asic (PMS) DMA18 time out	MFP board (MFPB)	C

Error code	Item	Component	Rank
CFEE9	Asic (PMS) DMA19 time out		
CFEEA	Asic (PMS) DMA32 time out		
CFEEB	Asic (PMS) DMA33 time out		
CFEEC	Asic (PMS) DMA34 time out		
CFEED	Asic (PMS) DMA35 time out		
CFEEE	Asic (PMS) DMA36 time out		
CFEEF	Asic (PMS) DMA37 time out		

6.19.14 CFEF# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFEF0	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFEF1	Asic (PMS) DMA39 time out		
CFEF2	Asic (PMS) DMA40 time out		
CFEF3	Asic (PMS) DMA41 time out		
CFEF4	Asic (PMS) DMA42 time out		
CFEF5	Asic (PMS) DMA43 time out		
CFEF6	ASIC777 DMA00 time out		
CFEF7	ASIC777 DMA01 time out		
CFEF8	ASIC777 DMA02 time out		
CFEF9	ASIC777 DMA03 time out		
CFEFA	ASIC777 DMA04 time out		
CFEFB	ASIC777 DMA05 time out		
CFEFC	ASIC777 DMA06 time out		
CFEFD	ASIC777 DMA07 time out		
CFEFE	ASIC777 DMA08 time out		
CFEFF	ASIC777 DMA09 time out		

6.20 CFF## (bizhub C368/C308/C258)

6.20.1 CFF0# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF00	EFI relay board (second Asic30) DMA21 time out	• MFP board (MFPB) • EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFF01	EFI relay board (second Asic30) DMA22 time out		
CFF02	EFI relay board (second Asic30) DMA23 time out		
CFF03	EFI relay board (second Asic30) DMA24 time out		
CFF04	EFI relay board (second Asic30) DMA25 time out		
CFF05	EFI relay board (second Asic30) DMA26 time out		
CFF06	EFI relay board (second Asic30) DMA27 time out		
CFF07	EFI relay board (second Asic30) DMA28 time out		
CFF08	EFI relay board (second Asic30) DMA29 time out		
CFF09	EFI relay board (second Asic30) DMA30 time out		
CFF0A	EFI relay board (second Asic30) DMA31 time out		
CFF0B	Dual scan image processing board JPEG DMA_A time out		
CFF0C	Dual scan image processing board JPEG DMA_C time out		
CFF0D	Dual scan image processing board JPEG DMA_D time out		
CFF0E	ASIC777 DMA00 time out		
CFF0F	ASIC777 DMA01 time out		

6.20.2 CFF1# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF10	ASIC777 DMA02 time out	MFP board (MFPB)	C
CFF11	ASIC777 DMA03 time out		
CFF12	ASIC777 DMA04 time out		
CFF13	ASIC777 DMA05 time out		
CFF14	ASIC777 DMA06 time out		
CFF15	ASIC777 DMA07 time out		
CFF16	ASIC777 DMA08 time out		
CFF17	ASIC777 DMA09 time out		

Error code	Item	Component	Rank
CFF18	ASIC777 DMA10 time out		
CFF19	ASIC777 DMA11 time out		
CFF1A	ASIC777 DMA12 time out		
CFF1B	ASIC777 DMA13 time out		
CFF1C	ASIC777 DMA14 time out		
CFF1D	ASIC777 DMA15 time out		
CFF1E	ASIC777 DMA16 time out		
CFF1F	ASIC777 DMA17 time out		

6.20.3 CFF2# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF20	ASIC777 DMA18 time out	MFP board (MFPB)	C
CFF21	ASIC777 DMA19 time out		
CFF22	ASIC777 DMA20 time out		
CFF23	ASIC777 DMA21 time out		
CFF24	ASIC777 DMA22 time out		
CFF25	ASIC777 DMA23 time out		
CFF26	ASIC777 DMA24 time out		
CFF27	ASIC777 DMA25 time out		
CFF28	ASIC777 DMA26 time out		
CFF29	ASIC777 DMA27 time out		
CFF2A	ASIC777 DMA28 time out		
CFF2B	ASIC777 DMA29 time out		
CFF2C	ASIC777 DMA30 time out		
CFF2D	ASIC777 DMA31 time out		
CFF2E	ASIC777 DMA32 time out		
CFF2F	ASIC777 DMA33 time out		

6.20.4 CFF3# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF30	ASIC777 DMA34 time out	MFP board (MFPB)	C
CFF31	ASIC777 DMA35 time out		
CFF32	ASIC777 DMA36 time out		
CFF33	ASIC777 DMA37 time out		
CFF34	ASIC777 DMA38 time out		
CFF35	ASIC777 DMA39 time out		
CFF36	ASIC777 DMA40 time out		
CFF37	ASIC777 DMA41 time out		
CFF38	ASIC777 DMA42 time out		
CFF39	ASIC777 DMA43 time out		
CFF3A	ASIC777 DMA44 time out		
CFF3B	ASIC777 DMA45 time out		
CFF3C	ASIC777 DMA46 time out		
CFF3D	ASIC777 DMA47 time out		
CFF3E	ASIC777 DMA48 time out		
CFF3F	ASIC777 DMA49 time out		

6.20.5 CFF4# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF40	ASIC777 DMA50 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFF41	ASIC777 DMA51 time out		
CFF42	ASIC777 DMA52 time out		
CFF43	ASIC777 DMA53 time out		
CFF44	ASIC777 DMA54 time out		
CFF45	ASIC777 DMA55 time out		
CFF46	EFI relay board (Asic30) DMA00 time out		
CFF47	EFI relay board (Asic30) DMA01 time out		

Error code	Item	Component	Rank
CFF48	EFI relay board (Asic30) DMA02 time out		
CFF49	EFI relay board (Asic30) DMA03 time out		
CFF4A	EFI relay board (Asic30) DMA04 time out		
CFF4B	EFI relay board (Asic30) DMA05 time out		
CFF4C	EFI relay board (Asic30) DMA06 time out		
CFF4D	EFI relay board (Asic30) DMA07 time out		
CFF4E	EFI relay board (Asic30) DMA08 time out		
CFF4F	EFI relay board (Asic30) DMA09 time out		

6.20.6 CFF5# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF50	EFI relay board (Asic30) DMA10 time out	EFI relay board (VI-508)	C
CFF51	EFI relay board (Asic30) DMA11 time out		
CFF52	EFI relay board (Asic30) DMA12 time out		
CFF53	EFI relay board (Asic30) DMA13 time out		
CFF54	EFI relay board (Asic30) DMA14 time out		
CFF55	EFI relay board (Asic30) DMA15 time out		
CFF56	EFI relay board (Asic30) DMA16 time out		
CFF57	EFI relay board (Asic30) DMA17 time out		
CFF58	EFI relay board (Asic30) DMA18 time out		
CFF59	EFI relay board (Asic30) DMA19 time out		
CFF5A	EFI relay board (Asic30) DMA20 time out		
CFF5B	EFI relay board (Asic30) DMA21 time out		
CFF5C	EFI relay board (Asic30) DMA22 time out		
CFF5D	EFI relay board (Asic30) DMA23 time out		
CFF5E	EFI relay board (Asic30) DMA24 time out		
CFF5F	EFI relay board (Asic30) DMA25 time out		

6.20.7 CFF6# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF60	EFI relay board (Asic30) DMA26 time out	• EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFF61	EFI relay board (Asic30) DMA27 time out		
CFF62	EFI relay board (Asic30) DMA28 time out		
CFF63	EFI relay board (Asic30) DMA29 time out		
CFF64	EFI relay board (Asic30) DMA30 time out		
CFF65	EFI relay board (Asic30) DMA31 time out		
CFF66	Dual scan image processing board (Asic30/Asic777) DMA00 time out		
CFF67	Dual scan image processing board (Asic30/Asic777) DMA01 time out		
CFF68	Dual scan image processing board (Asic30/Asic777) DMA02 time out		
CFF69	Dual scan image processing board (Asic30/Asic777) DMA03 time out		
CFF6A	Dual scan image processing board (Asic30/Asic777) DMA04 time out		
CFF6B	Dual scan image processing board (Asic30/Asic777) DMA05 time out		
CFF6C	Dual scan image processing board (Asic30/Asic777) DMA06 time out		
CFF6D	Dual scan image processing board (Asic30/Asic777) DMA07 time out		
CFF6E	Dual scan image processing board (Asic30/Asic777) DMA08 time out		
CFF6F	Dual scan image processing board (Asic30/Asic777) DMA09 time out		

6.20.8 CFF7# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF70	Dual scan image processing board (Asic30/Asic777) DMA10 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFF71	Dual scan image processing board (Asic30/Asic777) DMA11 time out		
CFF72	Dual scan image processing board (Asic30/Asic777) DMA12 time out		
CFF73	Dual scan image processing board (Asic30/Asic777) DMA13 time out		
CFF74	Dual scan image processing board (Asic30/Asic777) DMA14 time out		
CFF75	Dual scan image processing board (Asic30/Asic777) DMA15 time out		
CFF76	Dual scan image processing board (Asic30/Asic777) DMA16 time out		
CFF77	Dual scan image processing board (Asic30/Asic777) DMA17 time out		

Error code	Item	Component	Rank
CFF78	Dual scan image processing board (Asic30/Asic777) DMA18 time out		
CFF79	Dual scan image processing board (Asic30/Asic777) DMA19 time out		
CFF7A	Dual scan image processing board (Asic30/Asic777) DMA20 time out		
CFF7B	Dual scan image processing board (Asic30/Asic777) DMA21 time out		
CFF7C	Dual scan image processing board (Asic30/Asic777) DMA22 time out		
CFF7D	Dual scan image processing board (Asic30/Asic777) DMA23 time out		
CFF7E	Dual scan image processing board (Asic30/Asic777) DMA24 time out		
CFF7F	Dual scan image processing board (Asic30/Asic777) DMA25 time out		

6.20.9 CFF8# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF80	Dual scan image processing board (Asic30/Asic777) DMA26 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFF81	Dual scan image processing board (Asic30/Asic777) DMA27 time out		
CFF82	Dual scan image processing board (Asic30/Asic777) DMA28 time out		
CFF83	Dual scan image processing board (Asic30/Asic777) DMA29 time out		
CFF84	Dual scan image processing board (Asic30/Asic777) DMA30 time out		
CFF85	Dual scan image processing board (Asic30/Asic777) DMA31 time out		
CFF86	Dual scan image processing board (Asic777) DMA32 time out		
CFF87	Dual scan image processing board (Asic777) DMA33 time out		
CFF88	Dual scan image processing board (Asic777) DMA34 time out		
CFF89	Dual scan image processing board (Asic777) DMA35 time out		
CFF8A	Dual scan image processing board (Asic777) DMA36 time out		
CFF8B	Dual scan image processing board (Asic777) DMA37 time out		
CFF8C	Dual scan image processing board (Asic777) DMA38 time out		
CFF8D	Dual scan image processing board (Asic777) DMA39 time out		
CFF8E	Dual scan image processing board (Asic777) DMA40 time out		
CFF8F	Dual scan image processing board (Asic777) DMA41 time out		

6.20.10 CFF9# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFF90	Dual scan image processing board (Asic777) DMA42 time out	Dual scan image processing board (DSIPB: DF-704)	C
CFF91	Dual scan image processing board (Asic777) DMA43 time out		
CFF92	Dual scan image processing board (Asic777) DMA44 time out		
CFF93	Dual scan image processing board (Asic777) DMA45 time out		
CFF94	Dual scan image processing board (Asic777) DMA46 time out		
CFF95	Dual scan image processing board (Asic777) DMA47 time out		
CFF96	Dual scan image processing board (Asic777) DMA48 time out		
CFF97	Dual scan image processing board (Asic777) DMA49 time out		
CFF98	Dual scan image processing board (Asic777) DMA50 time out		
CFF99	Dual scan image processing board (Asic777) DMA51 time out		
CFF9A	Dual scan image processing board (Asic777) DMA52 time out		
CFF9B	Dual scan image processing board (Asic777) DMA53 time out		
CFF9C	Dual scan image processing board (Asic777) DMA54 time out		
CFF9D	Dual scan image processing board (Asic777) DMA55 time out		

6.20.11 CFFA# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFFA1	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFFA5	Asic (PMS) DMA07 time out		

6.20.12 CFFB# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFFB0	Asic (PMS) DMA18 time out	• MFP board (MFPB) • EFI relay board (VI-508)	C
CFFB1	Asic (PMS) DMA19 time out		
CFFB2	Asic (PMS) DMA32 time out		
CFFB3	Asic (PMS) DMA33 time out		
CFFB4	Asic (PMS) DMA34 time out		

Error code	Item	Component	Rank
CFFB5	Asic (PMS) DMA35 time out		
CFFB6	Asic (PMS) DMA36 time out		
CFFB7	Asic (PMS) DMA37 time out		
CFFB8	Asic (PMS) DMA38 time out		
CFFB9	Asic (PMS) DMA39 time out		
CFFBA	Asic (PMS) DMA40 time out		
CFFBB	Asic (PMS) DMA41 time out		
CFFBC	Asic (PMS) DMA42 time out		
CFFBD	Asic (PMS) DMA43 time out		
CFFBE	EFI relay board (second Asic30) DMA00 time out		
CFFBF	EFI relay board (second Asic30) DMA01 time out		

6.20.13 CFFC# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFFC0	EFI relay board (second Asic30) DMA02 time out	EFI relay board (VI-508)	C
CFFC1	EFI relay board (second Asic30) DMA03 time out		
CFFC2	EFI relay board (second Asic30) DMA04 time out		
CFFC3	EFI relay board (second Asic30) DMA05 time out		
CFFC4	EFI relay board (second Asic30) DMA06 time out		
CFFC5	EFI relay board (second Asic30) DMA07 time out		
CFFC6	EFI relay board (second Asic30) DMA08 time out		
CFFC7	EFI relay board (second Asic30) DMA09 time out		
CFFC8	EFI relay board (second Asic30) DMA10 time out		
CFFC9	EFI relay board (second Asic30) DMA11 time out		
CFFCA	EFI relay board (second Asic30) DMA12 time out		
CFFCB	EFI relay board (second Asic30) DMA13 time out		
CFFCC	EFI relay board (second Asic30) DMA14 time out		
CFFCD	EFI relay board (second Asic30) DMA15 time out		
CFFCE	EFI relay board (second Asic30) DMA16 time out		
CFFCF	EFI relay board (second Asic30) DMA17 time out		

6.20.14 CFFD# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFFD0	EFI relay board (second Asic30) DMA18 time out	• EFI relay board (VI-508) • Dual scan image processing board (DSIPB: DF-704)	C
CFFD1	EFI relay board (second Asic30) DMA19 time out		
CFFD2	EFI relay board (second Asic30) DMA20 time out		
CFFD3	EFI relay board (second Asic30) DMA21 time out		
CFFD4	EFI relay board (second Asic30) DMA22 time out		
CFFD5	EFI relay board (second Asic30) DMA23 time out		
CFFD6	EFI relay board (second Asic30) DMA24 time out		
CFFD7	EFI relay board (second Asic30) DMA25 time out		
CFFD8	EFI relay board (second Asic30) DMA26 time out		
CFFD9	EFI relay board (second Asic30) DMA27 time out		
CFFDA	EFI relay board (second Asic30) DMA28 time out		
CFFDB	EFI relay board (second Asic30) DMA29 time out		
CFFDC	EFI relay board (second Asic30) DMA30 time out		
CFFDD	EFI relay board (second Asic30) DMA31 time out		
CFFDE	Dual scan image processing board JPEG DMA_A time out		
CFFDF	Dual scan image processing board JPEG DMA_C time out		

6.20.15 CFFE# (bizhub C368/C308/C258)

Error code	Item	Component	Rank
CFFE0	Dual scan image processing board JPEG DMA_D time out	Dual scan image processing board (DSIPB: DF-704)	C

6.21 CFF## (bizhub C658/C558/C458)

6.21.1 CFF0# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF00	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFF01	ASIC777 DMA11 time out		
CFF02	ASIC777 DMA12 time out		
CFF03	ASIC777 DMA13 time out		
CFF04	ASIC777 DMA14 time out		
CFF05	ASIC777 DMA15 time out		
CFF06	ASIC777 DMA16 time out		
CFF07	ASIC777 DMA17 time out		
CFF08	ASIC777 DMA18 time out		
CFF09	ASIC777 DMA19 time out		
CFF0A	ASIC777 DMA20 time out		
CFF0B	ASIC777 DMA21 time out		
CFF0C	ASIC777 DMA22 time out		
CFF0D	ASIC777 DMA23 time out		
CFF0E	ASIC777 DMA24 time out		
CFF0F	ASIC777 DMA25 time out		

6.21.2 CFF1# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF10	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFF11	ASIC777 DMA27 time out		
CFF12	ASIC777 DMA28 time out		
CFF13	ASIC777 DMA29 time out		
CFF14	ASIC777 DMA30 time out		
CFF15	ASIC777 DMA31 time out		
CFF16	ASIC777 DMA32 time out		
CFF17	ASIC777 DMA33 time out		
CFF18	ASIC777 DMA34 time out		
CFF19	ASIC777 DMA35 time out		
CFF1A	ASIC777 DMA36 time out		
CFF1B	ASIC777 DMA37 time out		
CFF1C	ASIC777 DMA38 time out		
CFF1D	ASIC777 DMA39 time out		
CFF1E	ASIC777 DMA40 time out		
CFF1F	ASIC777 DMA41 time out		

6.21.3 CFF2# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF20	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFF21	ASIC777 DMA43 time out		
CFF22	ASIC777 DMA44 time out		
CFF23	ASIC777 DMA45 time out		
CFF24	ASIC777 DMA46 time out		
CFF25	ASIC777 DMA47 time out		
CFF26	ASIC777 DMA48 time out		
CFF27	ASIC777 DMA49 time out		
CFF28	ASIC777 DMA50 time out		
CFF29	ASIC777 DMA51 time out		
CFF2A	ASIC777 DMA52 time out		
CFF2B	ASIC777 DMA53 time out		
CFF2C	ASIC777 DMA54 time out		
CFF2D	ASIC777 DMA55 time out		

6.21.4 CFF5# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF5E	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFF5F	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

6.21.5 CFF6# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF60	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFF61	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFF62	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFF63	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFF64	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFF65	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFF66	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFF67	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		
CFF68	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFF69	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFF6A	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFF6B	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFF6C	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFF6D	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFF6E	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFF6F	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

6.21.6 CFF7# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF70	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFF71	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFF72	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFF73	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		
CFF74	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFF75	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFF76	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFF77	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFF78	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFF79	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		

Error code	Item	Component	Rank
CFF7A	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFF7B	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFF7C	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFF7D	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		
CFF7E	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFF7F	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

6.21.7 CFF8# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF80	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFF81	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFF82	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFF83	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFF84	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		
CFF85	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFF86	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFF87	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFF88	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFF89	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFF8A	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFF8B	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFF8C	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		
CFF8D	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

6.21.8 CFF9# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFF99	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFF9D	Asic (PMS) DMA07 time out		

6.21.9 CFFA# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFFA8	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFFA9	Asic (PMS) DMA19 time out		
CFFAA	Asic (PMS) DMA32 time out		
CFFAB	Asic (PMS) DMA33 time out		
CFFAC	Asic (PMS) DMA34 time out		
CFFAD	Asic (PMS) DMA35 time out		
CFFAE	Asic (PMS) DMA36 time out		
CFFAF	Asic (PMS) DMA37 time out		

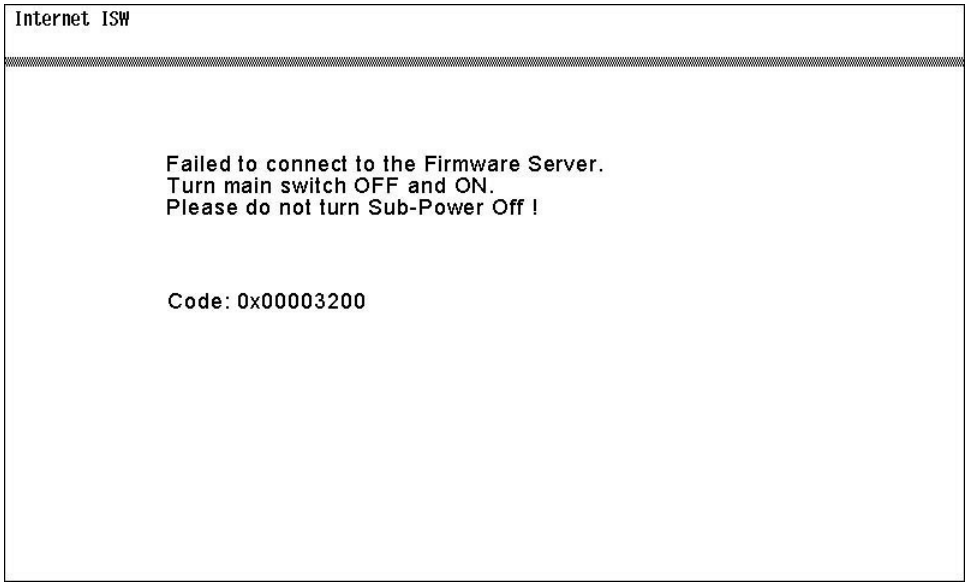
6.21.10 CFFB# (bizhub C658/C558/C458)

Error code	Item	Component	Rank
CFFB0	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFFB1	Asic (PMS) DMA39 time out		
CFFB2	Asic (PMS) DMA40 time out		
CFFB3	Asic (PMS) DMA41 time out		
CFFB4	Asic (PMS) DMA42 time out		
CFFB5	Asic (PMS) DMA43 time out		

7. ERROR CODE FOR THE INTERNET ISW

7.1 Error code list for the Internet ISW

- When a trouble occurred while conducting the Internet ISW and it was not normally connected, the message on the status and the error code will be displayed on the control panel.



NOTE

- **When a code other than the error code list is displayed, contact and inform the error code.**

7.2 0x0#

Error code	Description	Countermeasure
0x00000001	Illegal error on the control	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • Check the status of [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting]. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x00000010	Parameter error	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x00111000	Error concerning the network • Connection has been completed.	• Check the User’s network environment. (LAN cable’s connection) • Check the status of [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting]. • Check to see if the FTP server operates normally.
0x00111001	Error concerning the network • It cannot be connected to the server.	• Check the User’s network environment. • Check to see if the FTP server operates normally. • Check whether the URL of the data transfer server includes http://, ftp://, or the like to specify a protocol in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting].
0x00111100	Error concerning the network • Communication timeout.	
0x00111101	Error concerning the network • Disconnection occurred.	• Check the User’s network environment. • Check to see if the FTP server operates normally.
0x00111110	Error concerning the network • The network is not connected.	
0x00110010	Error concerning the network • Others	
0x00001###	FTP error • Reply code when it failed to be connected.	• Check to see if the FTP server operates normally. • Check the IP address, user’s name, etc.
0x00002###	FTP error • Error reply code for the user command or pass command.	Check to see if the FTP server operates normally.
0x00003###	FTP error • Error reply code for the CWD command.	
0x00004###	FTP error • Error reply code for the TYPE command.	Check to see if the FTP server operates normally.
0x00005###	FTP error	

Error code	Description	Countermeasure
	• Error reply code for the PORT command.	
0x00006###	FTP error • Error reply code for the PASV command.	• Check to see if the FTP server operates normally. • Set the PASV mode to “OFF”, and try it again.
0x00007###	FTP error • Error reply code for the RETR command.	• Check to see if the FTP server operates normally. • Wait for about 30 minutes and try it again.

7.3 0x1#

Error code	Description	Countermeasure
0x10000100	• It cannot be accepted because of the job currently being executed. • ISW being executed by other method.	Wait for the current job to be completed and try it again.
0x10000101	It cannot be accepted because the power key is OFF.	Turn power key ON and try it again.
0x10000102	The Internet ISW is already being executed.	Wait for the current Internet ISW to be completed.
0x10000103	It failed to prohibit the job. (It failed to lock the operation.) -> It failed to lock the job because the operation is already locked with PSWC, etc.	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x10000104	There is no space for firmware data to be downloaded.	
0x10000106	Check sum error	
0x10000107	File access error • The file downloaded has an error. • The header of the file which has been read has an error. • The size of the file to be downloaded is too large. • When it is identified to be the different type of firmware.	Check to see if the downloaded firmware is of the correct type.
0x10000108	The area firmware is stored is destroyed, and another ISW is necessary.	Wait until ISW is automatically executed on MFP side.

7.4 0x2#

Error code	Description	Countermeasure
0x20000000	The temporary error when running the subset • When starting the Internet ISW in a normal program, the rebooting will start and the Internet ISW will be executed with the subset program. During the process by the subset program, it has to be in the “Failed” status unless the Internet ISW is successfully conducted. This code is used temporarily to make it in error status.	Wait until ISW is automatically executed on MFP side.

8. CS Remote Care ERROR CODE

8.1 Troubleshooting for CS Remote Care

If communication is not done properly, check the condition by following the procedures shown below.

1. Shift the screen in the order of [Service Mode] -> [CS Remote Care] -> [Detail Setting].
   At this time, in the cases of initial transmitting / administrator transmitting / maintenance start transmitting / maintenance finish transmitting, the communication result will be displayed at the top of the screen.

NOTE

- **For the communication result, the following message will be displayed based on its success or failure.**

Display of communication result	Cause	Solution
Communicating	-	-
Communication trouble with the center	Although the machine tries to communicate with the center, there is any trouble and the communication completes unsuccessfully.	See the list of error message and confirm the corresponding point.
Complete successfully	-	-
Modem trouble	Although the machine tries to communicate with the center, there is any trouble in the modem.	• Check if the power of modem in ON. • Check if there is any problem in connection between the modem and the main body.
Busy line	Although the machine tries to communicate with the center, the line to the center is busy.	Communicate with the center again.
No response	Although the machine tries to communicate with the center, there is no response from the center.	• Communicate with the center again. • Check the communication environment of the center side.

8.2 CS Remote Care Operation under Enhanced Security Mode

CS Remote Care can be used even when “ON” is selected in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode]. However, to keep the enhanced security level, the following restrictions are accompanied.

- Only SSL communication is available.
- Error occurs if the Center tries to send the following commands.
  - Firmware update command
  - Command of reading and updating account track information
  - Machine settings update command
  - Command of reading and updating Internet ISW setting information

8.3 List of the CS Remote Care error code

8.3.1 When connecting by modem

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

Error code	Contents	Solution
0001	The line is busy • Busy detection	Transmit again manually.
0002	Failure of the Modem default setting at transmitting • When the transmission completes with modem initial setting failed	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0003	Timeout of CONNECT at transmitting • No response to ATD	• Transmit again manually. • Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0004	Timeout of response to receiving request • No response to receiving (start) request MSG	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0005	Timeout of CONNECT at receiving • No response to ATA	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0006	Shut down of the data modem line (Host) • Carrier OFF is detected	No solution, because the line is shut down at the host side.
0007	Forced line disconnection of data modem (main body) • The line is forcibly disconnected from the event	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0008	Timeout of start request telegram delivery • Start request telegram is not delivered after line connection	Transmit again manually.
0009	Timeout of finish request telegram delivery • Finish request telegram is not delivered (Start of shut down)	Transmit again manually.
000A	Receiving rejection • Receiving is made when the main body is set to reject receiving.	• Check the setting condition of the host side. • Check the setting condition of the main body side.

Error code	Contents	Solution
000E	Receiving ring buffer full • When receiving ring buffer is full	If the same error is detected several times, turn the modem power OFF and ON.
000F	Transmission ring buffer full • When transmission ring buffer is full	If the same error is detected several times, turn the modem power OFF and ON.
0014	Incorrect transmission data length • When transmission of a data with the length longer than the transmission ring buffer size is requested	If the same error is detected several times, turn the modem power OFF and ON.
0015	Status error (upon modem operation check)	Transmit again manually.
0016	Status error (upon data arrival)	Transmit again manually.
0017	Status error (upon line disconnection)	Transmit again manually.
0019	Center ID error • Center ID of the host is not identical with the one of start request telegram.	• Check center ID setting of the main body side. • Check the setting condition of the host side.
001A	Device ID inconsistency • Device ID of the host is not identical with the one of start request telegram.	• Check device ID setting of the main body side. • Check the setting condition of the host side.
001B	Device ID unregistered • Request telegram 2 (Constant data transmitting, emergency call) comes from the main body that has not registered device ID yet.	• Check device ID setting of the main body side. • Check the setting condition of the host side.
001C	Grammar error • The specified format is not used in the received reply telegram.	Check the settings for CSRC application.
001D	Change unavailable (Item where change is prohibited) • Host inquires change of the setting of the item not allowed to be changed.	Check the settings for CSRC application.
001E	Impossible to change (during printing) • Setting cannot be changed because the setting change is made during the machine is printing or starts printing.	Try again when the machine is not printing.
001F	Change unavailable (Item where change is prohibited) • Host attempts to write data to the item of which current value has not been read.	Check the settings for CSRC application.
0020	Timeout of telegram delivery • At waiting mode of telegram delivery the machine fails to receive the telegram in a given time.	Try communication again.
0021	Telegram longer than the specified length. • A telegram longer than the specified length is received.	Check the settings for CSRC application.
0022	Transmission phase response NG	Try communication again.
0023	Timeout of transmission phase response MSG	Try communication again.
0024	Incorrect acquisition function of event data	Try communication again.
0025	Timeout of driver transmission check MSG	Try communication again.
0026	An internal inconsistence is detected	Try communication again.
0027	Transmission / receiving collision • Receiving is detecting during transmitting processing	Try communication again.

8.3.2 When connecting by e-mails

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

(1) 0###

Error code	Contents	Solution
0###	Transmission error ###: SMTP responding code (hexadecimal) For SMTP responding code, see RFC issued by IETF after converting hexadecimal number into decimal one.	Check the user's SMTP server system settings. • Authentication setting • Authentication ID • Authentication password • Address of the destination where the server is connected

(2) 1###

Error code	Contents	Solution
1030	Machine ID mismatching • Received an e-mail which tells that machine ID mismatches.	• Check the machine ID setting. • Check the machine ID setting on host side.
1050	Grammar error • Received mail did not define the CS Remote Care command (2 digits). • The Type of Subject and the command of attached file are not consistent.	Ask the host to send another mail.

Error code	Contents	Solution
1061	Modifying not allowed • The host sent a command mail that asked modifying data of item where setting change is not allowed.	Ask the host to send another instruction mail for modifying.
1062	Modifying not available due to the copy job currently performing • When informing the host that it cannot be modified due to the copy job currently performing.	Ask the host to send another instruction mail for modifying.
1080	Data length problem • LEN value of TEXT data and actual data length are not consistent.	Ask the host to send another instruction mail for modifying.
1081	Frame No. error • The last frame has not been received. • There are missing frame No.	Check the status of the machine registration on host side, and perform initial transmission as necessary.
1082	Subject Type problem • Received code did not define the Type of Subject.	Ask the host to send another instruction mail for modifying.
1084	Date expired • Expiration date for data modification command has passed.	Ask the host to send another instruction mail for modifying.
1091	Oversized command • Received attached file exceeds the machine's receive buffer size.	Ask the host to send another instruction mail for modifying.
1092	Received an error mail when center setup is not complete	Check the status of the machine registration on host side.
1099	Illegal request • Status not predicted in design is detected.	Check the status of the machine registration on host side, and perform initial transmission as necessary.

(3) 2###

Error code	Contents	Solution
2064	Network is down • LAN cable on main body side is detached.	• Check the connection between main body on the user's side and the network connector. • Check the network environment on the user's side.
206B	Communication from an MFP to the server is disabled due to problems on the server side • LAN cable on the copier side is detached.	• Check the connection between main body on the user's side and the network connector. • Check the network environment on the user's side.
203E	Connection timeout	Check timeout setting.

(4) 3###

Error code	Contents	Solution
3001	POP3_AUTHORIZATION_ERR	Check the user's POP3 server system settings. • Authentication setting • Connection ID • Password • Address of the destination where the server is connected
3002	POP3_TRANSACTION_ERR	
3003	POP3_CONNECT_ERR	
3004	POP3_TIMEOUT_ERR	
3005	POP3_FORMAT_ERR	
3006	POP3_MEMORY_ERR	
3007	POP3_JOBID_ERR	
3008	POP3_NO_DATA_ERR	
3009	POP3_DELETE_FAIL_ERR	
3010	POP3_MAILBOX_FULL	

(5) 4###

Error code	Contents	Solution
4103	During polling from main body, MIO is not active and MFP cannot start communication.	Wait for a while and try transmitting again.
4104	During e-mail transmission from main body to the center, the SMTP channel is not in the "Ready" status and main body cannot send e-mail.	Wait for a while and try transmitting again.
4105	During polling from main body, the POP3 channel is not in the "Ready" status and main body cannot receive e-mail.	Wait for a while and try transmitting again.
4106	During e-mail transmission from main body to the center, MIO is not active and MFP cannot start communication.	Wait for a while and try transmitting again.
41F9	Control error • In the CS Remote Care's internal sequence, message transfer failed.	Turn the main power switch OFF and then ON.
41FA	Control error	Turn the main power switch OFF and then ON.

Error code	Contents	Solution
	• MIO response timed out.	
41FB	Control error • As the file descriptor of the e-mail that MFP receives from MIO is invalid, MFP cannot receive the e-mail.	Turn the main power switch OFF and then ON.
41FC	Control error • During the creation of data to be sent by e-mail, the CS Remote Care's internal status error occurs or the data that need to be sent has not been created.	Turn the main power switch OFF and then ON.
41FD	Control error • During e-mail reception, the parameter sent from MIO to the CS Remote Care is invalid and MFP cannot receive the e-mail.	Turn the main power switch OFF and then ON.
41FE	Control error • After the completion of e-mail transmission, MFP received the transmission completion message from MIO. However, the CS Remote Care's internal status was not the status of transmission completion.	Turn the main power switch OFF and then ON.
41FF	Control error • During e-mail reception, MIO became inactive.	Turn the main power switch OFF and then ON.
4210	Control error • E-mail sent from MIO could not be properly handled in the CS Remote Care.	Turn the main power switch OFF and then ON.

(6) 5###

Error code	Contents	Solution
5###	MIO detects error when sending an attached file.	Check the SMTP server and POP3 server on user side.

(7) 6###

Error code	Contents	Solution
6###	MIO detects error during a sending sequence.	Check the SMTP server and POP3 server on user side.

8.3.3 When connecting by http

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

(1) 0###

Error code	Contents	Solution
0###	Transmission error ###: http responding code (hexadecimal) For http responding code, see RFC issued by IETF after converting hexadecimal number into decimal one.	Check the user's http server system settings. • Authentication setting for address of the destination where the server is connected • Location indicated for a folder • Connection ID • Password

(2) 1###

Error code	Contents	Solution
1030	Machine ID mismatching • Received file which tells that machine ID mismatches.	• Check the machine ID setting. • Check the machine ID setting on host side.
1050	Grammar error • Received file did not define the CS Remote Care command (2 digits). • The Type of Subject and the command of file are not consistent.	Check file content.
1061	Modifying not allowed • The host sent a command file that asked modifying data of item where setting change is not allowed.	Ask the host to send another instruction file for modifying.
1062	Modifying not available due to the copy job currently performing • When informing the host that it cannot be modified due to the copy job currently performing.	Ask the host to send another instruction file for modifying.
1080	Data length problem • LEN value of TEXT data and actual data length are not consistent.	Ask the host to send another instruction file for modifying.
1081	Frame No. error • The last frame has not been received. • There are missing frame No.	Check the status of the machine registration on host side.

Error code	Contents	Solution
1082	Subject Type problem • Received code did not define the Type of Subject.	Ask the host to send another instruction file for modifying.
1084	Date expired • Expiration date for data modification command has passed.	Ask the host to send another instruction file for modifying.
1091	Oversized command • Received file exceeds the machine's receive buffer size.	Ask the host to send another instruction file for modifying.
1099	Illegal request • Status not predicted in design is detected.	Contact KM and inform the error code.

(3) 2###

Error code	Contents	Solution
2001	http request result problem • Internal status error	Check the user's http server system settings. • Authentication setting for address of the destination where the server is connected • Location indicated for a folder • Connection ID • Password
2002	http request result problem • File list acquisition result problem	
2003	http request result problem • Request header transmission failure	
2004	http request result problem • Request body transmission failure	
2005	http request result problem • Response header receive response failure	
2006	http request result problem • Response body receive response failure	
2007	http request result problem • Session ID inconsistent	

(4) 3###

Error code	Contents	Solution
3002	http request result problem • Unopened client ID was specified	Check the user's http server system settings. • Authentication setting for address of the destination where the server is connected • Location indicated for a folder • Connection ID • Password
3003	http request result problem • Receive time out occurred	
3004	http request result problem • Receive error occurred. Or wrong request URL was specified.	
3005	http request result problem • Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.	
3006	http request result problem • Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.	
3007	http request result problem • Internal error occurred. Or due to internal reset, process was stopped.	
3008	http request result problem • Connection to WebDAV server failed.	
3009	http request result problem • Error occurred during transmission to the WebDAV server.	
3010	http request result problem • Time out occurred during transmission to the WebDAV server.	
3011	http request result problem • Connection to the proxy server failed.	
3012	http request result problem • The proxy server refused CONNECT request.	
3013	http request result problem • The proxy server was set to enabled, but the proxy server host was not set.	
3014	http request result problem • Proxy server authentication failed.	
3015	http request result problem • Other errors were sent from the proxy server.	
3016	http request result problem • Internal error occurred.	
3017	http request result problem • As the device application specified MIO_REQBODY_ERROR, process was stopped.	

(5) 4###

Error code	Contents	Solution
4103	After the main power switch is switched ON, HTTP communication is attempted under the condition where HTTP communication is not ready.	Wait for a while and try transmitting again.
4106	When data is uploaded from main body to the web server, the network connection is not enabled and main body cannot start communication.	Wait for a while and try transmitting again.
41FA	Control error • MIO response timed out.	Turn the main power switch OFF and then ON.

(6) 5###

Error code	Contents	Solution
5###	MIO detects error at file sending.	Check the http server environment.

(7) 6###

Error code	Contents	Solution
6###	MIO detects error during a sending sequence.	Check the http server environment.

(8) 7###

Error code	Contents	Solution
7000	Acquisition of the certificate used in product authentication from a USB device or PSWC failed.	Acquire a new certificate (within 6 days after the issue).

8.3.4 When connecting by Fax modem

Error code	Contents	Solution
T50	Host terminal ID not correct	Check the telephone number set for host.
R80	Serial number received from the host not correct.	Check the status of the machine registration on host side.
R81	Disconnection of writing instruction from host during machine is running.	Wait for a while and try transmitting again.
R82	Disconnection of FAX-CSRC instruction when FAX-CSRC is not allowed.	Check the status of the machine registration on host side.
R83	Host command error.	Contact KM and inform the error code.
R84	NVRAM writing error.	Contact KM and inform the error code.

9. FAX TROUBLE CODE

9.1 The error in the transmission/reception system

- The error in the Txx/Rxx system may be caused under the effect of line noise, etc. even in usual operating condition.
- If the error arises often, output the activity report, fax setting list, protocol trace list, parameter list, address book list, group address list and program list and obtain detailed information on the error status, conditions which may cause the error, etc. from the user and contact KM.

9.2 B0##

Error code	Category	Contents of error	How to correct
B001	FAX board error	FAX board error 1 (FAX ROM check sum error)	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, hardware of the FAX board may be defective. Replace the FAX board in such a case.
B002		FAX board error 2 (DPRAM check error)	
B003		FAX board error 3 (FAX initialization NG)	
B004		FAX board error 4 (mistake in fax board DipSw setting)	
B005		FAX board error 5 (No fax board is installed. Mistake in installation, defective HW)	
B006		FAX board error 6 (USB connection is interrupted.)	
B007		FAX board error 7 (The main power switch is not turned off and on, after changing settings for USB installation.)	
B051		FAX board installation error (Line 1).	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, check if the fax (circuit 1) is set to [Unset] on the [Service Mode] -> [System 2] -> [Option board Status]. • If it is set to [Unset], set to [Set].
B052		FAX board installation error (Line 2).	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, check if the fax (line 2) is set to [Unset] on the [Service Mode] -> [System 2] -> [Option board Status]. • If it is set to [Unset], set to [Set].

9.3 B11#

Error code	Category	Contents of error	How to correct
B110	FAX driver error	Instance generation error or observer registration error	Turn OFF and ON the main power switch.
B111		Configuration space initialization NG	
B112		Semaphore acquisition, release error	
B113		Sequence error among main body tasks	
B114		Message queue control error	
B115		Main body - sequence error among FAX boards	Pull out and insert the connector of FAX board to check its installation.
B116		FAX board nonresponse (Nonresponse after initialization)	
B117		ACK waiting timeout error	
B118		Receiving undefined frame	
B119		DMA transfer error	

9.4 B12#

Error code	Category	Contents of error	How to correct
B120	JC	Soft error (FAX board side)	Turn OFF and ON the main power switch.
B122	SPI	Device error (modem-DAA initialization error)	• Turn OFF and ON the main power switch. • If the trouble is not yet corrected, hardware of the FAX board may be defective. Replace the FAX board in such a case.
B123		Device error (modem-DAA power save recovery error)	
B125	JC	ISW failure of SubCPU	
B126		Timeout error due to nonresponse from codec control during suspension process	Turn OFF and ON the main power switch.
B127		Timeout error due to nonresponse from communication control during suspension process	

Error code	Category	Contents of error	How to correct
B128		Timeout error due to nonresponse from LINE control during suspension process	
B129		Timeout error due to nonresponse from SPI tasks during suspension process	

9.5 B13#

Error code	Category	Contents of error	How to correct
B130	Driver error (FAX board side)	Driver soft error	Turn OFF and ON the main power switch.
B131		Reception frame length error from main	
B132		Reception frame header error from main	
B133		232C I/F sequence error	
B134		DPRAM I/F sequence error	
B135		DPRAM CTL/STS register error	
B136		ACK waiting timeout	
B137		DPRAM RESET reception	
B139	CC	No modem response during execution of voice response	

9.6 B14#

Error code	Category	Contents of error	How to correct
B140	Soft error (FAX board side)	MSG I/F error with job control	Turn OFF and ON the main power switch.
B141	Soft error	I/F error with driver	
B142	I/F error with main	Undefined command reception	
B143		Command frame length error	
B144		Command parameter length error	
B145		Undefined parameter	
B146		Command/response sequence error	

9.7 B15#

Error code	Category	Contents of error	How to correct
B150	Line control	External class instance acquisition error	Turn OFF and ON the main power switch.
B151		Job start error (starting job parameter error/child job generation error)	
B152		Doc access error (report buf access error)	
B153		Response wait timeout from external task	
B154		Internal que table control error (create/ enque/deque)	
B158	FAX job control	Incorrect start-up job information, fax job instance acquisition release error	

9.8 B16#

Error code	Category	Contents of error	How to correct
B160	1 destination control	Instance generation error	Turn OFF and ON the main power switch.
B161		Timeout error	
B162		Interface error	
B163		Message que control error	
B164		Semaphore acquisition release error	
B165		Observer registration error	
B166		Reception resource check error	
B167		Deployment error of sending image information	
B168		Serialization error of receiving image	
B169		Access error to quick memory data	

9.9 B17#

Error code	Category	Contents of error	How to correct
B170	Page control	Internal que table control error (create/enque/deque)	Turn OFF and ON the main power switch.
B171		Instance generation error	
B172		Timeout error	
B173		Interface error	
B174		Semaphore acquisition release error	
B175		Observer registration error	
B176		Unable to secure TTI domain	
B177		Error return from TTI rasterizer	
B178		Receiving job generation error	
B179		Sequence control error (line specification fault, status mismatch, event mismatch)	

9.10 B18#

Error code	Category	Contents of error	How to correct
B180	Page control	Access error to quick sending memory data	Turn OFF and ON the main power switch.
B181		BlockBuff acquisition error	
B182		Sending block image error (Req, restore)	
B183		Receiving block image error (Req, store)	
B184		Storage error of receiving image information	
B185		Receiving data size logic error (Receiving data are not multiples of dotline)	
B186		Image buf acquisition (alloc) error	
B187		Error return from compressor	
B188		BandBuf control error (newInstance/get/free)	

9.11 B19#

Error code	Category	Contents of error	How to correct
B190	USB	USB IF error (USB out transfer NG)	Turn OFF the main power switch, then check the connection of USB, turn ON the main power switch.
B191		USB IF error (USB in transfer NG)	
B192		USB IF error	
B193		USB IF error (USB is detached)	
B194		USB IF error (No response from fax board	
B195		USB IF error (Attach not detected for 1 min. after recovery from sleep)	
B196		USB IF error (Detach not detected for 1 min. after recovery from sleep)	

9.12 T0#

Error code	Category	Contents of error	How to correct
T00	Sending	T1 timeout. No response obtained from the machine on the other end of the line. (35 second)	Check that the address number is correct.
T01		T1 over after the mode has been changed (35 seconds)	-
T02		DCN reception in DIS waiting	The remote station may not receive the data due to paper shortage, full memory, etc.
T03		Unexpected command reception in DIS waiting	-
T04	Not used		
T05	Sending	FIF not matching with the remote station (remote station without the function).	-
T06		DCN reception in CFR/FTT waiting	-
T07	Not used		
T08	Sending	Training failure at 2400 bps	The line may be in trouble. Check the line noise.

Error code	Category	Contents of error	How to correct
T09		No response to DCS	The line may be disabled because the user on the remote station disconnected it.

9.13 T1#

Error code	Category	Contents of error	How to correct
T10	Not used		
T11	Sending	DCN reception while waiting for post message responses	The remote station may not receive the data due to paper shortage, full memory, etc.
T12		Unexpected command reception while waiting for post message responses	-
T13		No response while waiting for post message responses	The remote station may not receive the data due to paper shortage, full memory, etc.
T14	Not used		
T15	Not used		
T16	Not used		
T17	Not used		
T18	Sending	No reception ability in a remote station	The remote station may not receive the data due to paper shortage, full memory, etc.
T19	Not used		

9.14 T2#

Error code	Category	Contents of error	How to correct
T20	Not used		
T21	Not used		
T22	Not used		
T23	Not used		
T24	Not used		
T25	Not used		
T26	Not used		
T27	Not used		
T28	ECM sending	Timeout by RR/RNR (60 seconds)	-
T29	Not used		

9.15 T3#

Error code	Category	Contents of error	How to correct
T30	Not used		
T31	Not used		
T32	ECM sending	Fall back over by CTC	The line may be in trouble. Check the line noise.
T33	Not used		
T34	Not used		
T35	ECM transmission	No responses to RR	-
T36		DCN reception to RR	-
T37	Not used		
T38	F code polling TX	SID is received when SEP is received	-
T39	Not used		

9.16 T4#

Error code	Category	Contents of error	How to correct
T40	Calling	Software error at calling	-
T41	Not used		
T42	Sending	RTN/PIN reception	-
T43		Three continuous CRP signal reception	-
T44		Time error between frames at transmission	-
T45	Not used		
T46	Not used		

Error code	Category	Contents of error	How to correct
T47	Not used		
T48	Check destination	Line disconnected due to no match as a result of CSI check.	Telephone number may not be set on the remote station. Check the CSI signal of the remote station in the protocol trace list.
T49	Not used		

9.17 T5#

Error code	Category	Contents of error	How to correct
T50	FAX-CSRC	Host terminal ID inconsistency	-
T51	Sending	The FAX board does not respond during transmission	The line may be in trouble. Check the line noise.
T52		FAX board - sequence incorrect among MFPB	Pull out and insert the connector of FAX board to check its installation.
T53	Not used		
T54	Not used		
T55	Not used		
T56	Not used		
T57	Not used		
T58	Polling reception	Calling by polling reception, but a remote station does not have polling transmission documents	Polling original may not be set on the remote station.
T59	Not used		

9.18 T6#

Error code	Category	Contents of error	How to correct
T60	Polling transmission	Received the polling transmission request (DTC), but there are no polling transmission documents	Polling original may not be set on your machine. Polling TX is enabled only when the polling transmission original is registered.
T61	F-code polling transmission	Unsatisfactory conditions for receive polling TX request.	Bulletin board original may not be set. Bulletin board TX is enabled only when the bulletin board transmission original is registered.
T62	F-code polling transmission	Box number specified by SEP is not valid.	Bulletin board box number from the remote station may be incorrect.
T63	Not used		
T64	Not used		
T65	Not used		
T66	Not used		
T67	Not used		
T68	Not used		
T69	Not used		

9.19 T7#

Error code	Category	Contents of error	How to correct
T70	Not used		
T71	Not used		
T72	Not used		
T73	Transmission	Modem response waiting T.0 (60 seconds)	-
T74	V34	No changes in the V34 modem status	-
T75		V34 signal sending error	-
T76		CS2 is not turned to ON.	-
T77	Not used		
T78	Transmission	Codec control soft ware error	-
T79		Job control soft error at transmission	-

9.20 T8#

Error code	Category	Contents of error	How to correct
T80	Call control	LOOP current detection NG when CML is turned ON at calling	• The line may not be connected. • Check the line connection status.

Error code	Category	Contents of error	How to correct
			• The line may be connected to where other than analog line (Group 4 line/key telephone system). • Check the line connection to analog line (Group 3 line).
T81		Dial Tone detection NG when CML is turned ON at calling	• The line may not be connected. • Check the line connection status.
T82		Answer tone (CED/DIS) waiting timeout after dialing at calling	-
T83		Busy tone detection at calling	-
T84		Line control dial error	-
T85		Short disconnection was detected after LOOP current detection at calling	-
T86	Not used		
T87	Not used		
T88	Not used		
T89	Control unit	When the control unit is connected, a communication error is caused due to capacity shortage and communication is finished.	-

9.21 T9#

Error code	Category	Contents of error	How to correct
T90	Multiple lines Line auto switch	TX line undetermined	Data may have been transmitted with no line specified when "No" is selected for TX-Line Auto Switch Setting. Specify the line to be used to send.
T91	Multiple lines Line auto switch	TX line undetermined	Data may have been transmitted with an illegal line specified. Specify a different line and transmit the data.
T92	Not used		
T93	Not used		
T94	Not used		
T95	Call control	When called, short disconnection of LOOP current was detected during a call	-
T96	Not used		
T97	Transfer	Transmission request was received with no FAX board installed. *	-
T98		Transmission request of images that cannot be transmitted were received. (Color images) *	-
T99	Call control	Remote stations number is deleted while waiting for abbreviated or one-touch redialing (redial / transmission / polling reception) *	-

*: The corresponding error code is not displayed on the control panel even if the error occurs.

9.22 R0#

Error code	Category	Contents of error	How to correct
R00	Reception	DCS was not received within 35 seconds (T1 over)	The dialed telephone number may be incorrect.
R01		T1 timeout after EOM sending	-
R02		DCN reception in DCS waiting	The line may be disabled because the user on the remote station disconnected it.
R03		Unexpected command reception in DCS waiting	-
R04		FIF error of DCS	-
R05	Not used		
R06	Reception	The line is disconnected when occurrence of an image information error in all frames exceeds a predetermined frequency.	The line may be disabled because the user on the remote station disconnected it.
R07		Image information does not come in image information waiting	
R08		CD OFF while receiving image information	
R09		DCN reception in post message waiting	

9.23 R1#

Error code	Category	Contents of error	How to correct
R10	Reception	Unexpected command reception in post message waiting	-
R11		Command was not received which waiting for post message	The line may be disabled because the user on the remote station disconnected it.
R12		Timeout during EOL-EOL	-
R13	Not used		
R14	Not used		
R15	Not used		
R16	Not used		
R17	Not used		
R18	Reception	Resource check error (line disconnected due to ongoing communication)	Space in the hard disk may become short. Unnecessary data should be deleted to secure the space in the hard disk.
R19	Not used		

9.24 R2#

Error code	Category	Contents of error	How to correct
R20	Reception	Line disconnection by receive reject function	Call was received from a user who is in the register of addresses to be rejected.
R21	CUG reception	No match of password in the closed network RX setting	Check the password.
R22		No password received in the closed network RX setting	Check the setting of closed network RX.
R23	Not used		
R24	ECM reception	RR-RNR repeats for 2 minutes	-
R25		Command was not received while waiting for responses to RNR	-
R26		Unexpected command was received while waiting for responses to RNR	-
R27		DCN reception while waiting for responses to RNR	-
R28		The counter is abnormal of the post messages received (PC/BC).	-
R29		Timeout (35 seconds) between frames occurred	-

9.25 R3#

Error code	Category	Contents of error	How to correct
R30	Not used		
R31	Not used		
R32	Reception	Line disconnected because there is no appropriate confidential user box while automatic user box generation is inhibited.	Confidential box No. received from the remote station may be incorrect.
R33		DIS reception to DTC (German specifications only)	-
R34	F code confidential reception	PWD was received when SUB was received.	-
R35	Not used		
R36	Not used		
R37	V34	CS2 is not turned to ON.	-
R38		No change in V34 modem and status	-
R39	Not used		

9.26 R4#

Error code	Category	Contents of error	How to correct
R40	When called	Soft error when called	-
R41	Not used		
R42	Not used		
R43	Not used		

Error code	Category	Contents of error	How to correct
R44	Not used		
R45	Reception	Phase C timeout (NonECM reception only)	-
R46	Not used		
R47	Not used		
R48	Not used		
R49	Reception	DCN reception while waiting for image information	The line may be disabled because the user on the remote station disconnected it.

9.27 R5#

Error code	Category	Contents of error	How to correct
R50	Reception	No. of error lines exceeds.	The line may be in trouble. Check the line noise.
R51	Reception	The FAX board does not respond during reception	The line may be in trouble. Check the line noise.
R52		FAX board - sequence incorrect among MFPB	Pull out and insert the connector of FAX board to check its installation.
R53	Not used		
R54	Not used		
R55	Not used		
R56	Not used		
R57	Not used		
R58	Not used		
R59	Not used		

9.28 R6#

Error code	Category	Contents of error	How to correct
R60	Reception	Reception image error (RTN/PIN sending)	The line may be in trouble. Check the line noise.
R61	Not used		
R62	Not used		
R63	Reception	Three continuous CRP signal reception	-
R64	Not used		
R65	Not used		
R66	SEP polling	SEP polling transmission request was received without SEP polling transmission ability	-
R67	SUB reception	SUB was directed without SUB reception ability	-
R68	Not used		
R69	ECM reception	Communications are cut when EOR is received.	The line may be in trouble. Check the line noise.

9.29 R7#

Error code	Category	Contents of error	How to correct
R70	ECM reception	Decode error occurred in ECM	-
R71	Reception	RTC detection error (No. of EOL is smaller than FP.)	-
R72		Long original larger than the allowable value is received.	Longer original than specified is received from the remote station.
R73		Modem response waiting T.0 (60 seconds)	-
R74		Reception byte size error	-
R75	V34	V34 signal sending error	-
R76		Unexpected command was received in V34 mode phase C reception	-
R77	Reception	Codec control middle ware error	-
R78		Codec control software error	-
R79		Job control soft error during reception	-

9.30 R8#

Error code	Category	Contents of error	How to correct
R80	Not used		
R81	Not used		
R82	Not used		
R83	Not used		
R84	Not used		
R85	-	R-ISW request received when a machine is running in case of either reserved job exists, image exists in memory, or jam happened.	-
R86	Not used		
R87	Not used		
R88	Not used		
R89	Not used		

9.31 R9#

Error code	Category	Contents of error	How to correct
R90	Not used		
R91	Not used		
R92	Turnaround	When the turnaround function is not provided, the line is disconnected if a turnaround order (DTC) is received.	-
R93	F-code reception	Unsatisfactory conditions for confidential RX request	Check the Confidential password.
R94		Unsatisfactory conditions for relay request	Check the Relay password.
R95		Unsatisfactory conditions for forwarding request	-
R96		Confidential box number specified by SUB is not valid.	Confidential box No. received from the remote station may be incorrect.
R97		Unsatisfactory conditions for PC-FAX RX request (Function, PW unmatching)	-
R98	Not used		
R99	Others	Reception command was received from the whole control side before reception signals were detected.	-

9.32 Other

Error code	Category	Contents of error	How to correct
-	Others	Despite the FAX board is installed in line 2, FAX (line 2) of [Service Mode] -> [System 2] -> [Option Board Status] is "Unset", if it is set to When the main body is in the sleep mode, line 1 can not receive faxes.	• When using the line 2, make sure that the FAX (system) for line 2 is set up correctly. • When not using the line 2, remove all wirings of the FAX board for line 2.
-		When the main body recovers from the sleep mode while receiving a fax, the ring tone is generated more than the set number of times. (2 to 3 times)	This error is avoidable with any one of the following settings. • Set [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode] to “Disabled”. • Set [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Number of RX Call Rings] to “0 x”.

10. DIAGNOSTIC CODES

10.1 Outline

- The diagnostic code is a 22-digit hexadecimal code indicating a communication conditions and status.
- The diagnostic code is printed on the activity report.
- The purpose of the diagnostic code is to obtain detailed information of communication results and conditions so as to analyze communication troubles.

10.2 Explanation

10.2.1 The diagnostic code

XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)

10.2.2 Information of communication results and conditions

Items	Description							
	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
(1) Types of call out / called	F network (Japan)	PSTN	Dial-in (Japan)	Telephone	Group	One-touch dialing	Abbreviated dialing	Key pad dialing
(2) Communication mode	Sending	Error page resending	Forwarding transmission	Polled transmission	Receiving	Recovery transmission	Called turnaround	Polling RX
(3) Applied function specification	Mixed size transmission All pages/ cover	Frame erasure transmission	Book mode transmission	2in1 transmission	Original size appointing TX	Upside down	Special scanning non standard/ Zfold/Long	(Not used)
(4) One-time communication parameter specification	Timer TX	(Not used)	CSRC	PC-Fax transmission (RX/V2)	V.34 appoint transmission	F-code transmission	ECM specification TX	International mode transmission
(5) Communication type	Relay	Confidential	Manual transmission	Bulletin	Line used (line 1 to 4)			
(6) H_RES specification 1 (HR)	400 dpi	300 dpi	200 dpi	(Not used)	16 pels/mm	(Not used)	8 pels/mm	(Not used)
(7) H_RES specification 2 (HR)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	600 dpi
(8) V_RES specification 1	400 dpi	300 dpi	200 dpi	100 dpi	15.4 l/mm	(Not used)	7.7 l/mm	3.85 l/mm
(9) V_RES specification 2	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	600 dpi
(10) Coding specification	(Not used)	(Not used)	(JPEG)	(JBIG)	MMR	MR	MH	THRU
(11) Original length specification	(Not used)	(Not used)	(Legal)	(Letter)	A3	B4	A4	(Not used)
(12) Original length specification	(Not used)	No limits	(Legal)	(Letter)	(Not used)	B4	A4	(Not used)
(13) Speed specification 0	(Not used)	(Not used)	(Not used)	V.29-96	V.29-72	(Not used)	V.27-48	V.27-24
(14) Speed specification 1	V.17-144	V.17-120	V.17-96	V.17-72	(V.33-144)	(V.33-120)	(V.33-96)	(V.33-72)
(15) Speed specification 2	V.34-192	V.34-168	V.34-144	V.34-120	V.34-96	V.34-72	V.34-48	V.34-24
(16) Speed specification 3	(Not used)	(Not used)	V.34-336	V.34-312	V.34-288	V.34-264	V.34-240	V.34-216
(17) MSLT specification	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	MSLT of resolution shown as vertical RES		
(18) Communication parameter specification	ECM frame size 0: 256 / 1: 64	ECM	DIAG (CSRC)	(BFT)	(BTM)	PWD	SEP	SUB
(19) Remote station coding specification	(Not used)	(Not used)	(JPEG)	(JBIG)	MMR	MR	MH	THRU
(20) Remote station length specification	(Not used)	(Not used)	(Legal)	(Letter)	A3	B4	A4	(Not used)
(21) Remote station length specification	(Not used)	No limits	(Legal)	(Letter)	(Not used)	B4	A4	(Not used)
(22) Remote station communication	(Not used)	ECM	DIAG (CSRC)	(BFT)	(BTM)	PWD	SEP	SUB

- (Not used): bit is set to 0.

11. NETWORK FAX ERROR CODE

- When there occurs any trouble with this machine, the error screen is displayed. And on this error screen, the following error message is shown. Take a necessary step referring to the table given below.

11.1 Error code list of the transmission system

Error code	Category	Contents of error	Redial	Corrective action
N10	Connection error	Server connection error	No	• Check the condition of the other party machine. • Check the network setting of local machine. • Ask the network administrator if the network is operating normally.
N11	Connection error	Connection declined by the other party machine	No	Reception is declined. Check the condition of the other party machine.
N12	Connection error	Disconnection of the line	Yes	Check to see if there occurs any abnormal condition with the network, such as the disconnection of a cable.
N13	Connection error	No response received from the network	No	• Check the condition of the other party machine. • Check the network setting of local machine. • Ask the network administrator if the network is operating normally.
N14	Connection error	Mail delivery error	No	Check the condition of the other party machine. Send it again after waiting for a while.
N15	Remote reset	Connection reset by the other party machine	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N16	Remote busy	Remote machine is busy	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N17	LAN access	Communication time out	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N18	Network error	Network error	No	• Check the each settings. • Check to see if there occurs any abnormal condition with the network, such as the disconnection of a cable. • After turning off and on the main power switch, send it again.
N20	Memory error	Memory overflow	No	• The memory is full. • Check to see if there is any other job being handled. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N21	HDD error	HDD error	No	• HDD is full. • Delete unnecessary files. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N22	Conversion error	Conversion error	No	After turning off and on the main power switch, send it again.
N25	Memory overflow	Memory overflow	No	• The memory is full. • Check to see if there is any other job being handled. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N35	Forward TX	A request for transmission has been received with the NetFAX with the Function Settings OFF. (A request for transfer of the IP address FAX while the IP Address FAX function is being OFF in the service mode.)	No	-
N36		A request has been received for transmission of images that cannot be sent.	No	-

11.2 Error code list of the reception system

Error code	Category	Contents of error	Corrective action
N50	SMTP reception	SMTP reception error	When the SMTP reception does not start in 60 minutes after connection for an incoming call, this error may be resulted. Ask the sender to send it again.
N51	Decode	In excess of the length specified for reception	Ask the sender to send it again after the length of the text being reduced.

Error code	Category	Contents of error	Corrective action
N52	Decode	In excess of the number of pages specified for reception	Ask the sender to send it again after the number of text sheets being reduced.
N53	Decode	File error	Ask the sender to send it again in a correct file format as shown below. • Internet Fax: TIFF • IP Address Fax: PDF or TIFF
N54	Decode	Decode error	The data has been received in an incorrect format. Ask the sender to send it again in a correct format.

12. Open API RELATED TROUBLE

12.1 Outline

- Through the Certification Management System provided by OpenAPI, if error is found in communication between the machine and interacting applications developed by company other than KM, an error message is displayed.

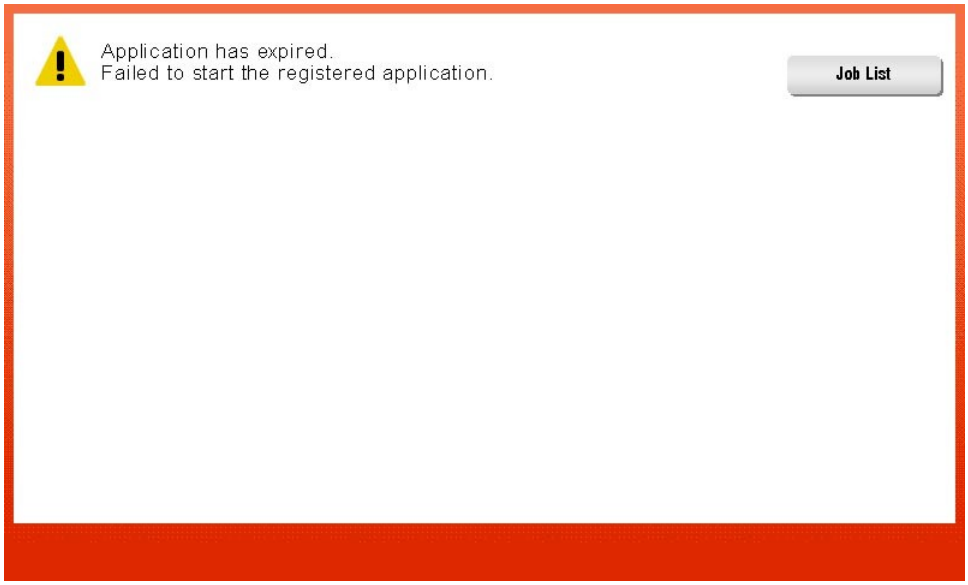
12.2 Types of Trouble

- The Certification Management System provided by OpenAPI certificates and manages communication between main body and non-KM applications that run on the computer connected to the machine. If trouble is detected, the trouble message is displayed on the control panel of the machine or the screen of the computer on which the applications run.
  Trouble messages displayed on the control panel of the main body and actions are described below.

NOTE

- **A message that appears on the computer screen may be different depending on the application being used for communication. The corresponding action may be different, so contact the application vendor for an appropriate action.**

<Examples of trouble messages>



12.3 Solution

- The below describes the OpenAPI certification related trouble messages displayed on the control panel of the main body and actions, dividing them by possible situation.

12.3.1 When using an application

No.	Symptom and message	Action
1	When starting an application, the following message is displayed: Application has expired. Failed to start the registered application. When starting the machine, the following message is displayed: The Enhanced Server Authentication application has expired. Change the User Authentication method to one other than Enhanced Server Authentication.	1. In [Administrator Settings] -> [System Settings] -> [Date/ Time Settings], check that the date and time that is set is same as the actual date and time. If a wrong date and time is set, correct it. 2. Contact the application vendor and obtain a new Solution Key (or the application software itself). Using it, perform the steps below. 1) Delete the application. 2) Using the Solution Key (or the application software itself), register the application again.
2	When starting an application, the following message is displayed: Failed to start the registered application. Please contact your service representative. When starting the machine, the following message is displayed: The enhanced server authentication application cannot be used. Please contact your service representative.	In [Service Mode] -> [System1] -> [Marketing Area], change the marketing area of the machine to the one that was selected when the application was registered.
3	In the screen saver application, after a time set, the screen saver does not work.	1. In [Administrator Settings] -> [System Settings] -> [Date/ Time Settings], check that the date and time that is set is same as the actual date and time. If a wrong date and time is set, correct it. 2. Contact the application vendor and obtain a new Solution Key (or the application software itself). Using it, perform the steps below. 1) Delete the application. 2) Using the Solution Key (or the application software itself), register the application again.

No.	Symptom and message	Action
		3. In [Service Mode] -> [System1] -> [Marketing Area], change the marketing area of the machine to the one that was selected when the application was registered.

12.3.2 After rewriting the firmware of the machine

No.	Symptom and message	Action
1	When starting an application, the following message is displayed: Failed to start the registered application. Please contact your service representative.	After deleting the application in question, register the application again.
	When starting the machine, the following message is displayed: The enhanced server authentication application cannot be used. Please contact your service representative.	
	In the screen saver application, after a time set, the screen saver does not work.	

13. TROUBLES THAT DO NOT DISPLAY THE TROUBLE CODE

13.1 Machine is not energized at all (DCPU operation check) (bizhub C658/C558/C458/C368/C308/C258)

13.1.1 Contents

Trouble type	Machine is not energized at all
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• Main power switch (SW1) • MFP board (MFPB) • DC power supply (DCPU)

13.1.2 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is a power voltage supplied across CN1-1 and 2 on DCPU?	C368/C308/C258 19-T C658/C558/C458 15-S	NO	Check the WIRING from the wall outlet to SW1 to CN1.
2	Are the fuses on DCPU conducting?	-	NO	Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Is DC5 V being output from CN6-5 on DCPU?	C368/C308/C258 19-R C658/C558/C458 17-S	NO	Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Is DC24 V being output to CN7-3 on DCPU?	C368/C308/C258 19-R C658/C558/C458 18-S	NO	• Check the WIRING from the wall MFPB to DCPU. • Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	The LED on MFPB is blinking?	-	NO	Replace MFPB. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	Is DC24 V being output to CN7-1 on DCPU?	C368/C308/C258 19-R C658/C558/C458 18-S	NO	Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

- N.1 bizhub C368/C308/C258
- N.2 bizhub C658/C558/C458

13.2 Fusing heaters do not operate (bizhub C658/C558/C458/C368/C308/C258)

13.2.1 Contents

Trouble type	Fusing heaters do not operate
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• Main power switch (SW1) • Right door switch (SW3) • DC power supply (DCPU) • MFP board (MFPB) • Fusing unit

13.2.2 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is a power voltage supplied across CN8-5 on DCPU? During this time, the right door should be closed.	C368/C308/C258 17-R C658/C558/C458 15 to 16-Q	NO	Check wiring from power outlet to SW1 to CN8 to SW3.
2	Is the power source voltage applied across MFPB CN13E-6, 9? (bizhub C368/C308/C258)	C368/C308/C258 11-E	YES	Replace the fusing unit.
			NO	Replace DCPU. Replace MFPB.
3	Is the power source voltage applied across MFPB CN13E-4, 6 (bizhub C658/C558), MFPB CN12E-6, 9 (bizhub C458)? (bizhub C658/C558/C458)	C658/C558/C458 23 to 24-C	YES	Replace the fusing unit. (bizhub C658/C558 / bizhub C458)
			NO	Replace DCPU. Replace MFPB.

- N.1 bizhub C368/C308/C258
- N.2 bizhub C658/C558/C458

13.3 Power is not supplied to DF (bizhub C658/C558/C458)

13.3.1 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being output from CN1 on DF?	13-I	YES	Malfunction in DF.
2	Is DC24 V being output from CN004-1 on DCPU?	17-Q	NO	Check wiring from DCPU to DF.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in DF.

- N.3 Dual scan document feeder

13.4 Power is not supplied to option

13.4.1 DF-704/DF-629

(1) Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being output from CN1DF-1 on DF?	15-I	YES	Malfunction in DF-704/DF-629.
2	Is DC24 V being output to CN4-1 on DCPU?	18-R	NO	Check wiring from DCPU to DF-704/DF-629.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in DF-704/DF-629.

- N.1 bizhub C368/C308/C258
- N.4.2 DF-704
- N.4.1 DF-629

13.4.2 PC-110/PC-115/PC-210/PC-215/PC-410/PC-415

(1) Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being applied to CN65?	C368/C308/C258 23-D C658/C558/C458 28-D	NO	Malfunction in cabinet.
2	Is DC24 V being output to CN21E-1 on MFPB?	C368/C308/C258 23-E C658/C558/C458 28-E	NO	Check wiring from MFPB to CN21E to cabinet.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	Malfunction in cabinet.

- N.1 bizhub C368/C308/C258
- N.2 bizhub C658/C558/C458
- N.4.3 PC-110
- N.4.4 PC-115
- N.4.5 PC-210
- N.4.6 PC-215
- N.4.7 PC-410
- N.4.8 PC-415

13.4.3 FS-533/FS-534

(1) Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being applied to CN1FN?	17-I	NO	Malfunction in finisher.
2	Is DC24 V being output to CN4-5 on DCPU?	18-R	NO	Check wiring from DCPU to finisher.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in finisher.

- N.1 bizhub C368/C308/C258
- N.4.11 FS-533

- N.4.12 FS-534

13.4.4 FS-536/FS-536SD/FS-537/FS-537SD

(1) Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being output to CN1-3?	27-K to L	NO	Malfunction in finisher.
2	Is DC24 V being output to CN4-5 on DCPU?	17-Q	NO	Check wiring from DCPU to finisher.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in finisher.

- N.2 bizhub C658/C558/C458
- N.4.15 FS-536/FS-536SD
- N.4.16 FS-537/FS-537SD

14. OTHER TROUBLE

14.1 Firmware error warning

- Warning message: A firmware error occurred.
- While the enhanced security mode is enabled, if MFP is restarted by turning the main power switch OFF and ON or other operations, self-testing is performed internally. If the self-testing detects firmware error, this warning appears.

14.1.1 Action

1. Set Enhanced Security Mode to “OFF” in Administrator Settings and touch “OK.”
2. Turn OFF and ON the main power switch.
3. Check that the warning screen is not displayed.
4. Rewrite the firmware.
5. Set the Enhanced Security Mode.

14.2 HDD lock password error warning

14.2.1 Detection timing

- Warning message: Reset HDD Lock Password.
- There is a mismatch between the password registered in the HDD and that registered in the main body.
- Wrong machine type information is input.

14.2.2 Action

(1) Checking the machine type information

NOTE

- **Perform the following steps, if this malfunction occurs when the MFP board is replaced with a new one.**
- **Prepare a USB flash drive in which firmware data is recorded.**

1. Call the firmware update selection screen to the display.
   NOTICE
   - USB memory
2. Touch [Machine Type Select].
3. Check the setting values of [Machine] and [Type] and enter the correct setting values. For details, see “USB memory”.
4. Turn OFF and ON the main power switch. If a USB flash drive has been used, first remove the USB flash drive and then turn ON the main power switch.

(2) Re-registering the correct HDD Lock Password

1. Touch Menu.
2. Touch [Utility].
3. Touch [Administrator Settings].
4. Enter the administrator password and touch [OK].
5. Enter the currently set HDD Lock Password twice.
6. Touch [OK].
7. When the screen that indicates the completion of setting of the HDD Lock Password appears, turn OFF and ON the main power switch.

(3) Performing HDD Physical Format

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Physical Format].
4. Press the Start key.
5. When Physical Format is completed, turn OFF and ON the main power switch.

15. TROUBLESHOOTING OF i-Option

15.1 Structure of license management

- The functions available with i-Option can be activated by entering “License code” to the main body.
- License code is issued and controlled by License Management System (LMS).
  To prevent unauthorized use of the license code, each main body is identified individually so that the license code cannot be activated unless it matches with the authorized the main body.

15.2 License management information

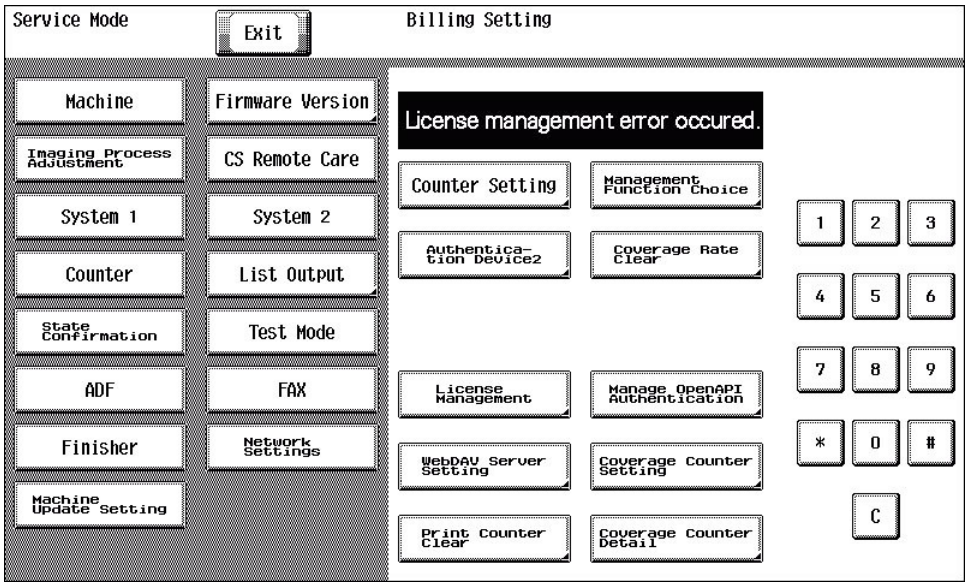
- Since license code needs to identify each main body, it is issued using the serial number of main body and “unique value” that is generated inside the main body.
- The “unique value” is stored to the memory region on the MFP board and at the same time some parts of it are memorized by eMMC board and EEPROM. The activated function cannot be used unless the both figures conform.
  Since these figures are out of target of [Memory Data Backup], when any trouble occurs at either nonvolatile memory, “License Management Error” is generated due to discordance of the figures.

15.3 Error message

15.3.1 License management error

- When abnormal value is detected in the license management information that is stored to the MFP board, eMMC board or EEPROM, or some values are detected cleared, warning is issued to let the user know the abnormality.
- The abnormality is detected at the timing of start-up or restart due to any condition.
- When the abnormality is detected, the corresponding i-Option function cannot be used, other ordinal functions, however, such as copy, scanning, print or etc, can be used without interruption. (Error message is displayed on the Service Mode screen.)

(1) Example of error message



(2) Main reasons of trouble

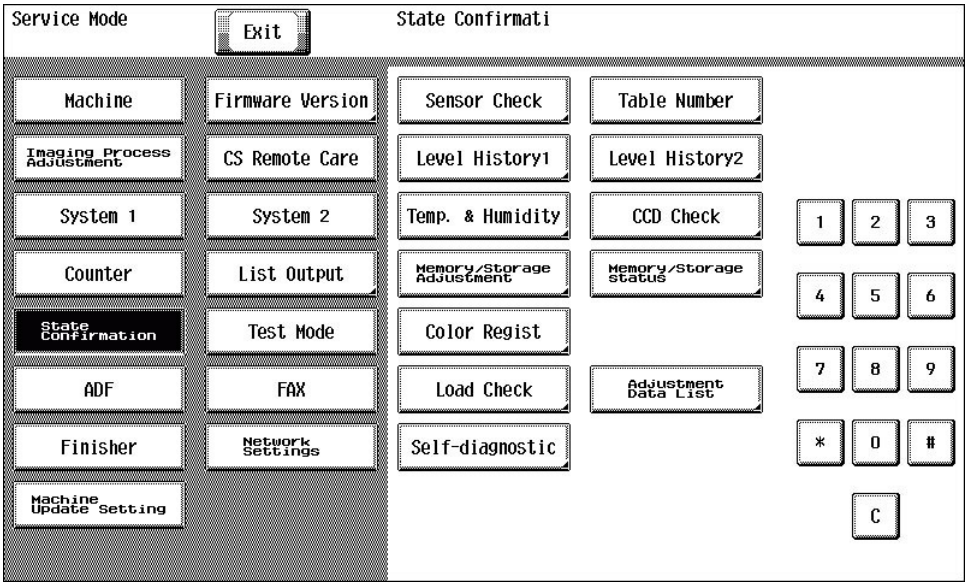
- The following shows the possible trouble factors and their countermeasure.

Board replacement	Countermeasure
When MFP board and eMMC board or EEPROM are replaced with the new ones at the same time.	Install firmware, follow the setup procedure.
When mounting the MFP board of the machine whose function(s) have already been activated and a new eMMC board or EEPROM.	Install firmware, then restore the data using restore procedure.

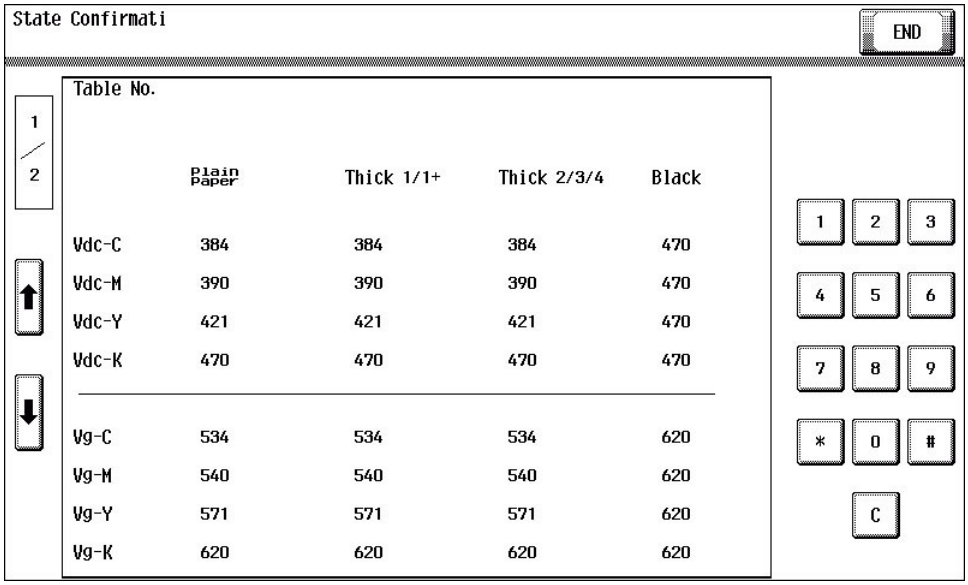
16. IMAGE QUALITY PROBLEM

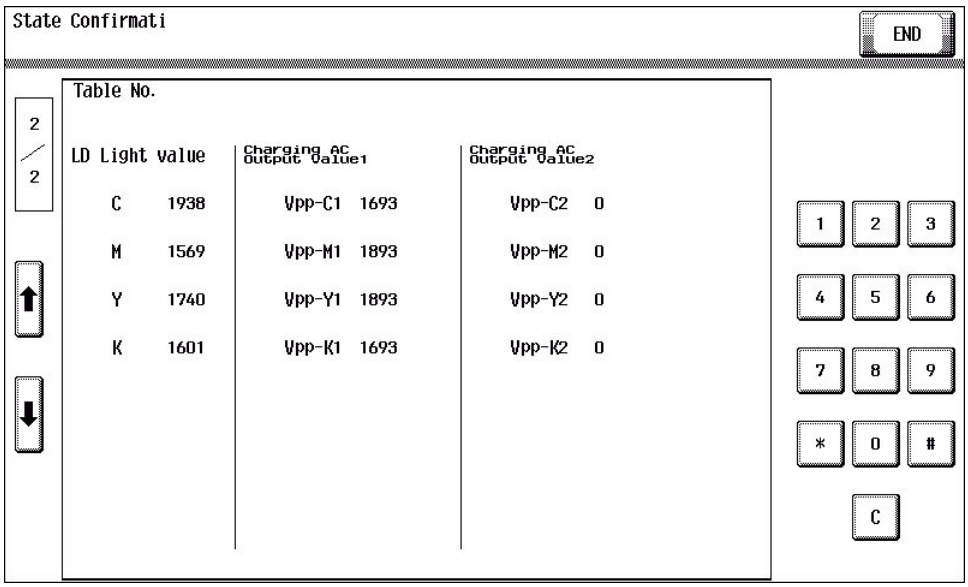
16.1 How to read element data

- As part of troubleshooting procedures, the numeric values set for “State Confirmation” available from “Service Mode” can be used to isolate the cause of the image problem.



16.1.1 Table Number

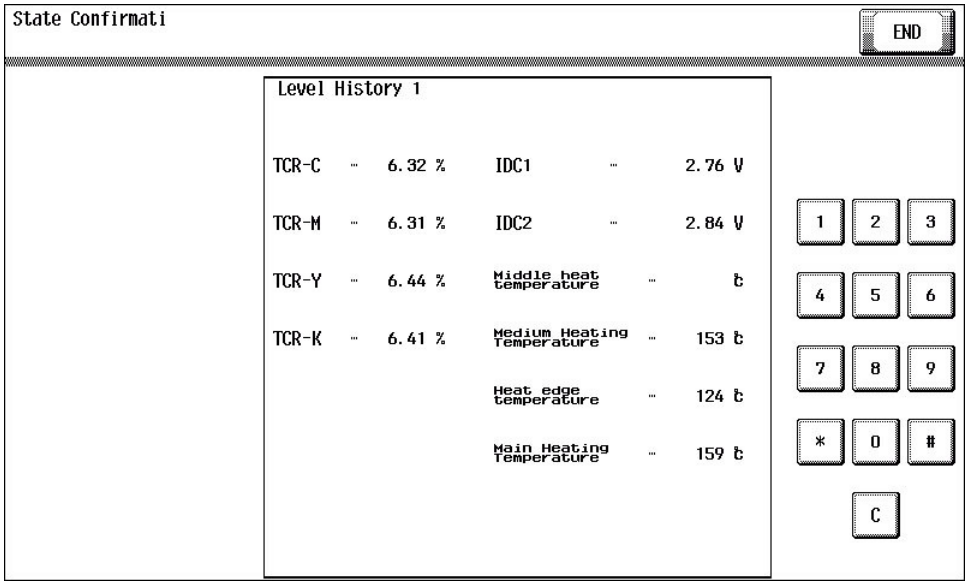




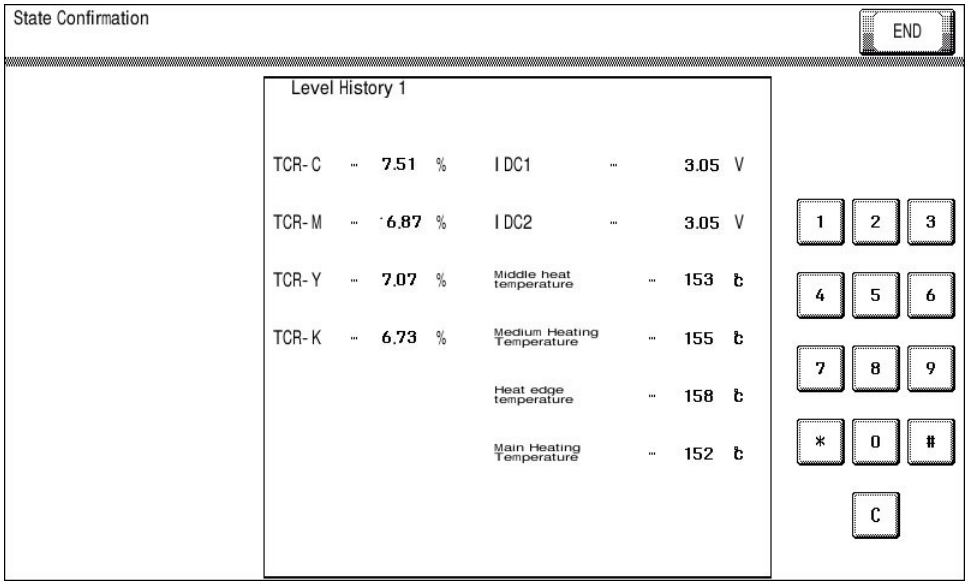
Vdc-C Vdc-M Vdc-Y Vdc-K	• Shows the developing bias value of toner when an image is produced. • Standard values: around 300 V to 400 V (100 V to 800 V) • The specific numeric values vary with different developing units. (The values incorporate corrections to match the proper density after image stabilization.) • If the value is high: It is decided that the image density is low by the IDC detection, and the value is corrected high. • If the value is low: It is decided that the image density is high by the IDC detection, and the value is corrected low. • Relevant components: Developing unit, drum unit, high voltage unit (HV)
Vg-C Vg-M Vg-Y Vg-K	• Shows the grid voltage value of each color of toner when an image is produced. • Standard values: around 450 V to 550 V (200 V to 1000 V) • The specific numeric values vary with different developing units. (The values incorporate corrections to match the proper density after image stabilization.) • If the value is high: It is decided that the image density is low by the IDC detection, and the value is corrected high. • If the value is low: It is decided that the image density is high by the IDC detection, and the value is corrected low. • Relevant components: Developing unit, drum unit, high voltage unit (HV)
LD Light Value (C, M, Y, K)	• Shows the LD light value of each color of toner during print image formation. • Standard values: around 1500 to 2200 (1400 to 3600) • For your information, photoconductor durability tends to be aggravated and fine line width tends to be broader at higher values and characters tend to be faint at lower values. • Relevant components: PH unit, drum unit
Charging AC Output Value1 Vpp-C1 Vpp-M1 Vpp-Y1 Vpp-K1	• Shows the AC voltage value applied to the charging roller of each color of toner during print image formation. • Standard values: around 1750 V to 1800 V (500 V to 2500 V) • Relevant components: Drum unit, high voltage unit (HV)
Charging AC Output Value2 Vpp-C2 Vpp-M2 Vpp-Y2 Vpp-K2	• Shows the current value applied to the charging roller of each color of toner during print image formation. • Standard values: around 120 to 145 (0 to 350) • Relevant components: Drum unit, high voltage unit (HV)

16.1.2 Level History 1

bizhub C458/C368/C308/C258

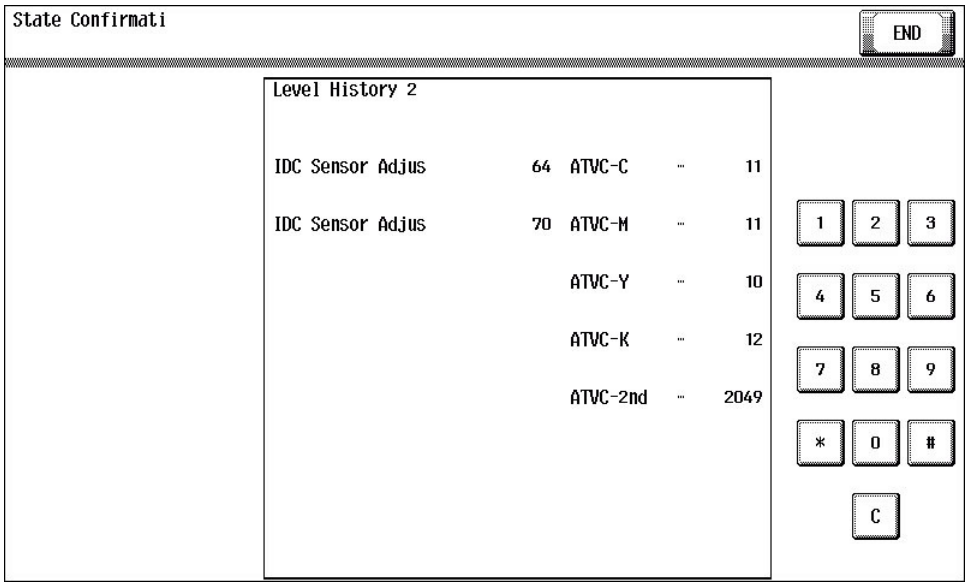


bizhub C658/C558



TCR-C TCR-M TCR-Y TCR-K	• Shows the T/C ratio. (in 0.01 % increments) • Standard value: 5 to 8 % • For your information, foggy background tends to occur at higher values and low image densities tend to occur at lower values. • Relevant components: TCR sensor
IDC1 IDC2	• Shows the IDC bare surface output value. (in 0.01 V increments) • It should normally be around 3.0 V. • The output range is 0 V to 3.4 V. • Relevant components: IDC sensor, transfer belt unit
Middle heat temperature (bizhub C458/C368/C308/C258: not used) Medium Heating Temperature Heat edge temperature Main Heating Temperature	• Shows the temperature of the fusing unit. (in 1 °C increments) • Relevant components: Fusing unit

16.1.3 Level History 2



IDC Sensor Adjust 1 IDC Sensor Adjust 2	• Shows the IDC intensity adjustment value. • It should normally be around 70. • The range is 0 to 255. • The value becomes greater as the transfer belt unit has been used more. • Relevant components: IDC sensor, transfer belt unit
ATVC -C ATVC -M ATVC -Y ATVC -K ATVC -2nd	• Shows the latest ATVC level (which varies according to the paper type). • ATVC-C: 8 µA to 23 µA (bizhub C368), 8 µA to 20 µA (bizhub C308) • ATVC-M: 7 µA to 22 µA (bizhub C368), 7 µA to 19 µA (bizhub C308) • ATVC-Y: 6 µA to 19 µA (bizhub C368), 6 µA to 17 µA (bizhub C308) • ATVC-K: 8 µA to 24 µA (bizhub C368), 8 µA to 21 µA (bizhub C308) • ATVC-2nd: 300 V to 5,000 V • Relevant components: Transfer belt unit, High voltage unit (HV), 2nd transfer roller

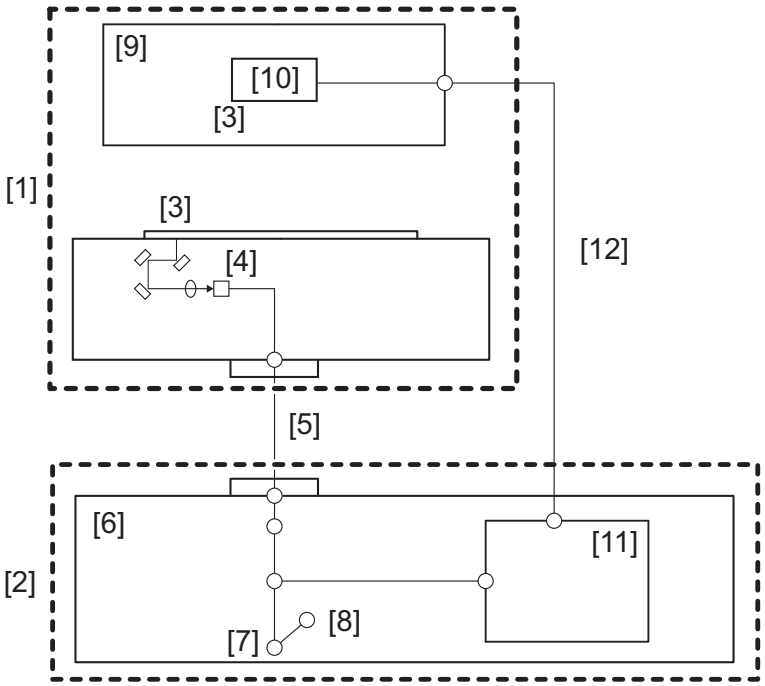
16.2 Troubleshooting procedure overview

16.2.1 Test pattern printing

- Following give an overview of a procedure to isolate a faulty spot of an image trouble using a test pattern.
- A faulty spot that is responsible for an image trouble is isolated by printing a test pattern to determine whether an image trouble is evident and determining which color of toner, Y, M, C, or K, has the trouble.

(1) Scanner system image trouble

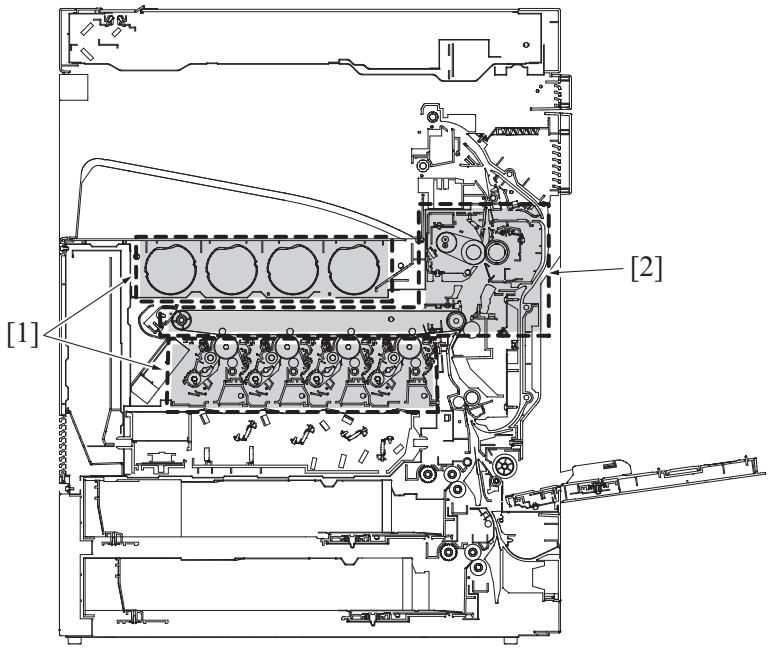
- If an image trouble occurs during a copy cycle, use the image trouble that may be evident on the test pattern printed to determine whether the trouble is attributable to the scanner system or the printer system.
- If no image trouble occurs on a test pattern produced following a print cycle, the image trouble is determined to be attributable to the scanner system.



[1]	Scanner system	[2]	Printer system
[3]	Document scan	[4]	CCD board (CCDB)
[5]	I/F cable (when DF-629 is mounted; and only for the front side for bizhub C368/C308/C258 mounted with DF-704 and for bizhub C658/C558/C458)	[6]	MFP board (MFPB)
[7]	PH relay board (PHRYB)	[8]	Print output
[9]	DF-629 / DF-704 / Dual scan document feeder	[10]	CIS module (CIS)
[11]	Dual scan image processing board (DSIPB)	[12]	I/F cable (only for the back side for bizhub C368/C308/C258 mounted with DF-704 and for bizhub C658/C558/C458)

(2) Printer system image trouble

- If the image trouble is attributable to the printer system, determine whether the image trouble occurs with one to three colors, or with four colors of Y, M, C, and K.
- If the same image trouble occurs with four colors, the image trouble is determined to be that of the four-color system.



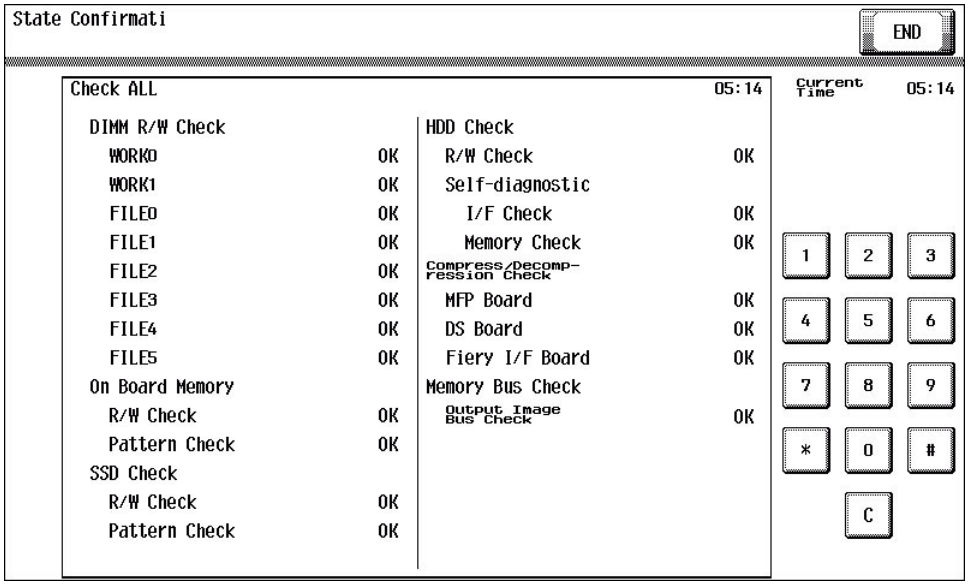
[1]	Faulty spot responsible for an image trouble of the single-to- three-color system	[2]	Faulty spot responsible for an image trouble of the four-color system

16.2.2 Self-diagnostic function

Following give an overview of the self-diagnostic function.

- The self-diagnostic function makes a self-diagnosis of printed-wiring boards and electrical parts to determine whether they are fully operational.
- Two methods are provided to activate the self-diagnostic function. The details are shown as follows: [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All].
  - Procedure (from SERVICE MODE menu)
  - Procedure (from main power switch ON)
- When the self-diagnostic procedure is completed, "OK" or "NG" appears on the display. If "NG" appears, check the corresponding printed-wiring board for proper connector connection or replace a faulty board with a good one.
- After completing the self-diagnostic, "Self-diagnosis result report" can be printed out. (Only when starting the self-diagnostic from main power switch ON.)

Self-diagnostic (Check All) screen: Example



(1) Causes and countermeasures

Check name	Cause of "NG" display	Corrective action
DIMM R/W Check	DIMM improperly installed, faulty DIMM, faulty CPU of MFP board	Reinstall the DIMM, replace the DIMM, replace the MFP board
On Board Memory Check	Faulty MFP board, run-down battery	Replace the MFP board
SSD Check	eMMC board improperly installed, faulty eMMC board, faulty MFP board	Reinstall the eMMC board, replace the eMMC board, replace the MFP board

HDD Check	Broken HDD cable, damaged HDD, faulty MFP board	Replace the HDD cable, replace the HDD, replace the MFP board
Compress/Decompression Check	Faulty MFP board, improperly connected dual scan image processing board	Reinstall the dual scan image processing board, replace the dual scan image processing board, replace the MFP board
Memory Bus Check: Output image	Improperly connected MFP board, faulty MFP board	Replace the MFP board

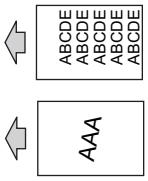
16.3 Corrective action procedure (bizhub C658/C558/C458/C368/C308/C258)

16.3.1 Image trouble sample illustrations

NOTE

- **Sample illustrations schematically show exemplary image troubles that occur when the images are printed on A3-size paper.**
- **The arrow in the exemplary image troubles indicates the paper feeding direction.**

Skewed image/Image deviation



White line 1, White band 1



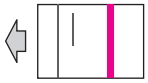
Color line 1, Color band 1



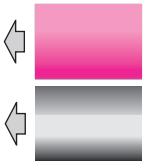
White line 2, White band 2



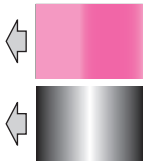
Color line 2, Color band 2



Uneven density 1



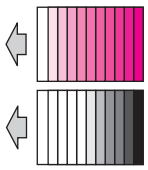
Uneven density 2



Faint image, Low image density



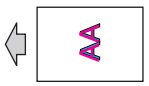
Gradation reproduction failure



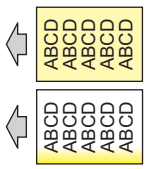
Color reproducibility error



Incorrect color image registration



Foggy background



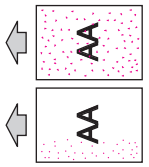
Void area



White spot



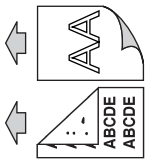
Color spot



Blurred image



Back marking



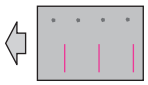
Blank copy



Black copy



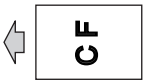
Uneven pitch



Uneven gloss, Rough gloss



Poor fusing performance



Offset



Brush effect

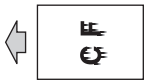
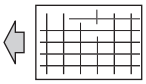


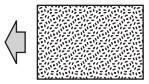
Image bleeding



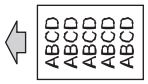
Blurred fine lines



Moire



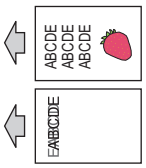
Distorted image



ACS malfunction



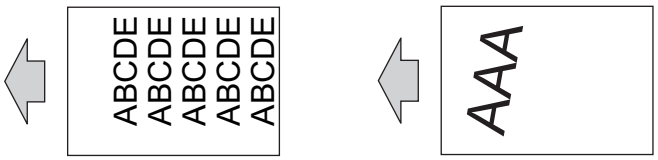
Abnormal image



16.3.2 Skewed image/Image deviation

(1) Typical faulty images

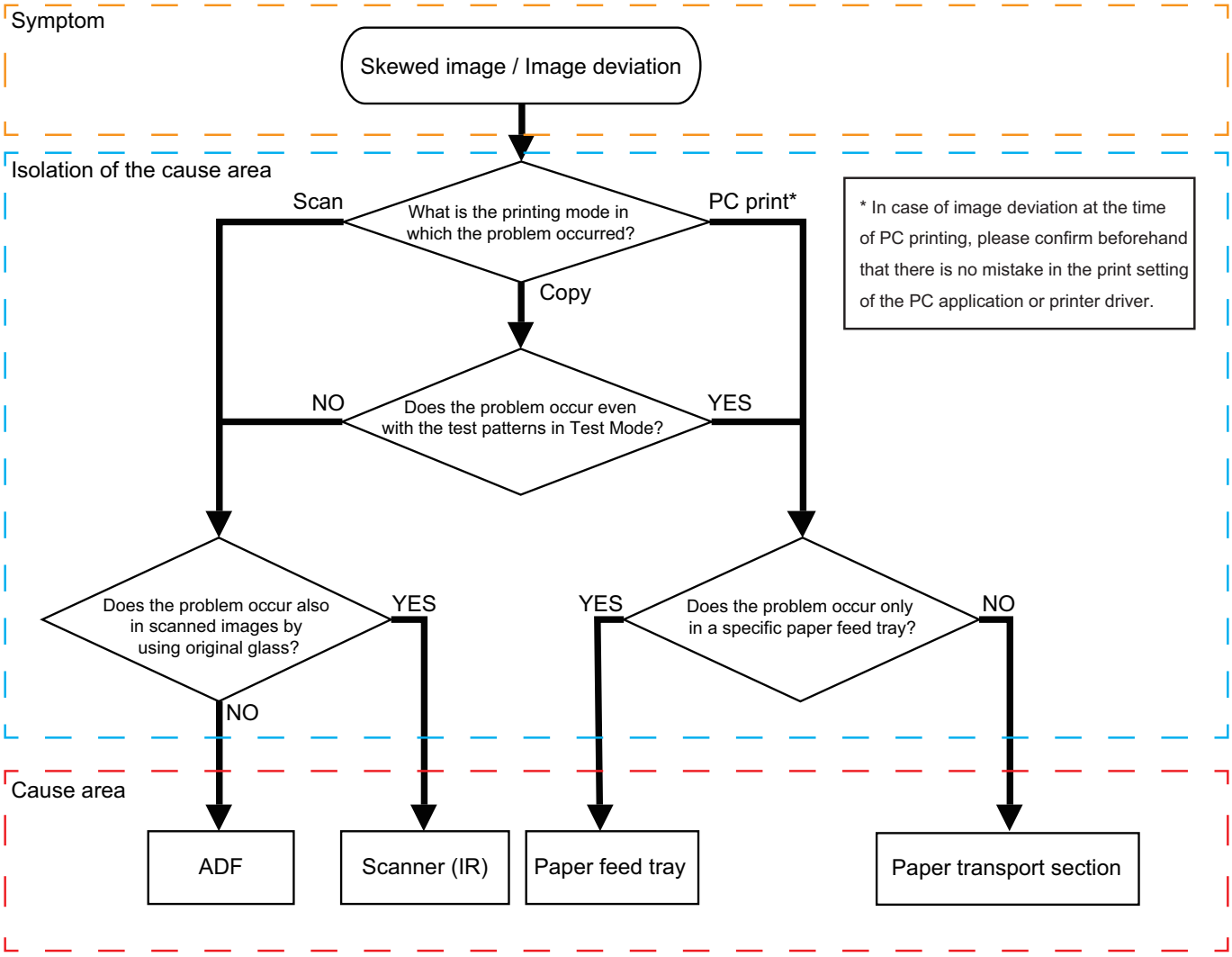
The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

Flowchart for isolating the cause area

- The figure below is a flowchart for isolating the cause area of image deviation / skewed image (four main cause areas are covered).
- After isolating the cause area according to the flowchart, please perform the troubleshooting described on the next page for each cause area.



Troubleshooting steps for each cause area

NOTE

- **If the problem can not be solved after "(1) First steps of troubleshooting," check "(2) Individual adjustment items".**
- **In "(2) Individual adjustment item," perform adjustment and test according to the manual description procedure of each item.**

< ADF >

(1) First steps of troubleshooting

Step	Content
1	Check the set position of original and document width guide, and correct it if needed.
2	Check the paper path, and remove any paper pieces or foreign matters.
3	Check each roller for dirt and wear, and clean or replace it if needed.
4	If there is looseness in the screw of the ADF hinge part, fix it and perform the installation settings of ADF. (Mount DF-629 , Mount DF-704)
5	Perform test printing/scanning to check whether the problem has been resolved.

Step	Content
	If it can not be resolved, confirm "(2) individual adjustment items".

(2) Individual adjustment items

Skewed image	1. ADF adjusting the height Adjusting the height Adjusting the height (DF-629) Adjusting the height (DF-704)
	2. Skew Measurement
	3. Registration Loop Adj. (Perform this item only if the problem is not resolved by adjustment 1 and 2.)
Image deviation	1. Feed Zoom
	2. FD-Mag. Adj. (B)
	3. Auto Stop Position Adjustment (Before performing this adjustment, adjustment 1 and 2 needs to be completed.)

NOTE

- **If the trouble can not be solved by the above adjustment, replace the CCD unit. CCD board (CCDB) (C368/C308/C258) / CCD board (CCDB) (C658/C558/C458)**
- **When using DF-704 (dual scan document feeder), if there is a problem only on the back side image after the above adjustment, replace the CIS module. CIS module (CIS) (dual scan document feeder)**

< Scanner (IR) >

(1) First steps of troubleshooting

Step	Content
1	Check the set position of original, and correct it if needed.
2	When using a thick original (like a book), check whether the user strongly presses the document cover/ADF. *The scanner section may not move smoothly due to the excessive pressure, and which may cause image deviation.
3	If original glass is not installed properly, reinstall original glass.
4	Perform test printing/scanning to check whether the problem has been resolved. If it can not be resolved, confirm "(2) individual adjustment items".

(2) Individual adjustment items

Skewed image	Mechanical adjustment: Print Head Skew Adj. (C658/C558/C458)
Image deviation	Scan Area

NOTE

If the trouble can not be solved by the above adjustment, replace the CCD unit. CCD board (CCDB) (C368/C308/C258) / CCD board (CCDB) (C658/C558/C458)

< Paper feed tray >

(1) First steps of troubleshooting

Step	Content
1	Correct the paper settings, if the paper size/type in the tray and the paper settings selected on the machine are not matched.
2	Check the set position of paper or paper length guide / paper width guide, and correct it if needed. *For a paper tray that uses only a specific paper size, it is possible to fix the paper width guide to a specific paper size position by attaching a screw to the screw hole on the paper width guide (back side). It is possible to prevent problems due to wrong paper setting, but be careful as users will not be able to change paper sizes by themselves.
3	Check the paper path and the back side of the tray, and remove any paper pieces or foreign matters.
4	Check each roller for dirt and wear, and clean or replace it if needed.
5	Perform test printing to check whether the problem has been resolved. If it can not be resolved, confirm "(2) individual adjustment items".

(2) Individual adjustment items

Skewed image	Printer Reg. Loop Adj.
Image deviation	Printer Area * If the image deviation in the main scan direction (side edge) can not be adjusted completely, perform the mechanical adjustment on below for the affected tray.
	Mechanical adjustment: Centering adjustment of the tray 1/2 Centering adjustment of the tray 1/2 (C368/C308/C258)/Centering adjustment of the tray 1/2 (C658/C558/C458)
	Mechanical adjustment: Paper reference position Paper reference position (PC-100/PC-210)/Paper reference position (PC-115/CP-215)/Paper reference position (PC-410/PC-415)

NOTE

* If the trouble can not be solved by the above adjustment, check the Paper transport section.

< Paper transport section >

(1) First steps of troubleshooting

Step	Content
1	Check the set position of paper or paper length guide / paper width guide, and correct it if needed.

Step	Content
	*For a paper tray that uses only a specific paper size, it is possible to fix the paper width guide to a specific paper size position by attaching a screw to the screw hole on the paper width guide (back side). It is possible to prevent problems due to wrong paper setting, but be careful as users will not be able to change paper sizes by themselves.
2	If the Right door unit / Regist unit (inner door on the vertical transport section) is half-open, make it correct position.
3	Check the paper path, transport rollers, and registration section, and remove any paper pieces / foreign matters / paper dust.
4	Perform test printing to check whether the problem has been resolved. If it can not be resolved, confirm "(2) individual adjustment items".

(2) Individual adjustment items

Skewed image	Printer Reg. Loop Adj.

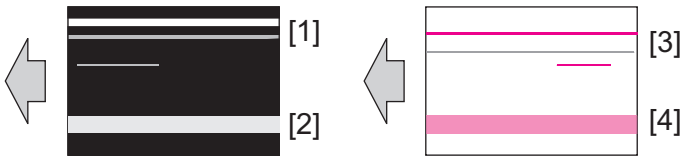
NOTE

* If the trouble can not be solved by the above adjustment, reinstall the Right door unit /Regist unit. Right door unit (C358/C308/C258)/Right door unit (C658/C558/C458)/Regist unit (C358/C308/C258)/Regist unit (C658/C558/C458)

16.3.3 White line 1, White band 1, Color line 1, Color band 1

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	White line	[2]	White band
[3]	Color line	[4]	Color band

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing to determine which color causes the abnormal image.	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.
			Not available	Go to scanner troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of 300 V to 400 V (100 V to 800 V) • Grid voltage: Vg-c, Vg-M, Vg-Y, Vg-K: close to the standard value of 450 V to 550 V (200 V to 1000 V)	NO	• Check the high voltage unit, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Write section	Sharp white line or colored line is blurry.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##).

Step	Section	Check item for the faulty color	Result	Action for the faulty color
				Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
6	Photo conductor section	Scratches on photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	Photo conductor section	Toner line or dirt on photo conductor. (improper cleaning)	YES	Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	Photo conductor section	Faint lines evident on the entire surface as if the surface were brushed off.	YES	• Select [Service Mode] -> [Counter] -> [Life] and check the counter value of the Drum Unit. • Replace the drum unit having the greatest counter value with a new one. (bizhub C368/C308/C258 / bizhub C658/C558/C458) (Not the drum unit of the color that has developed the lines, but the drum unit having the greatest counter value)
9	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
10	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
11	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper path	There is dirty or foreign matter on paper path.	YES	Check or clean the paper path including the duplex section.
2	Transfer belt unit	Lines that can be removed by cleaning are evident on the transfer belt. (improper cleaning)	YES	• Check or clean the cleaning blade. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

Step	Section	Check item	Result	Action
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
7	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
8	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	• Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(5) Scanner troubleshooting procedure

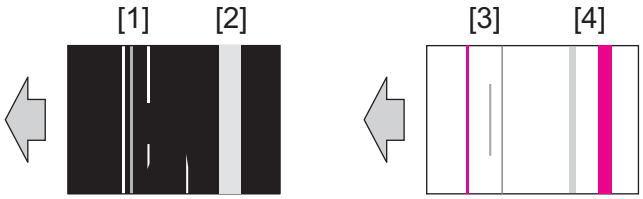
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	When original glass is being used	A fault occurs in the image read through the original glass.	YES	Go to step 6.
3	When DF is being used: 1st side	A fault occurs in the image read from the 1st side while DF is being used.	YES	Go to step 12.
4	When DF-629 is being used: 2nd side	A fault occurs in the image read from the 2nd side while DF-629 is being used.	YES	Go to step 12.
5	DF-704 or dual scan document feeder is being used: 2nd side	A fault occurs in the image read from the 2nd side while DF-704 or dual scan document feeder is being used.	YES	Go to step 20.
Main body side_original glass				
6	DF side_ Original pad	Original pad of DF is dirty.	YES	Clean.
7	Original glass	Original glass is dirty.	YES	Clean.
8	Shading sheet	Shading sheet is dirty.	YES	Clean.
9	End face of original is reproduced as a line	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Line occurring due to faulty shading	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
11	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
Main body side_DF original reading section				
12	Main body side_reading section	Document reading glass of main body is dirty.	YES	Clean.
13	DF side_ document reading glass cleaning brush	Document reading glass cleaning brush of DF is dirty.	YES	Clean.
14	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
15	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Original Stop Position] -> [Sub Scanning Direction 1-Side] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
16	When DF-629 is being used: 2nd side: end face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Original Stop Position] -> [Sub Scanning Direction 2-Side] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
17	Service Mode -> Read Pos Adj	Select [Service Mode] -> [ADF] -> [Read Pos Adj] -> [Auto Adjust] and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
18	Line occurring due to faulty shading	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
19	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
DF-704 or dual scan document feeder side_original reading section				
20	CIS glass cleaning	CIS glass is dirty.	YES	Clean.
21	CIS reading section	CIS reading section is dirty.	YES	Clean.
22	CIS cleaning brush	CIS cleaning brush is dirty.	YES	Clean.
23	Shading sheet	Shading sheet is dirty.	YES	Clean.
24	When DF-704 or dual scan document feeder is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Original Stop Position] -> [Sub Scanning Direction 2-Side] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
25	When DF-704 or dual scan document feeder is being used: 2nd side: Home Read Position	Select [Service Mode] -> [ADF] -> [Home Read Position Adjust] and the image trouble is eliminated.	NO	Go to the next step.
26	Scanning section	CIS reading section is dirty.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.4 White line 2, White band 2, Color line 2, Color band 2

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	White line	[2]	White band
[3]	Color line	[4]	Color band

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing to determine which color causes the abnormal image.	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.
			Not available	Go to scanner troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of 300 V to 400 V (100 V to 800 V) • Grid voltage: Vg-c, Vg-M, Vg-Y, Vg-K: close to the standard value of 450 V to 550 V (200 V to 1000 V)	NO	• Check the high voltage unit, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Write section	Sharp white line or colored line is blurry.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
6	Photo conductor section	Scratches on photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	Photo conductor section	Toner line or dirt on photo conductor. (improper cleaning)	YES	Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
9	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
10	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper path	There is dirty or foreign matter on paper path.	YES	Check or clean the paper path including the duplex section.
2	Transfer belt unit	Lines that can be removed by cleaning are evident on the transfer belt. (improper cleaning)	YES	• Check or clean the cleaning blade. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

Step	Section	Check item	Result	Action
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
7	Fusing unit	Dirt or foreign matter on paper path or separation claw of the fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
8	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	• Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

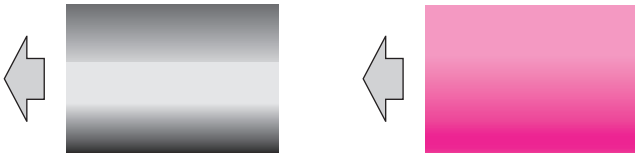
(5) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used: Service Mode -> Scan Area	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning (Front)] and the image trouble is eliminated.	NO	Go to the next step.
6	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning (Back)] and the image trouble is eliminated.	NO	Go to the next step.
7	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	DF-704 or dual scan document feeder is being used: 2nd side	CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.5 Uneven density 1

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.

Step	Section	Check item	Result	Action
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image occurs only with one color.	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	High image density original	Uneven density in sub scan direction occurs at a pitch of 40 mm to 50 mm when a multi-copy cycle is run using an original with high image density (50% or more).	YES	Feed 10 to 20 blank sheets of paper with no originals placed, as the developing unit fails to keep up with a high demand for toner.
2	Service Mode -> LD 1/2 Balance Adj.	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> TCR Level Setting	Select [Service Mode] -> [Imaging Process Adjustment] -> [TCR Level Setting] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
6	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	1st transfer section	Dirt, scratches, or foreign matter on the 1st transfer roller.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	1st transfer section	Faulty pressure/retraction operation of the 1st transfer roller.	YES	• Correct or replace the drive system. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
9	Developing section	Toper hopper operates improperly or contains foreign matter.	YES	• Correct or remove. • Replace the hopper drive unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
10	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	• Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

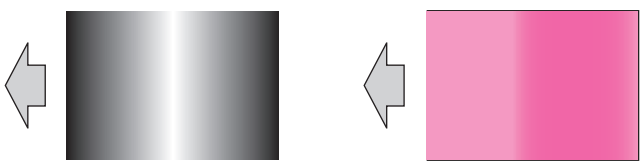
(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
2	Transfer belt unit	Lines that can be removed by cleaning are evident on the transfer belt. (improper cleaning)	YES	• Check and clean the cleaning blade. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
5	Transfer belt unit	Transfer belt rotates faultily.	YES	Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	2ND TRANSFER SECTION	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	2nd transfer section	Faulty pressure/retraction operation of the 2nd transfer roller.	YES	• Correct. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
9	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.6 Uneven density 2

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.

Step	Section	Check item	Result	Action
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image occurs only with one color.	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Service Mode -> LD 1/2 Balance Adj.	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.] and the image trouble is eliminated.	YES	Readjust.
2	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
4	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	Photo conductor section	Photo conductor drives faultily.	YES	• Correct. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	• Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
2	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
4	Transfer belt unit	Transfer belt rotates faultily.	YES	• Correct. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

Step	Section	Check item	Result	Action
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	2nd transfer section	Faulty pressure/retraction operation of the 2nd transfer roller.	YES	• Correct. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
8	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
9	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.7 Faint image, low image density (ID lowering)

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
4	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
5	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
6	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
7	Image check	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "4 Color", "Full Bleed", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing to determine which color causes the abnormal image.	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.
			Not available	Go to scanner troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of 300 V to 400 V (100 V to 800 V) • Grid voltage: Vg-c, Vg-M, Vg-Y, Vg-K: close to the standard value of 450 V to 550 V (200 V to 1000 V)	NO	• Check the high voltage unit, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
6	Hopper drive unit section	Faulty connector connection between the toner supply motor (M6 to M9) and MFP board (CN16E, CN30E).	YES	Reconnect the connector.
7	Hopper drive unit section	Faulty in the drive of sub hopper.	YES	• Correct. • Replace the hopper drive unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
8	Service Mode -> TCR data	Select [Service Mode] -> [State Confirmation] -> [Level History 1] and the measured value is correct. TCR-C, TCR-M, TCR-Y, TCR-K: normal value 5 to 8 %	NO	Select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add] and perform the function.
9	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
2	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
3	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
4	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

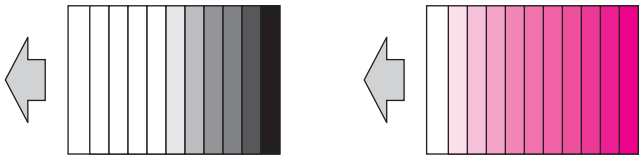
(5) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
2	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
3	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
4	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	DF-704 or dual scan document feeder is being used: 2nd side	• Shading correction surface of DF-704 or dual scan document feeder is dirty. • CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.8 Gradation reproduction failure

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

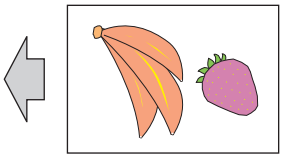
Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Image check	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", "Full Bleed", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.	-	Go to the next step.

Step	Section	Check item	Result	Action
		• Check the image after printing to determine which color causes the abnormal image.		
4	Write section	Dirt or foreign matter on the dust-proof glass of the PH of the color which is responsible for the abnormal image.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	Charging section	Foreign matter on charging roller of the color which is responsible for the abnormal image.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
6	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
7	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
8	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
9	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit that is responsible for the abnormal image. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the developing unit that is responsible for the abnormal image. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.9 Color reproducibility error

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

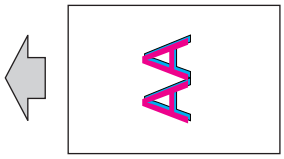
Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Administrator Settings -> PS Designer Settings	Select [Utility] -> [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [PS Designer Settings] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
4	Image check	• Select [Service Mode] -> [Test Mode] -> [8 Color Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle of 8 colors on one sheet of paper. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
5	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
7	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
8	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
9	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
10	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
11	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
12	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
13	Connector connection	Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN22E, CN36E).	YES	Reconnect the connector.
14	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.10 Incorrect color image registration

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [8 Color Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle of 8 colors on one sheet of paper. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Incorrect color registration evident at the trailing edge of the printed image	Select [Service Mode] -> [Machine] -> [Trail Edge Color Alignment Adj] and the image trouble is eliminated.	NO	Go to the next step.
2	Connector connection	Faulty connector connection the MFP board (CN18) and PH relay board (CN1, CN2).	YES	Reconnect the connector.
3	Service Mode -> Color Registration Adjustment	Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Print Head Skew Reset	Select [Service Mode] -> [Machine] -> [Print Hear Skew Adj.] -> [Print Head Skew Reset] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original contains incorrect color registration.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
3	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. (DF-704 / DF-629 / Dual scan document feeder) • Replace DF if it is deformed or hinges are broken.
4	Scanner rails	Foreign matter on scanner rails.	YES	Clean and apply lubricant. *
5	When original glass is being used	Scanner moves smoothly.	YES	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	• Adjust the scanner motor drive belt. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the scanner motor. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

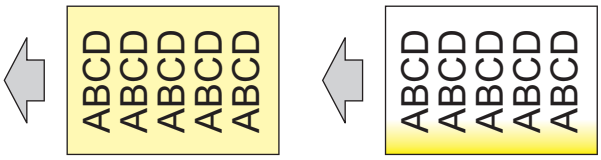
Step	Section	Check item	Result	Action
				• Replace the scanner drive board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	When DF is being used: Registration Loop Adj.	Select [Service Mode] -> [ADF] -> [Registration Loop Adj.] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	When DF-704 or dual scan document feeder is being used: Paper path	There is dirty on paper path or roller of DF-704 or dual scan document feeder.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

*: Apply FLOIL No. 947P or Launa 40 oil to the scanner rails. FLOIL is a product manufactured by KANTO KASEI LTD. (http://www.kanto-kasei.co.jp/).

16.3.11 Foggy background

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
4	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
5	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
6	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
7	Service Mode -> Charge AC Output fine adjustment	Fog occurs unevenly on the left-hand side with respect to the paper feeding direction. Or fog occurs in part of the paper. The fog is reduced when [Service Mode] -> [Imaging Process Adjustment] -> [Charge AC Output fine adjustment] are selected and the setting value is increased.	NO	Return the setting value to the original one and go to the next step.
8	Service Mode -> Image Background Adj	Select [Service Mode] -> [Imaging Process Adjustment] -> [Image Background Adj] and [Stabilizer] and the image trouble is eliminated.	NO	Set the fog margin value back to the original one and go to the next step.
9	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", "600dpi", and "Normal", enter "20" for CD width, "20" for FD width, and "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing to determine which color causes the abnormal image.	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.
			Not available	Go to scanner troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
4	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
5	Service Mode -> TCR data	Select [Service Mode] -> [State Confirmation] -> [Level History 1] and the measured value is correct. TCR-C, TCR-M, TCR-Y, TCR-K: normal value 5 to 8 %	NO	Select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add] and perform the function.
6	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
7	Connector connection	bizhub C368/C308/C258: Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN18, CN22E, CN36E) and PH relay board (CN1, CN2). bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN6, CN30E, CN33E) and PH relay board (CN1, CN2).	YES	Reconnect the connector.
8	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
2	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
3	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(5) Scanner troubleshooting procedure

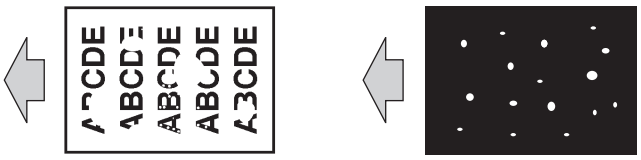
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
3	Basic -> Density	Change the density setting, and the image trouble is eliminated.	NO	Go to the next step.
4	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. (DF-704 / DF-629 / Dual scan document feeder) • Replace DF if it is deformed or hinges are broken.
5	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
6	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
7	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
8	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
9	DF-704 or dual scan document feeder is being used: 2nd side	• Shading correction surface of DF-704 or dual scan document feeder is dirty. • CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.12 Void areas, White spots

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.

[1] [2]



[1]	Void areas	[2]	White spots

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Use in areas with low atmospheric pressure	Select [Service Mode] -> [Imaging Process Adjustment] -> [Grad/Dev AC Bias V Selection] and change the setting to [ON]. This eliminates the trouble.	NO	Change the setting to [OFF] and go to the next step.
3	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Service Mode -> Charge AC Output fine adjustment	The white spots is eliminated when [Service Mode] -> [Imaging Process Adjustment] -> [Charge AC Output fine adjustment] are selected and the setting value is increased.	NO	Return the setting value to the original one and go to the next step.

Step	Section	Check item	Result	Action
7	Service Mode -> Primary transfer adj.	Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [Primary transfer adj.] and the image trouble is eliminated. * Decrease the setting value for white dots.	NO	Return the setting value to the original one and go to the next step.
8	Service Mode -> 2nd transfer adj.	Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [2nd Transfer Adj.] and the image trouble is eliminated. * Increase or decrease the setting value to find a specific value at which the trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
9	Enhanced Security -> Engine FW Dip SW	Select [Service Mode] -> [Enhanced Security] -> [Engine FW Dip SW] -> [No. 8], set OFF, perform [2nd Transfer Adj.] again, and the image trouble is eliminated. * Increase or decrease the setting value to find a specific value at which the trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
10	Service Mode -> TCR Level	Select [Service Mode] -> [Imaging Process Adjustment] -> [TCR level] and set the adjustment value of all colors to "+3". Next, select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add], select all colors, and press the start key. (This starts a toner replenishing sequence.) Then, select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and perform the function. Then, select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj.] -> [2nd Transfer Adj.], perform the function, and the image trouble is eliminated. * Increase or decrease the setting value to find a specific value at which the trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
11	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • If the abnormal image does not recur, change Density to "255" and make a print check. • Check the image after printing and the abnormal image occurs only with one color.	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Developing section	Toner bristles not even on the developing roller, resulting in a void area.	YES	Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
7	Connector connection	bizhub C368/C308/C258:	YES	Reconnect the connector.

Step	Section	Check item for the faulty color	Result	Action for the faulty color
		Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN18, CN22E, CN36E) and PH relay board (CN1, CN2).		
		bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN6, CN30E, CN33E) and PH relay board (CN1, CN2).		
8	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

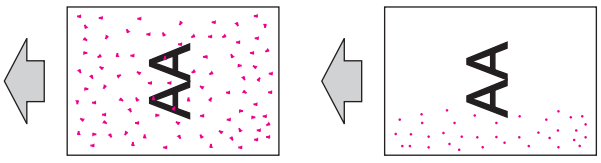
(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
4	Connector connection	bizhub C368/C308/C258: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN22E, CN36E).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN30E, CN33E).		
5	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.13 Color spot

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Charge AC Output fine adjustment	Fine colored dots evident on the left-hand side with respect to the paper feeding direction. Or fine color spots are evident on a particular portion in the paper. The color spots are reduced when [Service Mode] -> [Imaging Process Adjustment] -> [Charge AC Output fine adjustment] are selected and the setting value is increased.	NO	Return the setting value to the original one and go to the next step.
6	Service Mode -> Primary transfer adj.	Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] and the image trouble is eliminated. * Decrease the setting value for color spots.	NO	Return the setting value to the original one and go to the next step.
7	Image check	• Select [Service Mode] -> [Test Mode] -> [Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle of 4 colors on one sheet of paper. • Check the image after printing to determine which color causes the abnormal image.	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.
			Not available	Go to scanner troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
6	Connector connection	bizhub C368/C308/C258: Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN18, CN22E, CN36E) and PH relay board (CN1, CN2).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2), MFP board (CN6, CN30E, CN33E) and PH relay board (CN1, CN2).		
7	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean.

Step	Section	Check item	Result	Action
				• Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Paper path	There is dirty or foreign matter on paper path.	YES	Check or clean the paper path including the duplex section.
4	Connector connection	Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN22E, CN36E).	YES	Reconnect the connector.
5	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(5) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	DF-704 or dual scan document feeder is being used: 2nd side	CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.14 Blurred image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH of the color which is responsible for the abnormal image.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller of the color which is responsible for the abnormal image.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Photo conductor section	Dirt or foreign matter on the photo conductor of the PH of the color which is responsible for the abnormal image.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

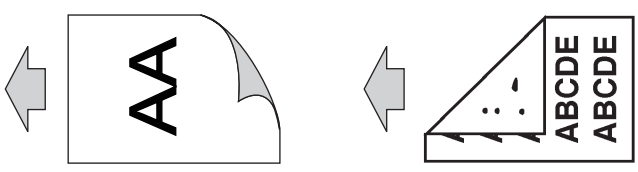
(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is folded, bent, or raised.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass tilts.	YES	Corrected to the correct position.
4	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
5	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. (DF-704 / DF-629 / Dual scan document feeder) • Replace DF if it is deformed or hinges are broken.
6	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Document reading glass tilts.	YES	Corrected to the correct position.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	DF-704 or dual scan document feeder is being used: 2nd side	CIS glass or CIS cleaning brush is tilted.	YES	Corrected to the correct position.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.15 Back marking

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



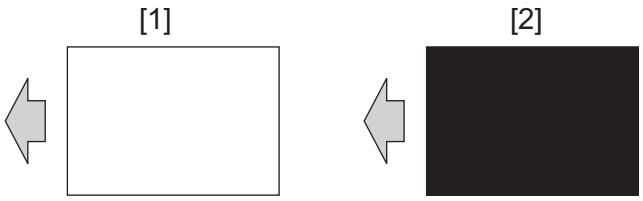
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
3	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
5	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.16 Blank copy, Black copy

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Blank copy	[2]	Black copy

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
2	Image check	• Select [Service Mode] -> [Test Mode] -> [Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "120" for Density, and load tray 2 with A3 paper. This runs a print cycle of 4 colors on one sheet of paper. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
2	Transfer belt unit	With the color of toner responsible for the abnormal image, there is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (Y: T1-4; M: T1-3; C: T1-2; K: T1-1).	NO	Clean or correct the terminal.
3	Photo conductor section	The drum unit of the color of toner responsible for the abnormal image is installed properly.	NO	Reinstall.
4	Photo conductor section	With the color of toner responsible for the abnormal image, there is a positive contact between the drum charge corona bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.

Step	Section	Check item	Result	Action
5	Developing section	With the color of toner responsible for the abnormal image, there is a positive contact between the developing bias application terminals and the high voltage unit connection terminals (Y: B4; M: B3; C: B2; K: B1).	NO	Clean or correct the terminal.
6	Connector connection	bizhub C368/C308/C258: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN22E, CN36E).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN30E, CN33E).		
7	Write section	bizhub C368/C308/C258: Faulty connector connection the MFP board (CN18) and PH relay board (CN1, CN2).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the MFP board (CN6) and PH relay board (CN1, CN2).		
8	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Black copy: Scanner section	Foreign matter on scanner rails. Faulty the drive shaft and pulley shaft.	YES	Clean and apply lubricant. *1 *2
2		Scanner moves smoothly.	NO	• Adjust the scanner motor drive belt. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the scanner motor. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the scanner drive board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	• When original glass is being used • When DF is being used: 1st side	None of the terminal pins of the connection cable between the CCD board (CN3 or PJ3) and the MFP board (CN1) is bent and a positive connection is made.	NO	Reconnect the connector.
4	• When original glass is being used • When DF is being used: 1st side • When DF-629 is being used: 2nd side	Replace the connection cable between the machine and the DF. This eliminates the trouble.	YES	Replace the connection cable.
5	• When original glass is being used • When DF is being used: 1st side • When DF-629 is being used: 2nd side	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	DF-704 or dual scan document feeder is being used: 2nd side	bizhub C368/C308/C258: Faulty connector connection the CIS power supply unit (J1), relay connector (P6), main body connection section (P1) and DC power supply (CN4).	YES	Reconnect the connector.
		bizhub C658/C558/C458:		

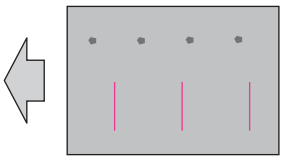
Step	Section	Check item	Result	Action
		Faulty connector connection the DF power supply (CN1), relay connector (CN117), main body connection section (CN46) and DC power supply (CN004).		
7	DF-704 or dual scan document feeder is being used: 2nd side	bizhub C368/C308/C258: Faulty connector connection the CIS module (J221), dual scan image processing board (CN1) and MFP board (CN22).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the CIS module (J101), dual scan image processing board (CN2, CN1) and MFP board (CN24).		
8	DF-704 or dual scan document feeder is being used: 2nd side	Replace the connection cable between the CIS module and the MFP board. This eliminates the trouble.	YES	Replace the connection cable.
9	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the dual scan image processing board. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

*1: Apply DURASURF KD-453S to the shaft. DURASURF is a product manufactured by Harves Co., Ltd. (http://www.harves.co.jp).
*2: Apply FLOIL No. 947P or Launa 40 oil to the scanner rails. FLOIL is a product manufactured by KANTO KASEI LTD. (http://www.kanto-kasei.co.jp/).

16.3.17 Uneven pitch

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image occurs only with one color.	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

(3) 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	Uneven pitch at 94 mm interval	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

Step	Section	Check item for the faulty color	Result	Action for the faulty color
2	Uneven pitch at 28 mm interval	Dirt, scratches, or foreign matter on the developing roller.	YES	• Clean. • Replace the developing unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Charging section	Foreign matter on charging roller.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
5	Connector connection	bizhub C368/C308/C258: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN22E, CN36E).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the high voltage unit (CN1, CN2) and MFP board (CN30E, CN33E).	NO	• Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

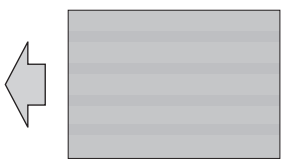
(4) 4-color troubleshooting procedure

Step	Section	Check item	Result	Action
1	Uneven pitch	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Uneven pitch at 64 mm interval	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	Uneven pitch at 157 mm interval	Dirt, scratches, or foreign matter on the fusing belt.	YES	• Clean. • Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
4	Uneven pitch at 94 mm interval	Dirt, scratches, or foreign matter on the fusing pressure roller.	YES	• Clean. • Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
5	Paper path	There is dirty or foreign matter on paper path.	YES	Check or clean the paper path including the duplex section.
			NO	• Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the high voltage unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.18 Uneven gloss, Rough gloss

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



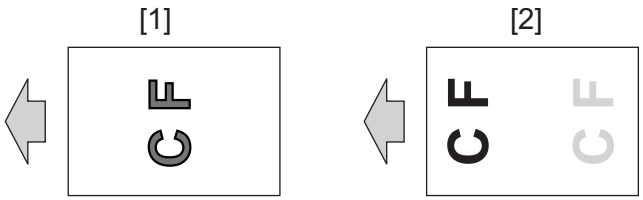
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident. (rough gloss)	YES	Go to the next step.
3	Service Mode-> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and lower the fusing temperature, and the image trouble is eliminated.	NO	Return the fusing temperature to the original one and go to the next step.
4	Exit tray front roller, Exit roller	Faulty pressure operation of the exit tray front roller or exit roller.	YES	Correct.
5	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
6	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	Replace the power supply of fusing.

16.3.19 Poor fusing performance, Offset

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Poor fusing performance	[2]	Offset

(2) Troubleshooting procedure

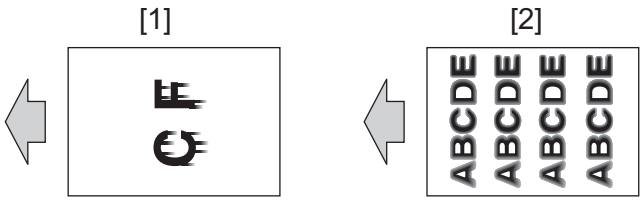
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Image check: Poor fusing performance	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
3	Image check: Poor fusing performance	• Select [Service Mode] -> [System 2] -> [Smart Fusing Control] and select [Prohibit]. • Check the image after printing and the abnormal image is evident.	YES	Return the setting to the original one and go to the next step.
4	Image check: Offset	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "8 Color", "Front Half", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
5	Service Mode -> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and make the necessary adjustment, and the image trouble is eliminated. * Poor fusing performance: Decrease the setting value * Offset: Increase the setting value	NO	Return the setting value to the original one and go to the next step.
6	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)

Step	Section	Check item	Result	Action
7	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	Replace the power supply of fusing.

16.3.20 Brush effect, Image bleeding

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Brush effect	[2]	Image bleeding

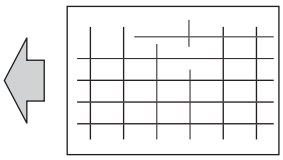
(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
6	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
7	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
8	Service Mode -> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and make the necessary adjustment, and the image trouble is eliminated. * Increase or decrease the setting value	NO	Return the setting value to the original one and go to the next step.
9	Service Mode -> Fusing Transport Speed	Select [Service Mode] -> [Machine] -> [Fusing Transport Speed] and make the necessary adjustment, and the image trouble is eliminated. * Brush effect: Increase or decrease the setting value * Image bleeding: Decrease the setting value	NO	Return the setting value to the original one and go to the next step.
10	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
11	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit. (bizhub C368/C308/C258 / bizhub C658/C558 / bizhub C458)
			NO	Replace the power supply of fusing.

16.3.21 Blurred fine lines

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Unclear thin line in main scan direction	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD Light Width Adjustment] and the image trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "FEET", "1-Sided", "CMYK", "600dpi", and "Normal", enter "3" for CD width, "3" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH of the color which is responsible for the abnormal image.	YES	Clean the PH window. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	Charging section	Foreign matter on charging roller of the color which is responsible for the abnormal image.	YES	Lightly wipe the surface clean of foreign matter using hydro-wipe (65AA-99##). Note: Do not apply a strong force to the surface of the charging roller, as doing so can damage the surface.
3	Photo conductor section	Dirt or foreign matter on the photo conductor of the PH of the color which is responsible for the abnormal image.	YES	• Clean. • Replace the drum unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
			NO	Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

(4) Scanner troubleshooting procedure

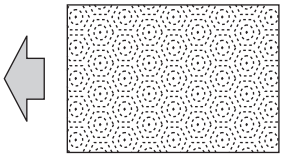
Step	Section	Check item	Result	Action
1	Original	Original is folded, bent, or raised.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass tilts.	YES	Corrected to the correct position.

Step	Section	Check item	Result	Action
4	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. (DF-704 / DF-629 / Dual scan document feeder) • Replace DF if it is deformed or hinges are broken.
5	• When DF is being used: 1st side • When DF-629 is being used: 2nd side	Document reading glass tilts.	YES	Corrected to the correct position.
			NO	• Replace the LED exposure unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
6	DF-704 or dual scan document feeder is being used: 2nd side	CIS glass or CIS cleaning brush is tilted.	YES	Corrected to the correct position.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.22 Moire

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
3	Original direction	Change the direction in which the original is placed. This eliminates moire.	YES	Change the original direction.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Paper Feed Direction Adj.	Select [Service Mode] -> [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
2	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the PH unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

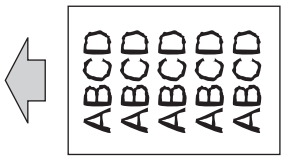
(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	When original glass is being used: Sub Scan Zoom Adj.	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Sub Scan Zoom Adj.] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
2	When DF is being used: 1st side: Feed Zoom	Select [Service Mode] -> [ADF] -> [Feed Zoom] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	When DF-704 or dual scan document feeder is being used: 2nd side: FD-Mag. Adj. (B)	Select [Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	When DF-704 or dual scan document feeder is being used: 2nd side: Main Scanning Direction Zoom	Select [Service Mode] -> [ADF] -> [Main Scanning Direction Zoom] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.23 Distorted image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



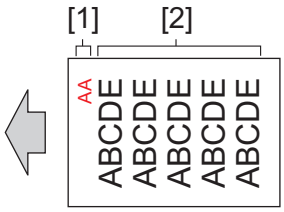
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Installation state	Machine not installed on a flat site.	YES	Install the machine horizontally.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
4	• When DF is being used: Distortion on 1st side • When DF-629 is being used: Distortion on 2nd side	CCD board not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
5	DF-704 or dual scan document feeder is being used: Distortion on 2nd side	CIS module not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

16.3.24 ACS malfunction

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Color original section	[2]	Black and white original section

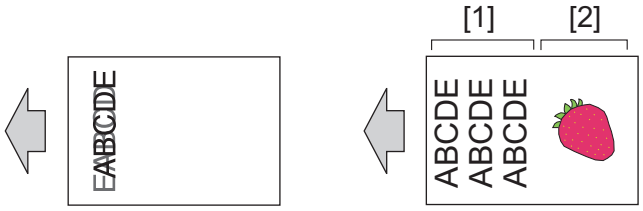
(2) Troubleshooting procedure

Procedure	Section	Check item	Result	Action
1	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
2	Original direction	Change the direction in which the original is placed. This eliminates the trouble.	YES	Change the original direction.
3	User Settings -> Auto Color Level Adjust.	Select [Utility] -> [User Settings] -> [System Settings] -> [Auto Color Level Adjust.] and the image trouble is eliminated.	YES	Readjust.
			NO	• Change the original direction. • Make the setting according to the type of original. (If the original contains a colored area at its corner, colored area detection NG may result.)

16.3.25 Abnormal image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Data on the previous page	[2]	Data on the next page

(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	When original glass is being used When DF is being used: 1st side	None of the terminal pins of the connection cable between the CCD board (CN3 or PJ3) and the MFP board (CN1) is bent and a positive connection is made.	NO	Reconnect the connector.
2	When original glass is being used When DF is being used: 1st side	Replace the connection cable between the CCD board and the MFP board. This eliminates the trouble.	YES	Replace the connection cable.
			NO	• Replace the CCD unit. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)
3	DF-704 or dual scan document feeder is being used: 2nd side	bizhub C368/C308/C258: Faulty connector connection the CIS power supply unit (J1), relay connector (P6), main body connection section (P1) and DC power supply (CN4).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the DF power supply (CN1), relay connector (CN117), main body connection section (CN46) and DC power supply (CN004).		
4	DF-704 or dual scan document feeder is being used: 2nd side	bizhub C368/C308/C258: Faulty connector connection the CIS module (J221), dual scan image processing board (CN1) and MFP board (CN22).	YES	Reconnect the connector.
		bizhub C658/C558/C458: Faulty connector connection the CIS module (J101), dual scan image processing board (CN2, CN1) and MFP board (CN24).		
5	DF-704 or dual scan document feeder is being used: 2nd side	Replace the connection cable between the CIS module and the dual scan image processing board. This eliminates the trouble.	YES	Replace the connection cable.
6	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CIS module. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

Step	Section	Check item	Result	Action
				• Replace the dual scan image processing board. (bizhub C368/C308/C258 / bizhub C658/C558/C458) • Replace the MFP board. (bizhub C368/C308/C258 / bizhub C658/C558/C458)

17. IC PROTECTOR

17.1 Outline

- To increase product safety, this MFP has an IC protector (ICP) installed in each board. ICP is a component that protects IC. If the amount of the current supplied to the electrical parts such as motor exceeds the set level, ICP trips to protect IC from over current.
  The following list contains ICP installed in each board, related devices, and symptoms that occur when ICP trips.

17.2 IC protector list

17.2.1 bizhub C368/C308/C258

(1) MFP board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1E	-	LCC, cabinet	No operation	C0202, C0204, C0206, C0208, C0210
			Misfeed at transport section	-
ICP2E	CL6	ADU transport clutch	Misfeed at duplex transport section	-
	CL5	1st transfer pressure clutch	Transfer belt fault at initial position return	C2152
	CL8	Paper exit clutch	Misfeed at exit section	-
	CL3	Tray 1 paper feed clutch	Misfeed at tray 1 feed section	-
	CL1	Tray 2 paper feed clutch	Misfeed at tray 2 feed section	-
	CL2	Tray2 vertical transport clutch	Misfeed at tray 2 feed section	-
	CL7	Bypass paper feed clutch	Misfeed at manual bypass feed section	-
ICP3E	SD4	Developing solenoid	Faulty image	-
	SD3	Gate switch solenoid	Misfeed at exit section	-
	SD1	Bypass pick-up solenoid	Manual feed up/down abnormality	C0211
	FM8	Paper cooling fan	Paper cooling fan failure to turn	C3302
ICP4E	FRB	Front side board	Faulty image	-
	CL4	Registration clutch	Misfeed at transport section	-
	SD2	IDC sensor shutter solenoid	Image stabilization abnormally terminated	-
ICP7E	USBB	USB board	No operation	-
ICP8E	-	3.3-V DC/DC converter in mechanical controller of MFP board	Engine communication data error	C 5605
	FRB	Front side board	Front side communication error	C5603
ICP9E	-	DF	Unable to be detected	-
	-	Scanner unit	Control panel operation failure	-
ICP10E	-	Cabinet	Misfeed at LCT paper feed section	-
ICP12E	FRB	Front side board (LD board, TCR sensor, DR new detection circuit)	Cyan TCR sensor failure	C2561
			Magenta TCR sensor failure	C2562
			Yellow TCR sensor failure	C2563
			Black TCR sensor failure	C2564
	INDEXB	Index board	-	-
	TCSB/Y	Toner cartridge set board/Y	Toner cartridge set board output does not change.	-
	TCSB/M	Toner cartridge set board/M		-
	TCSB/C	Toner cartridge set board/C		-
	TCSB/K	Toner cartridge set board/K		-
ICP14E	FM14	Exhaust fan/1	Clean unit fan failure to turn	C5360
	FM15	Exhaust fan/2		
	FM16	Suction fan		
ICP15E	HV	High voltage unit	Faulty image	-

17.2.2 bizhub C658/C558/C458

(1) MFP board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1E	-	LCC, cabinet	No operation	C0202, C0204, C0206, C0208, C0210

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
			Misfeed at transport section	-
F2E	SD2	IDC sensor shutter solenoid	Image stabilization abnormally terminated	-
	CL4 *1	Registration clutch	Misfeed at transport section	-
	EL/Y	Erase LED/Y	Faulty image	-
	EL/M	Erase LED/M	Faulty image	-
	EL/C	Erase LED/C	Faulty image	-
	EL/K	Erase LED /K	Faulty image	-
	TCT *2	Total counter	Not count	-
	KCT	Key counter	Not count	-
	CL9	Paper exit deceleration clutch	Tray paper misaligned	-
F3E	-	Clean unit (CU-102)	Clean unit fan's failure to turn	C5360
F6E	FM7 *3	IH coil cooling fan	IH coil cooling fan’s failure to turn	C5306
	FM2	Transfer belt cleaner cooling fan	Transfer belt cleaner cooling fan's failure to turn	C2355
	CL5	1st transfer pressure clutch	Transfer belt fault at initial position return	C2152
	CL8	Paper exit clutch	Misfeed at exit section	-
	FM4 *3	Toner cartridge cooling fan	Toner cartridge cooling fan's failure to turn	C5355
	FM17	UFP exhaust fan1	Fan’s failure to turn	C5307
	FM18 *3	UFP exhaust fan2	Fan’s failure to turn	C5307
	M9	Toner supply motor/Y	Abnormally low toner density detected yellow TCR sensor	C2555
	M8	Toner supply motor/M	Abnormally low toner density detected magenta TCR sensor	C2553
	M7	Toner supply motor/C	Abnormally low toner density detected cyan TCR sensor	C2551
	M6	Toner supply motor/K	Abnormally low toner density detected black TCR sensor	C2557
F7E	HV	High voltage unit	Faulty image	-
F8E	FM4 *4	Toner cartridge cooling fan	Toner cartridge cooling fan's failure to turn	C5355
F9E	USBHB	USB hub board	No operation	-
F11E	-	DF	Unable to be detected	-
	-	Scanner unit	Control panel operation failure	-
	DCPU	DC power supply	Unable to output from the 24V system	-
	SW2	Front door switch	Unable to detect open/closed door	-
	SW3	Right door switch	Unable to detect open/closed door	-
	NFB *3	NF board	Unable to supply the IH power source with AC	-
	FUPU *4	Fusing power supply	Unable to supply the heater with AC	-
F12E	-	Cabinet	Misfeed at LU paper feed section	-
	TEMS/1 *3	Heating roller temperature sensor1	Fusing abnormally low temperature detection (Main of the heating roller)	C3825
			Fusing sensor wire breaks detection (Main of the heating roller)	C3925
	TEMS/2 *5	Heating roller temperature sensor2	Fusing sensor wire breaks detection (Edge of the heating roller)	C3922
F15E	SW2	Front door switch	Unable to detect open/closed door	-
	SW3	Right door switch	Unable to detect open/closed door	-
	NFB *3	NF board	Unable to supply the IH power source with AC	-
	FUPU *4	Fusing power supply	Unable to supply the heater with AC	-

- *1: bizhub C558/C458 only
- *2: Japan model only
- *3: bizhub C658/C558 only
- *4: bizhub C458 only
- *5: bizhub C658 only

(2) Front side board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	M15	Skew correction motor/C	No operation	-

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
	M16	Skew correction motor/M		
	M17	Skew correction motor/Y		

(3) Expansion control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP2	-	TB new detection board	Unable to detect new article	-

17.2.3 Dual scan document feeder

(1) DF control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	M3	Reading motor	DF image reading section JAM	-
ICP2	M1	Paper feed motor	Misfeed at feed section	-
ICP3	M2	Registration motor	Misfeed at transport section	-
ICP4	-	Circuit that produces DC5V	Unable to produce DC5V in DF and MFP unable to detect DF	C6104
ICP5	M5	Lift-up motor	Lift up mechanism trouble (Upward movement)	C8103
ICP6	SD1	Stamp solenoid	Unable to place a stamp	-
ICP7	PS1	Empty sensor	Not recovered from the sleep mode	-
ICP8	M8	Front side cleaning motor	Glass cleaning mechanism trouble	C8107
	M7	Back side cleaning motor	Back side cleaning home sensor abnormality (normal)	C6105
	M4	Paper exit motor	Paper exit section jam	-
ICP9	M6	Reading roller pressure/retraction motor	Before reading pressure welding alienation mechanism trouble	C8101
ICP10	FM	Cooling fan motor	Cooling fan motor's failure	C8302
	CL1	Take-up clutch	Misfeed at feed section	-
ICP11	SCB	Sensor control board	Multi feed detection jam	-
	MFDB/1	Multi feed detection board/1 (transmitter)	Multi feed detection board failure	C8402
	MFDB/2	Multi feed detection board/2 (receiver)		
ICP15	PS4	After separate sensor	Misfeed at transport section	-
	PS5	Registration sensor	Misfeed at transport section	-
ICP16	PS6	Before read sensor	DF image reading section JAM	-
	PS11	Length Sensor2	Wrong original size detection	-

(2) DF power supply

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	CIS unit	CIS LED does not light up.	C6753
				C6754
				C6755
				C9403

17.2.4 JS-506

(1) JS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	CPU power supply	No operation (Due to no power supply to CPU, FS connection not detected)	-
ICP2	-	DC to DC converter input section 24V line	Unable to produce DC24V in FS and MFP unable to detect FS	-
ICP3	M1	Tray shift motor	Shift motor drive malfunction	C1182

17.2.5 FS-534

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	Between connection with MFP and 24V power line	No operation (Due to no power supply to CPU, FS connection not detected)	-

17.2.6 FS-533

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	All ICs and actuators	No operation (Due to no power supply to CPU, FS connection not detected)	-
CP1	-	DC to DC converter input section 5V line	No operation (Due to no power supply to CPU, FS connection not detected)	-
CP2	-	Regulator	No operation (Due to no power supply to CPU, FS connection not detected)	-
CP3	-	DC to DC converter input section 24V line	No operation (Due to no power supply to CPU, FS connection not detected)	-
CP21	SD101	Paper surface detect solenoid	No operation	-
CP22	SD102	Batch solenoid	No operation	-
CP23	SD103	Paper exit roller solenoid	No operation	-
CP101	M101	Paper conveyance motor	Misfeed at transport section	-
CP102	M102	Paper exit motor	Misfeed at transport section	-
CP103	M103	Alignment roller motor	Misfeed at transport section	-
CP104	M104	Exit roller lift up motor	Exit roller pressure/ retraction malfunction	C11A1
CP105	M105	Alignment motor/F	Alignment plate motor/F malfunction	C1103
	M106	Alignment motor/R	Alignment plate motor/R malfunction	C1140
CP107	M107	Stapler movement motor	Stapler movement motor malfunction	C1106
CP109	M109	Tray lift up motor	Main tray up/down motor drive malfunction	C1102

17.2.7 PK-519

(1) PK control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F201	M201	Punch motor	Punch drive motor’s malfunction	C1132

17.2.8 FS-536/FS-536SD

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected	-
F2	M11	Main tray up/down motor	Main tray up/down motor’s drive malfunction	C1102

(2) SD control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected Unable to be detected "There is an open component." display	-

17.2.9 FS-537/FS-537SD

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected	-
F2	ZUDTB	ZU relay board	The paper tray is lowered and becomes full	-
F3	M6	Main tray up/down motor	Main tray up/down motor’s drive malfunction	C1102
F4	M34	Paper transport belt motor	Paper transport belt motor's malfunction	C1152

(2) SD control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected Unable to be detected "There is an open component." display	-

17.2.10 PK-523

(1) Punch control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	DC5V sensor and others in the board	Finisher communication error (Finisher detection)	C1014
ICP2	M302	Punch oscillating motor	Punch oscillating motor’s drive malfunction	C1127

17.2.11 PI-507

(1) PI drive board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	DC5V sensor and others in the board	Finisher communication error (Finisher detection)	C1014
ICP3	M203	Transport motor	Misfeed at paper feed section	-
ICP4	CL201	Transfer clutch /Up	Misfeed at paper feed section	-
	CL202	Transfer clutch /Lw		-
	CL203	Registration clutch		-
	SD201	Pick-up solenoid /Up		-
	SD202	Pick-up solenoid /Lw		-

17.2.12 ZU-609

(1) ZU drive board

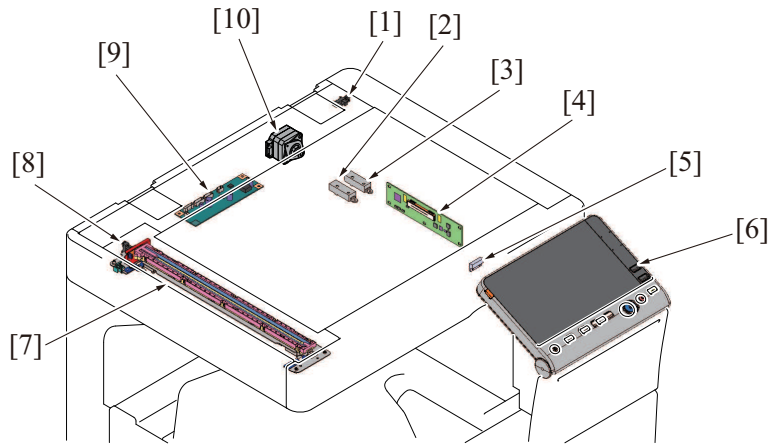
ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	M501	Center fold guide motor	Misfeed at fold section	-
ICP2	M501	Center fold guide motor		
ICP3	M502	Pressure motor	Pressure motor’s malfunction	C1133

L PARTS/CONNECTOR LAYOUT DRAWING

1. PARTS LAYOUT DRAWING

1.1 bizhub C368/C308/C258

1.1.1 Scanner section

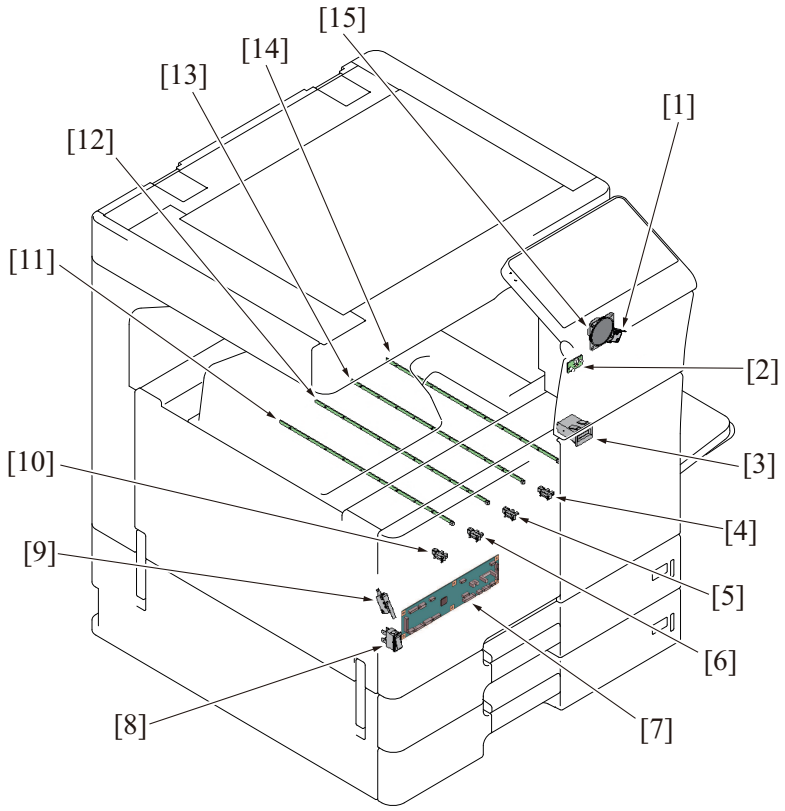


[1]	Angle sensor (PS202)	[2]	Original size sensor/1 (PS204)
[3]	Original size sensor/2 (PS205) *	[4]	CCD board (CCDB)
[5]	Original cover sensor (RS201)	[6]	Control panel unit
[7]	LED exposure unit (LU201)	[8]	Scanner home sensor (PS201)
[9]	Scanner drive board (SCDB)	[10]	Scanner motor (M201)

*: Excluding Japan models

1.1.2 Front side

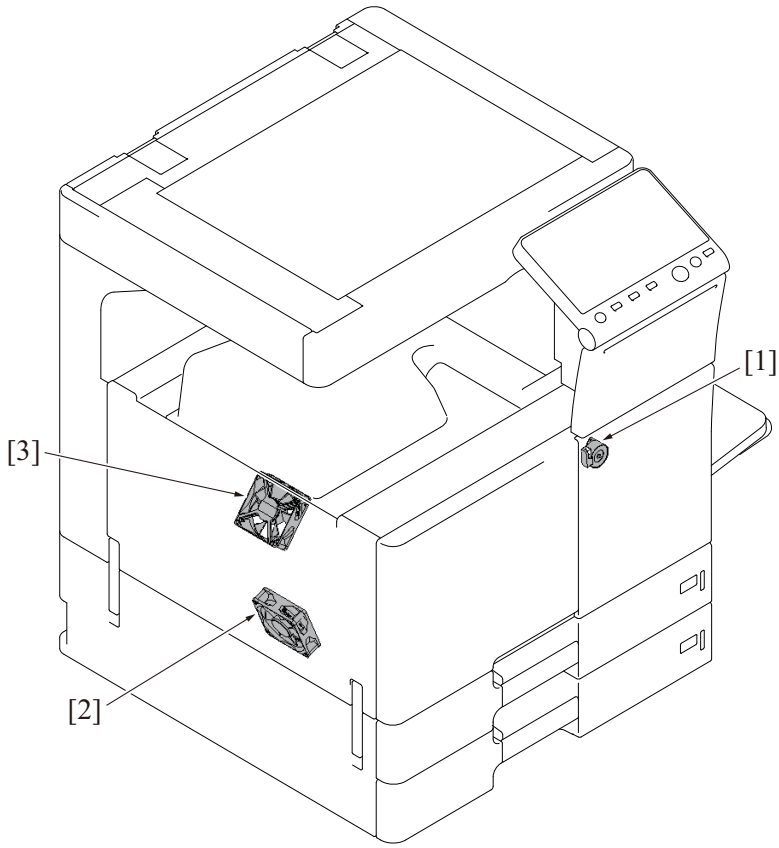
(1) Board/switch/sensor/others



[1]	Right door switch (SW3)	[2]	Machine condition monitor board (MCMB)
[3]	Total counter (TCT) *	[4]	Toner empty sensor/K (PS31)
[5]	Toner empty sensor/C (PS32)	[6]	Toner empty sensor/M (PS33)
[7]	Front side board (FRB)	[8]	Main power switch (SW1)
[9]	Front door switch (SW2)	[10]	Toner empty sensor/Y (PS34)
[11]	Erase LED/Y (EL/Y)	[12]	Erase LED/M (EL/M)
[13]	Erase LED/C (EL/C)	[14]	Erase LED/K (EL/K)
[15]	FAX speaker (SP1)	-	-

*: Japan only

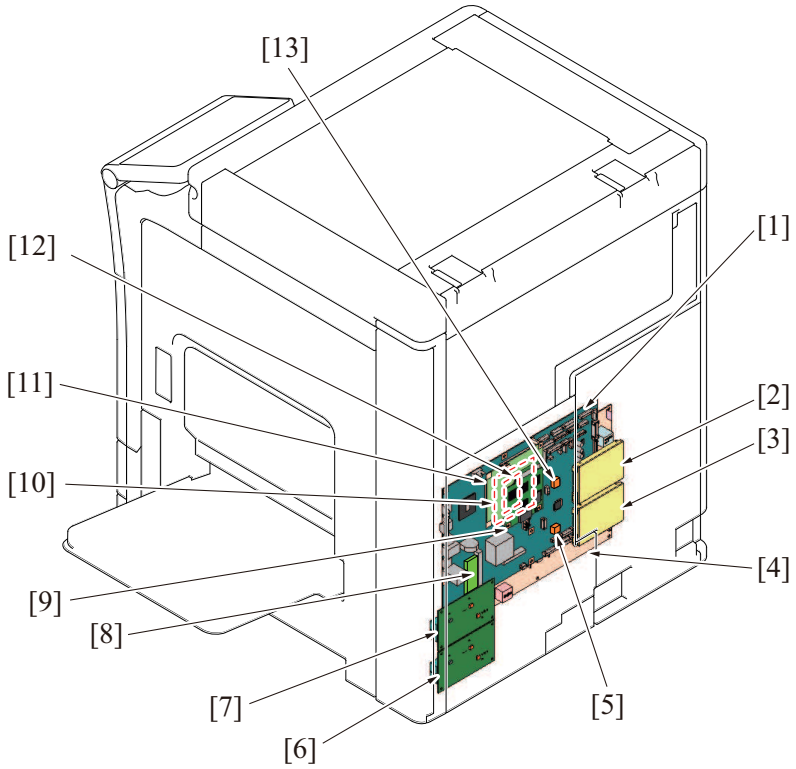
(2) Load



[1]	Toner supply motor/K (M6)	[2]	Power supply cooling fan (FM1)
[3]	Transfer belt cleaner cooling fan (FM2)	-	-

1.1.3 Back side

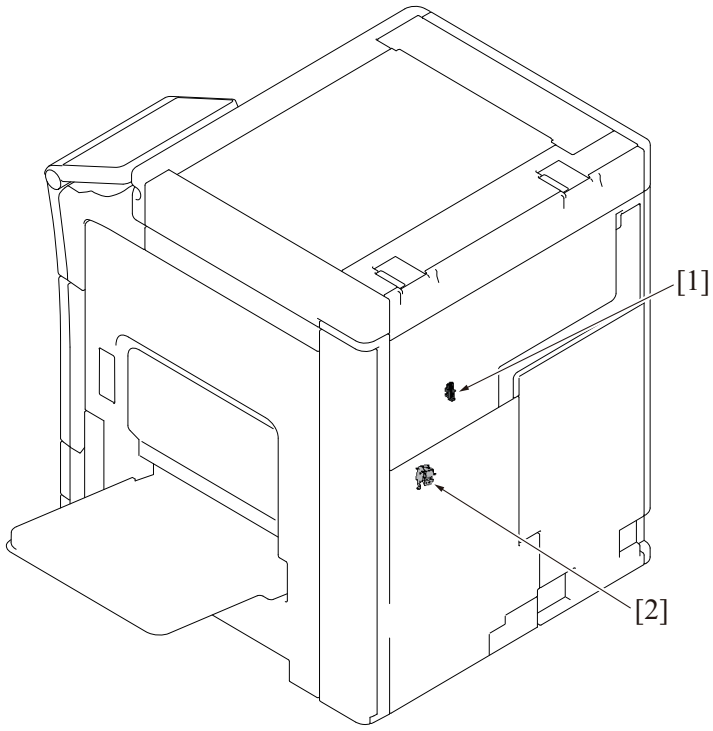
(1) Board



[1]	MFP board (MFPB)	[2]	Hard disk (A) (HDD (A))
[3]	Hard disk (B) (HDD (B)) *	[4]	High voltage unit (HV)
[5]	EEPROM/2	[6]	Fax board/1 (FAXB/1)
[7]	Fax board/2 (FAXB/2) *	[8]	Memory board (MEMB) *
[9]	DSC board/2 (DSCB/2) *	[10]	DSC board/1 (DSCB/1) *
[11]	Dual scan image processing board (DSIPB) *	[12]	eMMC board (eMMC)
[13]	EEPROM/1	-	-

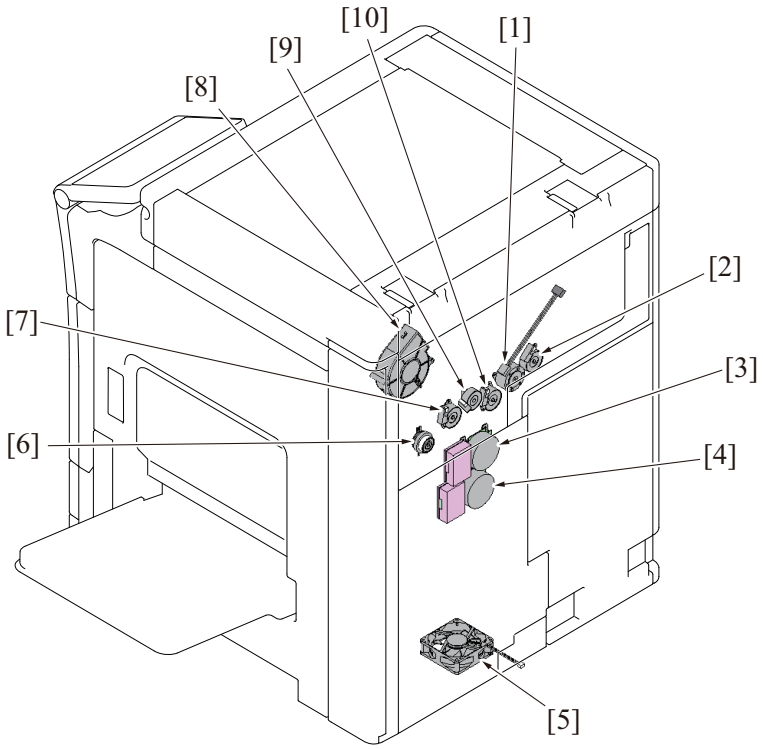
*: Option

(2) Switch/sensor/others



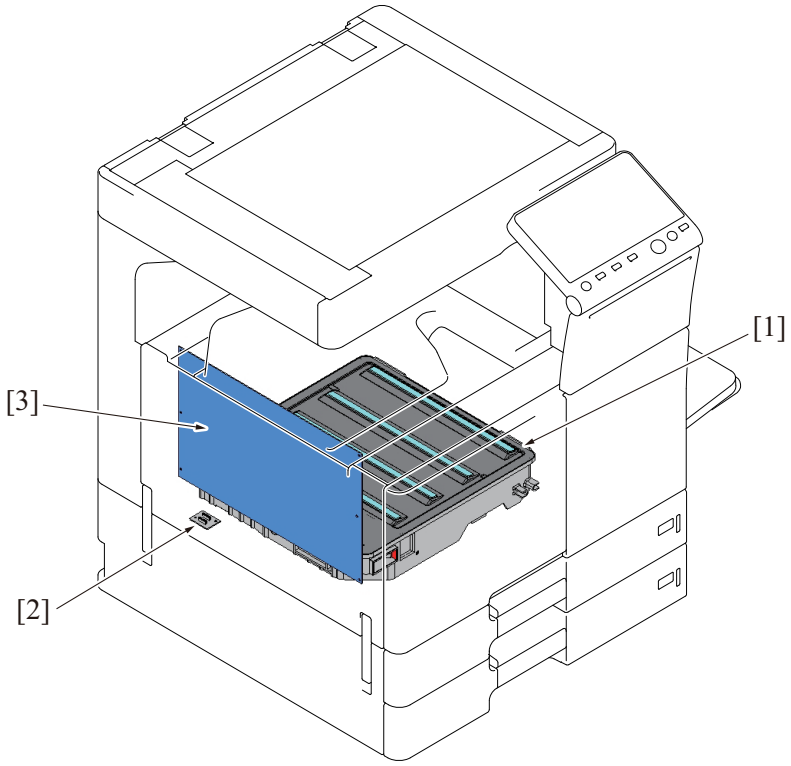
[1]	1st transfer pressure sensor (PS39)	[2]	Developing solenoid (SD4)

(3) Load



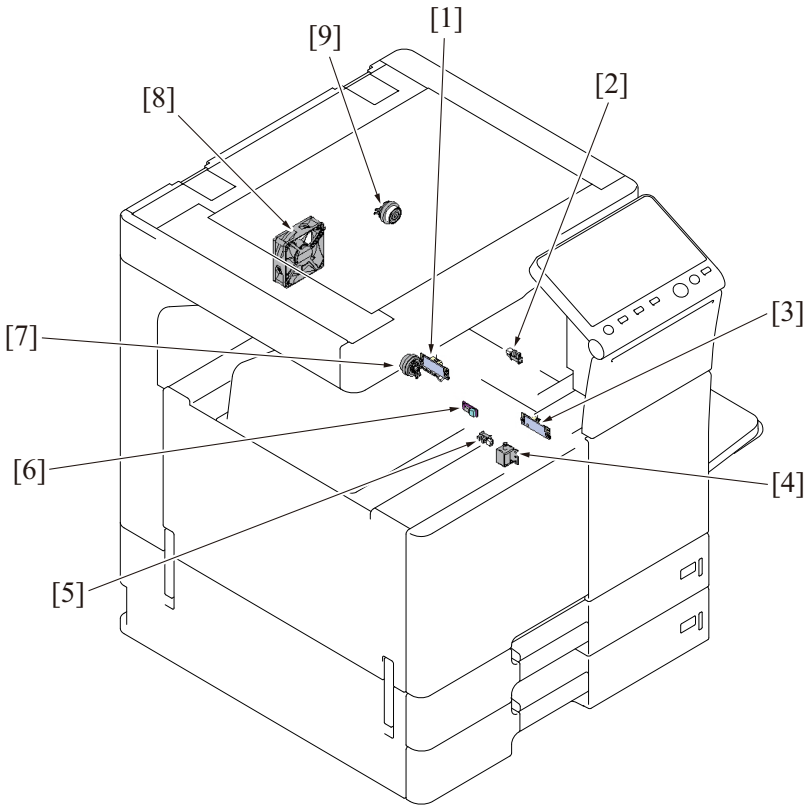
[1]	Toner cartridge motor/Y,M,C (M10)	[2]	Toner supply motor/Y (M9)
[3]	PC motor (M2)	[4]	Developing motor (M21)
[5]	Rear side cooling fan (FM3)	[6]	1st transfer pressure clutch (CL5)
[7]	Toner supply motor/C (M7)	[8]	Paper cooling fan (FM8)
[9]	Toner cartridge motor/K (M25)	[10]	Toner supply motor/M (M8)

1.1.4 Left side



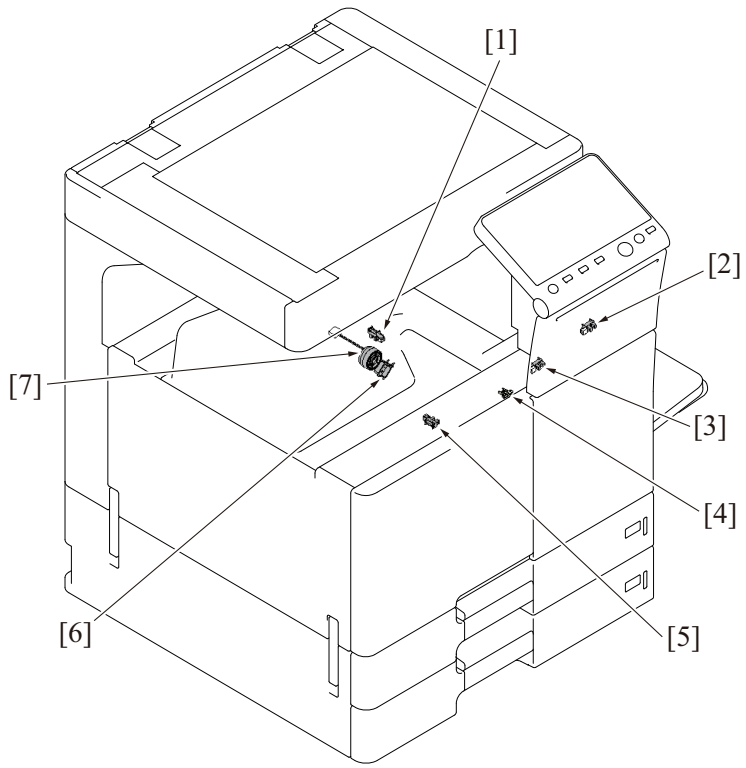
[1]	PH unit	[2]	PH relay board (PHRYB)
[3]	DC power supply (DCPU)	-	-

1.1.5 Right side



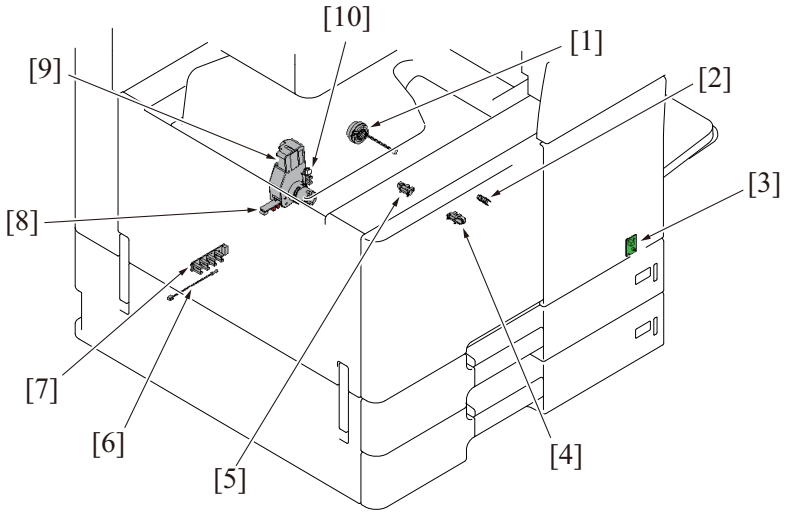
[1]	IDC sensor/Rr (IDCS/Rr)	[2]	Fusing loop sensor (PS2)
[3]	IDC sensor/Fr (IDCS/Fr)	[4]	IDC sensor shutter solenoid (SD2)
[5]	Registration sensor (PS1)	[6]	Temperature/humidity sensor (TEM/HUMS)
[7]	Registration clutch (CL4)	[8]	Toner cartridge cooling fan (FM4)
[9]	Paper exit clutch (CL8)	-	-

1.1.6 Manual bypass tray



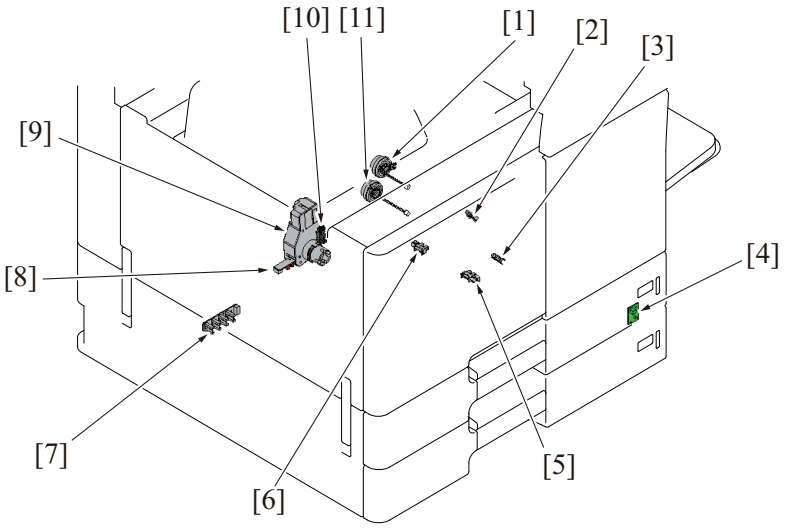
[1]	Bypass lift-up position sensor (PS26)	[2]	Bypass FD paper size sensor/2 (PS29)
[3]	Bypass FD paper size sensor/1 (PS28)	[4]	Bypass CD paper size VR (VR1)
[5]	Bypass paper empty sensor (PS27)	[6]	Bypass pick-up solenoid (SD1)
[7]	Bypass paper feed clutch (CL7)	-	-

1.1.7 Tray 1



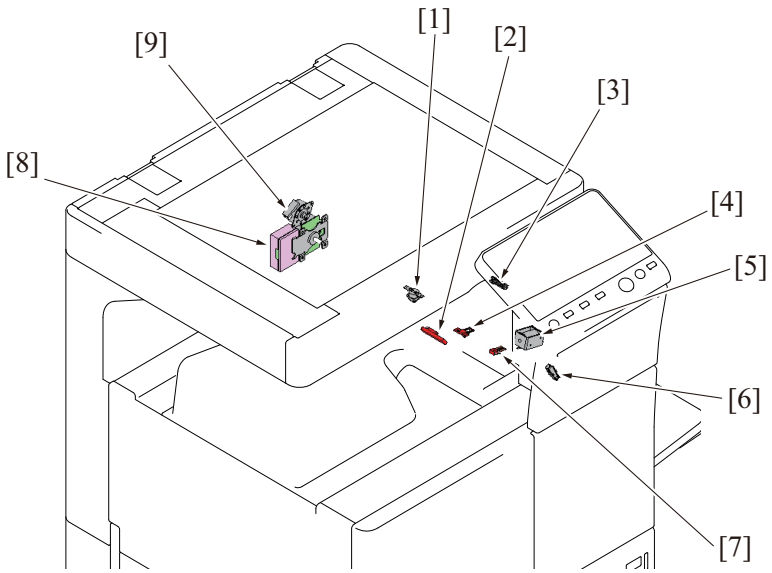
[1]	Tray1 paper feed clutch (CL3)	[2]	Tray1 paper feed sensor (PS23)
[3]	Tray1 empty indicator board (PEIB/1)	[4]	Tray1 paper empty sensor (PS24)
[5]	Tray1 upper limit sensor (PS25)	[6]	Paper temperature sensor (TH4)
[7]	Tray1 FD paper size board (FDPSB/1)	[8]	Tray1 CD paper size board (CDPSB/1)
[9]	Tray1 lift-up motor (M12)	[10]	Tray1 paper near empty sensor (PS11)

1.1.8 Tray 2



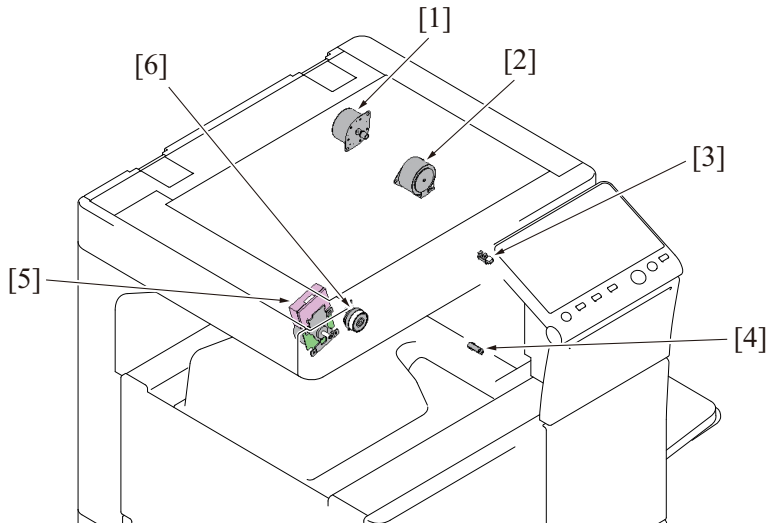
[1]	Tray2 vertical transport clutch (CL2)	[2]	Tray2 vertical transport sensor (PS19)
[3]	Tray2 paper feed sensor (PS20)	[4]	Tray2 empty indicator board (PEIB/2)
[5]	Tray2 paper empty sensor (PS21)	[6]	Tray2 upper limit sensor (PS22)
[7]	Tray2 FD paper size board (FDPSB/2)	[8]	Tray2 CD paper size board (CDPSB/2)
[9]	Tray2 lift-up motor (M13)	[10]	Tray2 paper near empty sensor (PS12)
[11]	Tray2 paper feed clutch (CL1)	-	-

1.1.9 Fusing/paper exit section



[1]	Heating roller thermostat (TS1)	[2]	Heating roller temperature sensor (TEMS)
[3]	Paper exit sensor (PS3)	[4]	Heating roller thermistor/2 (TH2)
[5]	Gate switch solenoid (SD3)	[6]	Fusing pressure home sensor (PS38)
[7]	Heating roller thermistor/1 (TH1)	[8]	Fusing motor (M3)
[9]	Fusing pressure motor (M11)	-	-

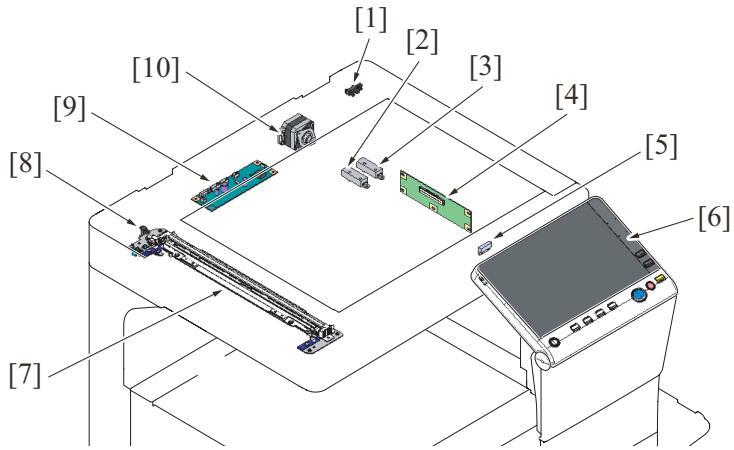
1.1.10 Duplex section



[1]	Switchback motor (M4)	[2]	ADU transport motor (M5)
[3]	ADU paper passage sensor/1 (PS40)	[4]	ADU paper passage sensor/2 (PS41)
[5]	Transport motor (M1)	[6]	ADU transport clutch (CL6)

1.2 bizhub C658/C558/C458

1.2.1 Scanner section

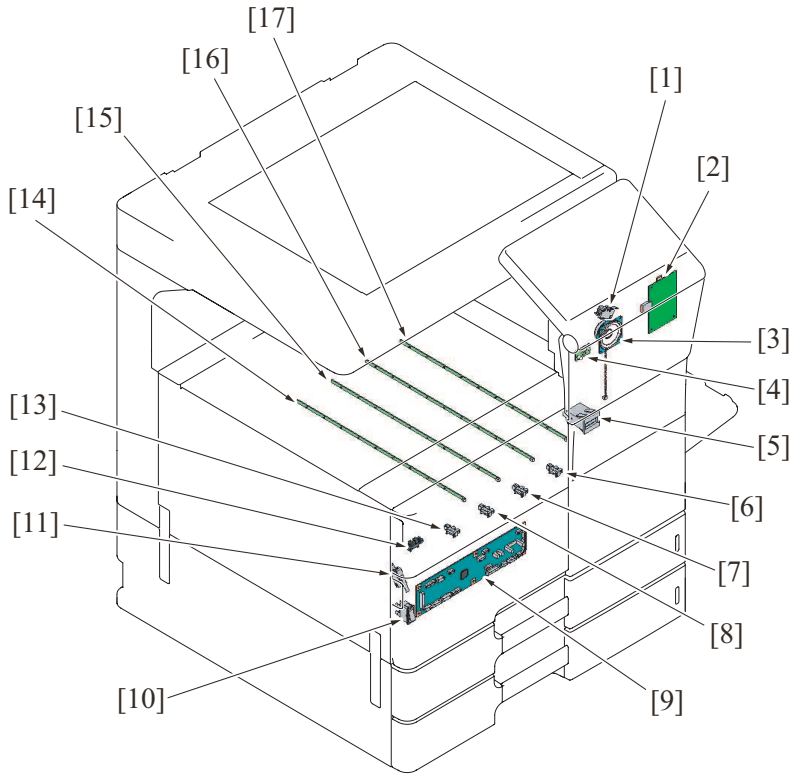


[1]	Angle sensor (PS202)	[2]	Original size sensor1 (PS204)
[3]	Original size sensor2 (PS205) *	[4]	CCD board (CCDB)
[5]	Original cover sensor (RS201)	[6]	Control panel unit
[7]	LED exposure unit (LU201)	[8]	Scanner home sensor (PS201)
[9]	Scanner drive board (SCDB)	[10]	Scanner motor (M201)

*: Excluding Japan models

1.2.2 Front side section

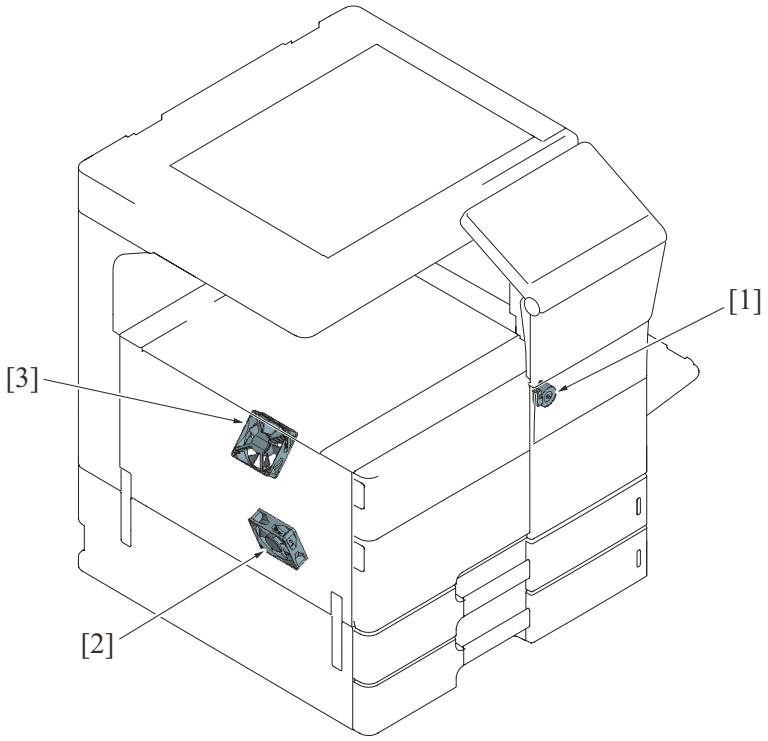
(1) Board/switch/sensor/others



[1]	Right door switch (SW3)	[2]	USB board (USBB)
[3]	FAX speaker (SP1)	[4]	Machine condition monitor board (MCMB)
[5]	Total counter (TCT) *	[6]	Toner empty sensor/K (PS31)
[7]	Toner empty sensor/C (PS32)	[8]	Toner empty sensor/M (PS33)
[9]	Front side board (FRB)	[10]	Main power switch (SW1)
[11]	Front door switch (SW2)	[12]	Front upper door sensor (PS43)
[13]	Toner empty sensor/Y (PS34)	[14]	Erase LED/Y (EL/Y)
[15]	Erase LED/M (EL/M)	[16]	Erase LED/C (EL/C)
[17]	Erase LED/K (EL/K)	-	-

*: Japan only

(2) Load

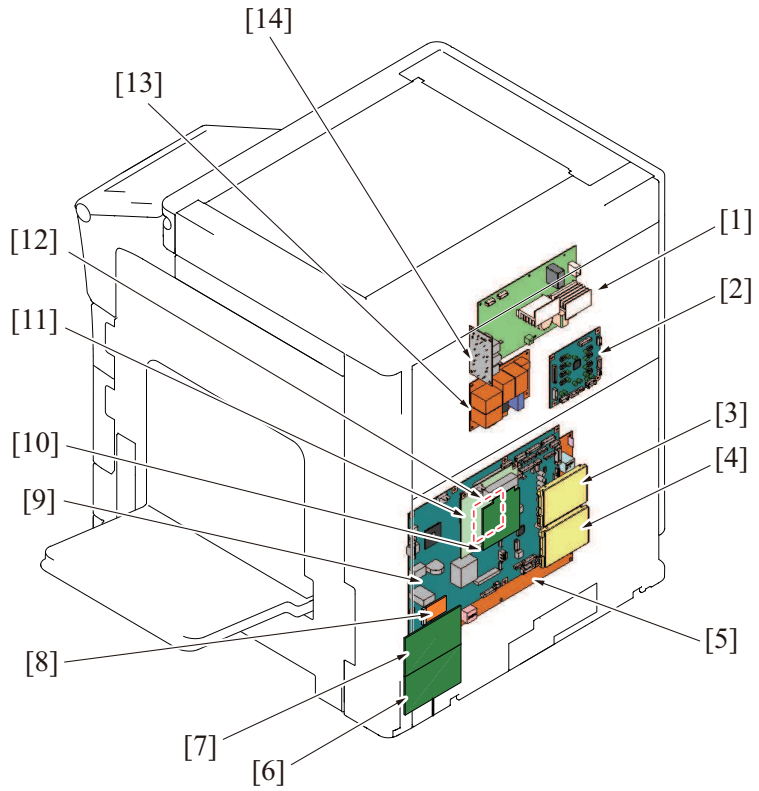


[1]	Toner supply motor/K (M6)	[2]	Power supply cooling fan (FM1)
[3]	Transfer belt cleaner cooling fan (FM2)	-	-

1.2.3 Back side

(1) Board

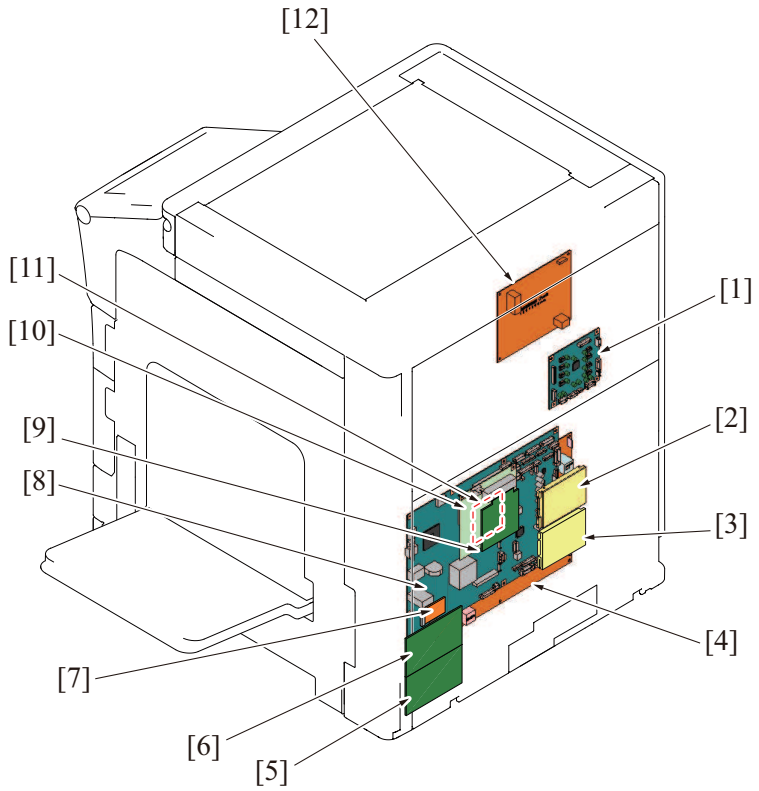
(a) C658/C558



[1]	IH power supply (IHPU)	[2]	Expansion control board (EXCB)
[3]	Hard disk (A) (HDD (A))	[4]	Hard disk (B) (HDD (B)) *
[5]	High voltage unit (HV)	[6]	Fax board/1 (FAXB/1) *
[7]	Fax board/2 (FAXB/2) *	[8]	eMMC board (eMMC)
[9]	MFP board (MFPB)	[10]	DSC board/2 (DSCB/2) *
[11]	Dual scan image processing board (DSIPB)	[12]	DSC board/1 (DSCB/1) *
[13]	NF board (NFB)	[14]	IH magnetic erasing board (IHMEB)

*: Option

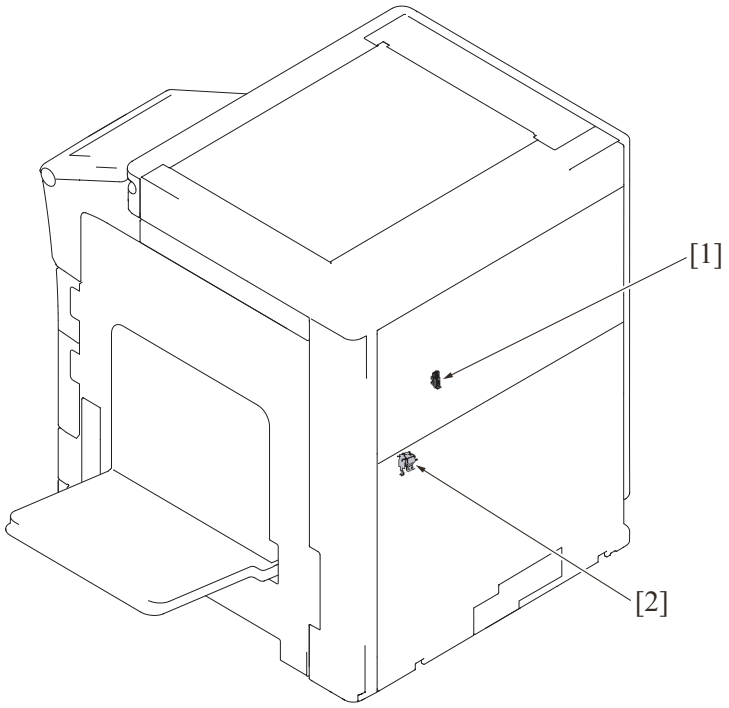
(b) C458



[1]	Expansion control board (EXCB)	[2]	Hard disk (A) (HDD (A))
[3]	Hard disk (B) (HDD (B)) *	[4]	High voltage unit (HV)
[5]	Fax board/1 (FAXB/1) *	[6]	Fax board/2 (FAXB/2) *
[7]	eMMC board (eMMC)	[8]	MFP board (MFPB)
[9]	DSC board/2 (DSCB/2) *	[10]	Dual scan image processing board (DSIPB)
[11]	DSC board/1 (DSCB/1) *	[12]	Fusing power supply (FUPU)

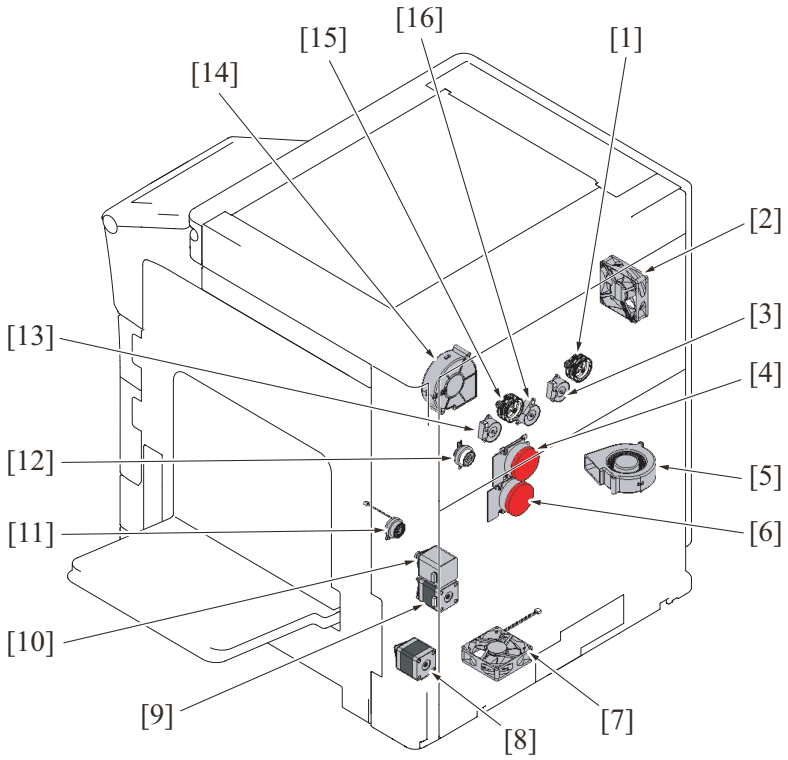
*: Option

(2) Switch/sensor/others



[1]	1st transfer pressure sensor (PS39)	[2]	Developing solenoid (SD4)

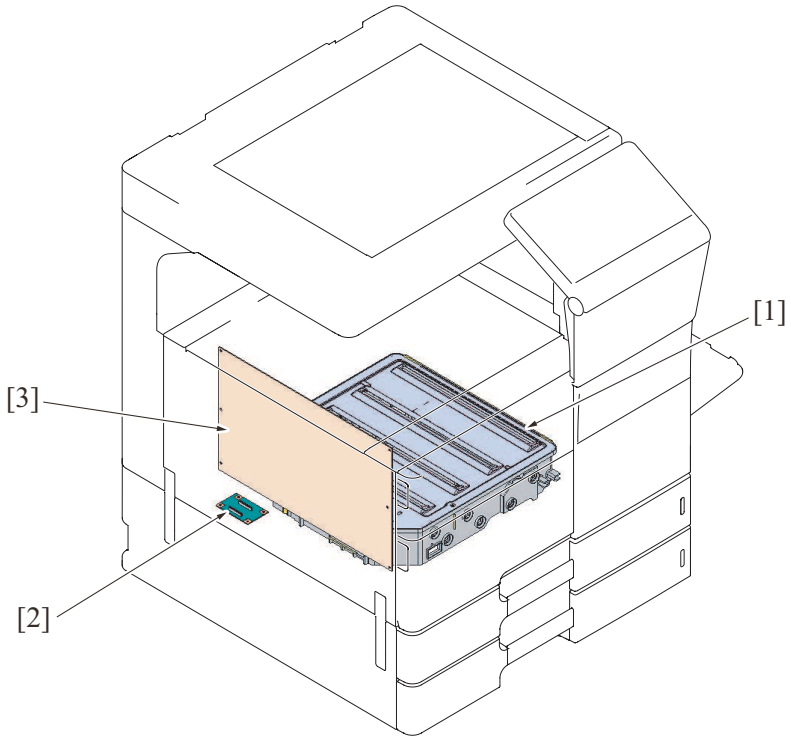
(3) Load



[1]	Toner Cartridge Motor/Y, M (M10)	[2]	Fusing power supply cooling fan (FM12)
[3]	Toner supply motor/Y (M9)	[4]	PC motor (M2)
[5]	Toner suction fan (FM11)	[6]	Developing motor (M21)
[7]	Rear side cooling fan (FM3)	[8]	Tray2 vertical transport motor (M23)
[9]	Paper feed motor (M22)	[10]	Registration motor (M24)*1
[11]	Registration clutch (CL4)*2	[12]	1st transfer pressure clutch (CL5)
[13]	Toner supply motor/C (M7)	[14]	Paper cooling fan (FM8)
[15]	Toner cartridge motor/C, K (M25)	[16]	Toner supply motor/M (M8)

*1: C658 only
*2: C558/C458 only

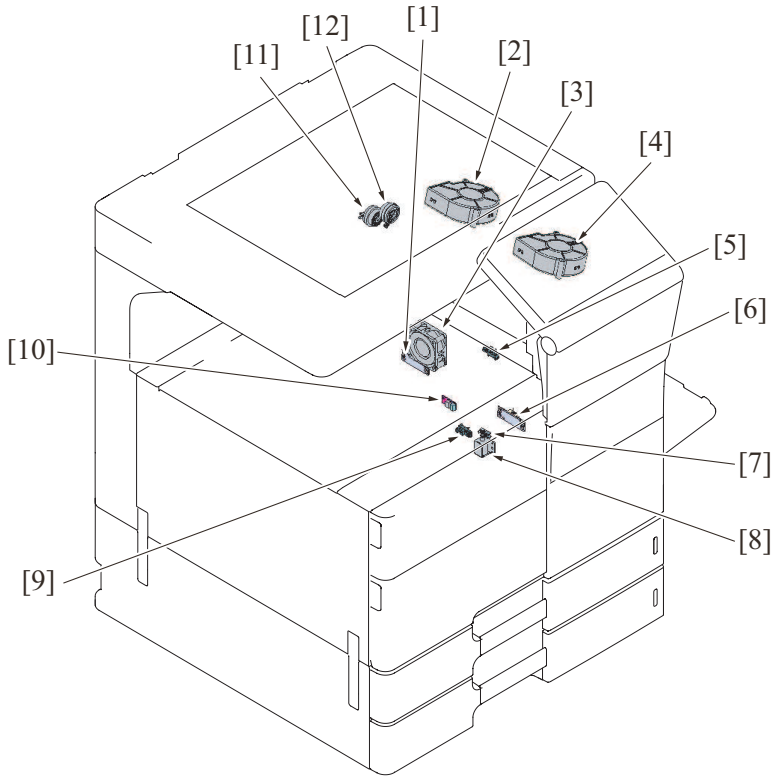
1.2.4 Left side



[1]	PH unit	[2]	PH relay board (PHRYB)
[3]	DC power supply (DCPU)	-	-

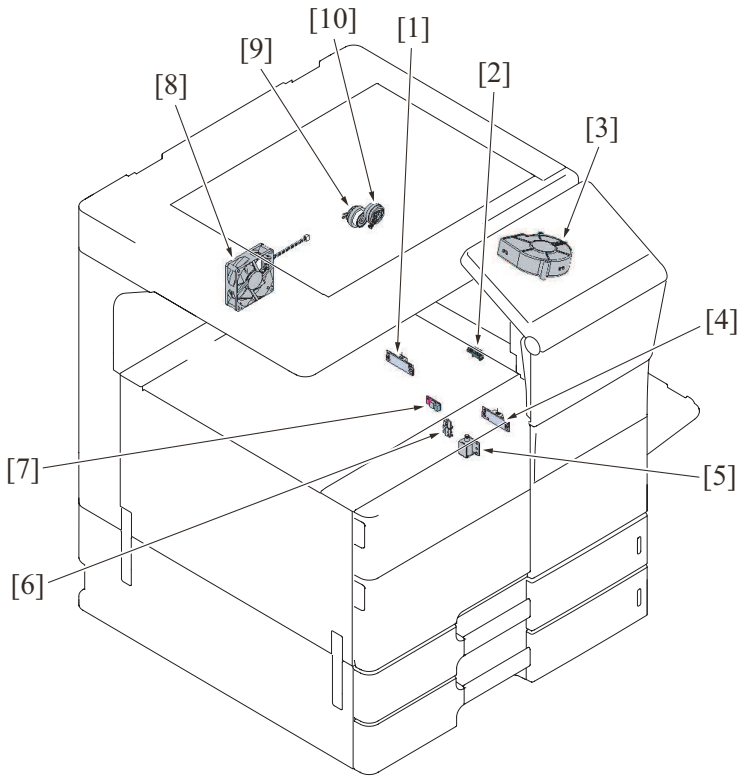
1.2.5 Right side

(1) C658/C558



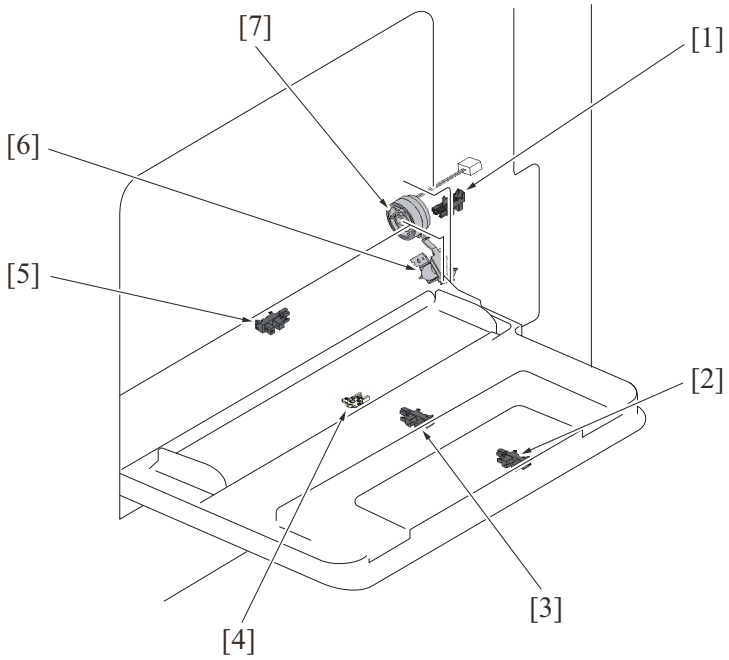
[1]	IDC sensor/Rr (IDCS/Rr)	[2]	UFP exhaust fan2 (FM18)
[3]	Toner cartridge cooling fan (FM4)	[4]	UFP exhaust fan1 (FM17)
[5]	Fusing loop sensor (PS2)	[6]	IDC sensor/Fr (IDCS/Fr)
[7]	Registration sensor2 (PS72)	[8]	IDC sensor shutter solenoid (SD2)
[9]	Registration sensor1 (PS1)	[10]	Temperature/humidity sensor (TEM/HUMS)
[11]	Paper exit clutch (CL8)	[12]	Paper exit deceleration clutch (CL9)

(2) C458



[1]	IDC sensor/Rr (IDCS/Rr)	[2]	Fusing loop sensor (PS2)
[3]	UFP exhaust fan1 (FM17)	[4]	IDC sensor/Fr (IDCS/Fr)
[5]	IDC sensor shutter solenoid (SD2)	[6]	Registration sensor1 (PS1)
[7]	Temperature/humidity sensor (TEM/HUMS)	[8]	Toner cartridge cooling fan (FM4)
[9]	Paper exit clutch (CL8)	[10]	Paper exit deceleration clutch (CL9)

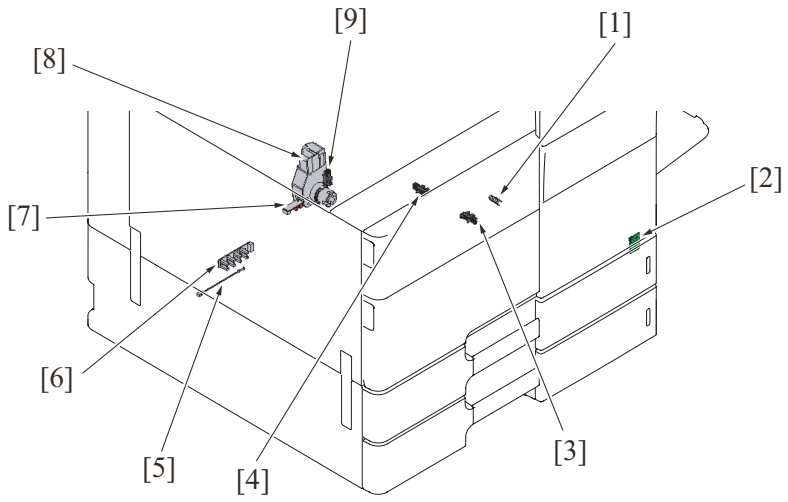
1.2.6 Manual bypass tray



[1]	Bypass lift-up position sensor (PS26)	[2]	Bypass FD paper size sensor2 (PS29)

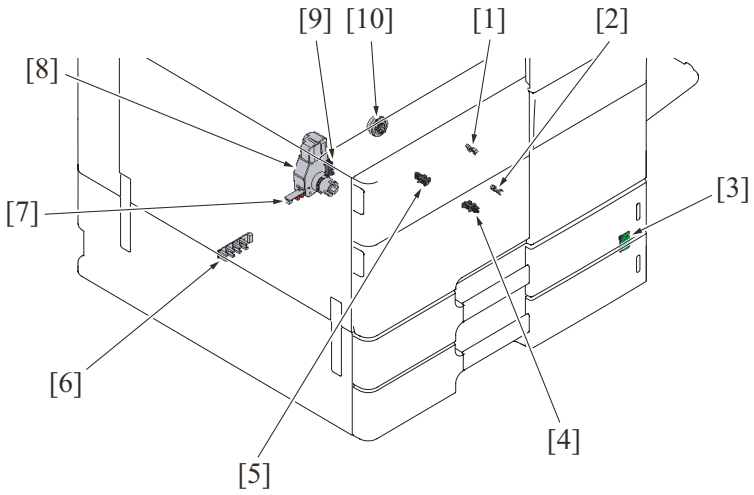
[3]	Bypass FD paper size sensor1 (PS28)	[4]	Bypass CD paper size VR (VR1)
[5]	Bypass paper empty sensor (PS27)	[6]	Bypass pick-up solenoid (SD1)
[7]	Bypass paper feed clutch (CL7)	-	-

1.2.7 Tray 1



[1]	Tray1 paper feed sensor (PS23)	[2]	Tray1 empty indicator board (PEIB/1)
[3]	Tray1 paper empty sensor (PS24)	[4]	Tray1 upper limit sensor (PS25)
[5]	Paper temperature sensor (TH4)	[6]	Tray1 FD paper size board (FDPSB/1)
[7]	Tray1 CD paper size board (CDPSB/1)	[8]	Tray1 lift-up motor (M12)
[9]	Tray1 paper near empty sensor (PS11)	-	-

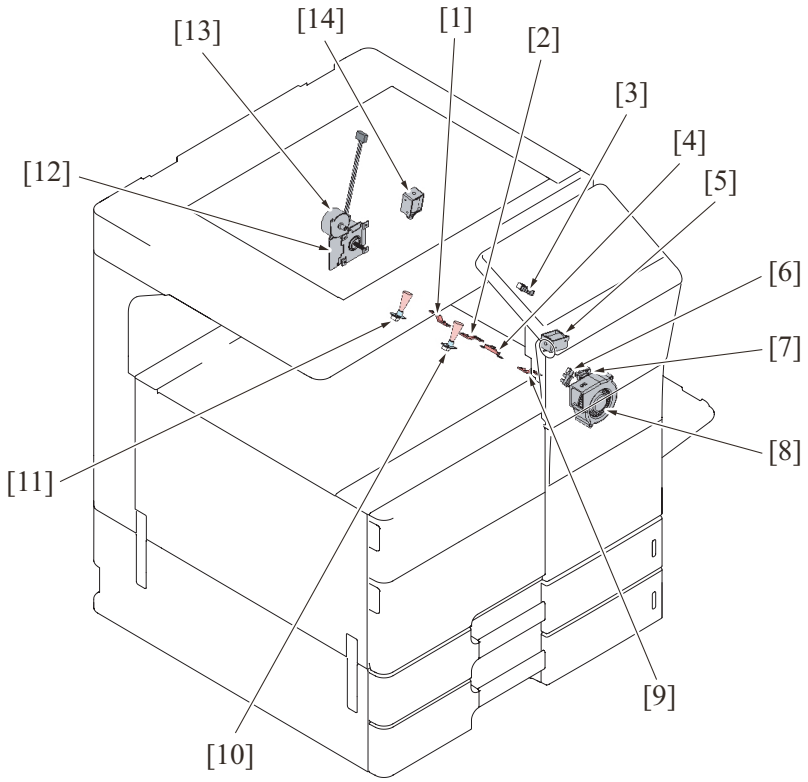
1.2.8 Tray 2



[1]	Tray2 vertical transport sensor (PS19)	[2]	Tray2 paper feed sensor (PS20)
[3]	Tray2 empty indicator board (PEIB/2)	[4]	Tray2 paper empty sensor (PS21)
[5]	Tray2 upper limit sensor (PS22)	[6]	Tray2 FD paper size board (FDPSB/2)
[7]	Tray2 CD paper size board (CDPSB/2)	[8]	Tray2 lift-up motor (M13)
[9]	Tray2 paper near empty sensor (PS12)	[10]	Tray2 paper feed clutch (CL1)

1.2.9 Fusing/paper exit section

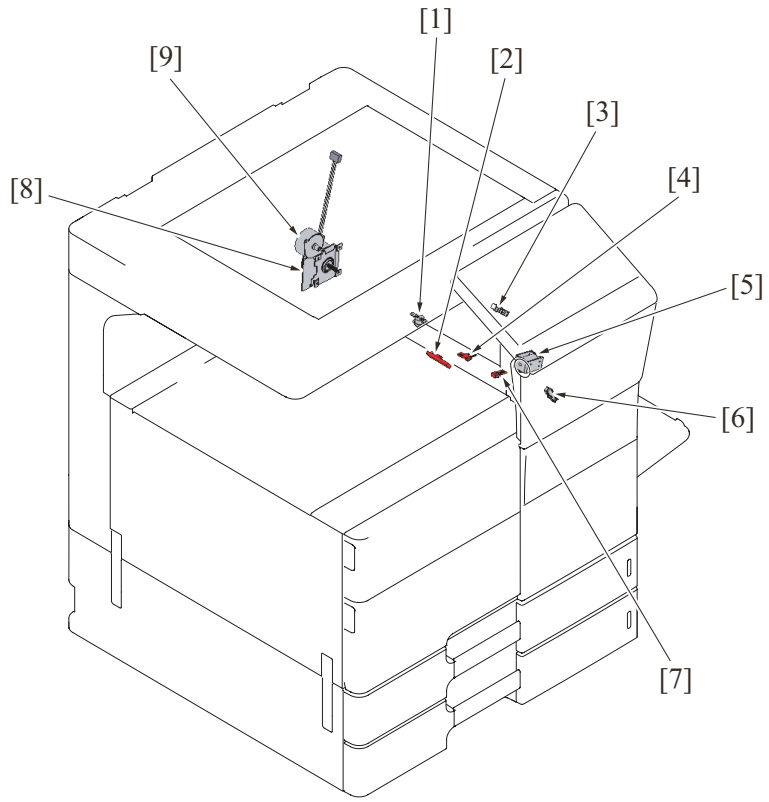
(1) C658/C558



[1]	Heating roller thermistor2 (TH2)	[2]	Heating roller thermistor3 (TH3)
[3]	Paper exit sensor (PS3)	[4]	Heating roller thermostat (TS1)
[5]	Gate switch solenoid (SD3)	[6]	Fusing pressure home sensor (PS38)
[7]	Heating roller rotation sensor (PS37)	[8]	IH coil cooling fan (FM7)
[9]	Heating roller thermistor1 (TH1)	[10]	Heating roller temperature sensor1 (TEMS/1)
[11]	Heating roller temperature sensor2 (TEMS)*	[12]	Fusing motor (M3)
[13]	Fusing pressure motor (M11)	[14]	Soaking roller pressure solenoid (SD5)

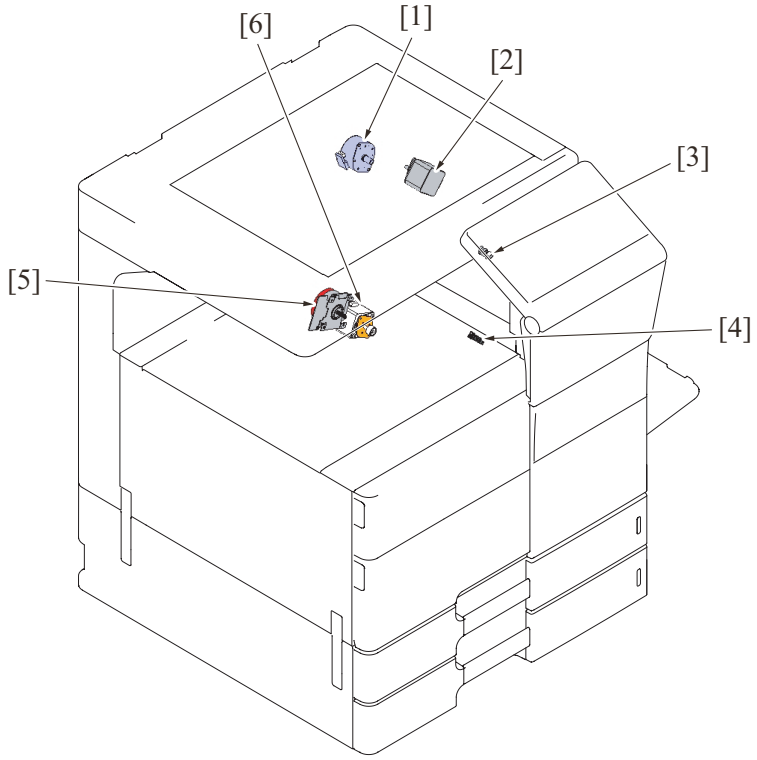
*: C658 only

(2) C458



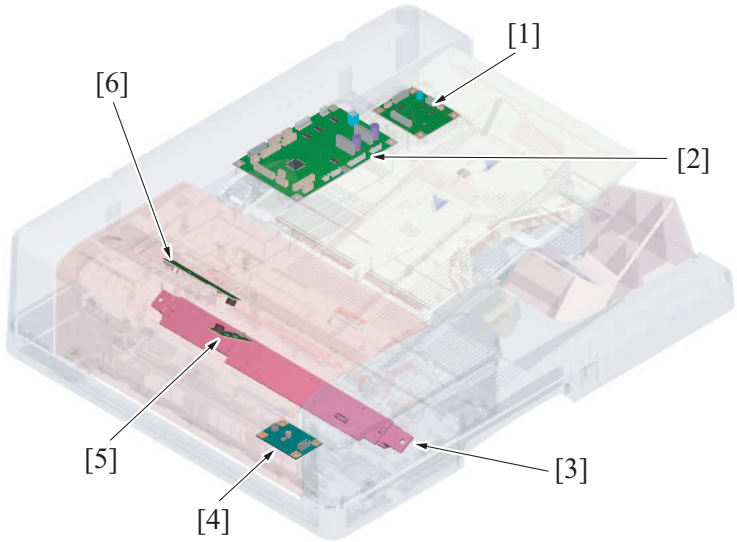
[1]	Heating roller thermostat (TS1)	[2]	Heating roller temperature sensor1 (TEMS/1)
[3]	Paper exit sensor (PS3)	[4]	Heating roller thermistor2 (TH2)
[5]	Gate switch solenoid (SD3)	[6]	Fusing pressure home sensor (PS38)
[7]	Heating roller thermistor1 (TH1)	[8]	Fusing motor (M3)
[9]	Fusing pressure motor (M11)	-	-

1.2.10 Duplex section

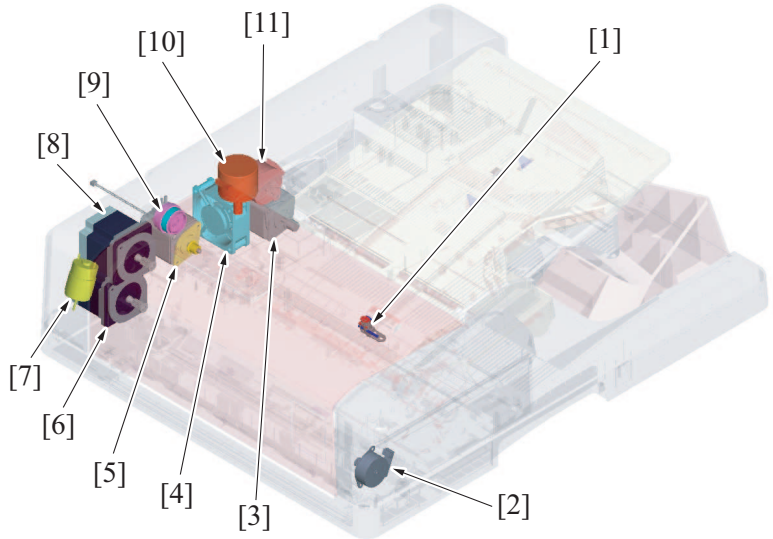


[1]	Switchback motor (M4)	[2]	ADU transport motor1 (M5)
[3]	ADU paper passage sensor1 (PS40)	[4]	ADU paper passage sensor2 (PS41)
[5]	Transport motor (M1)	[6]	ADU transport motor2 (M26)

1.3 Dual scan document feeder

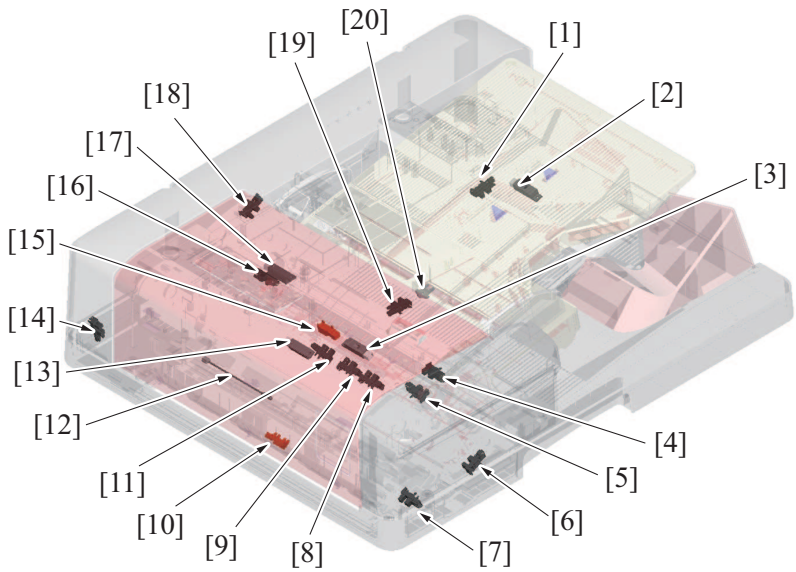


[1]	Sensor control board (SCB)	[2]	DF control board (DFCB)
[3]	CIS module (CIS)	[4]	DF power supply (DFPU)
[5]	Multi feed detection board/1 (transmitter) (MFDB/1)	[6]	Multi feed detection board/2 (receiver) (MFDB/2)



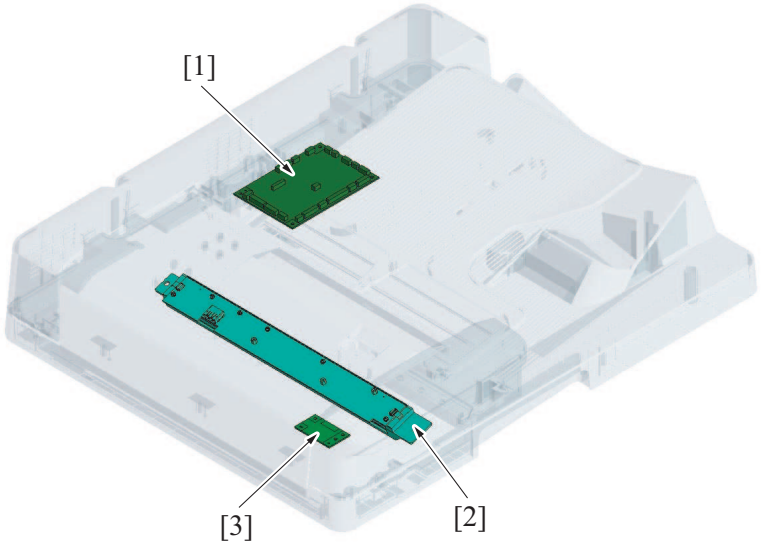
[1]	Stamp solenoid (SD1)*	[2]	Front side cleaning motor (M8)
[3]	Exit motor (M4)	[4]	Cooling fan motor (FM)
[5]	Take-up motor (M1)	[6]	Registration motor (M2)
[7]	Reading roller pressure/retraction motor (M6)	[8]	Reading motor (M3)
[9]	Take-up clutch (CL1)	[10]	Lift-up motor (M5)
[11]	Back side cleaning motor (M7)	-	-

- * : Option

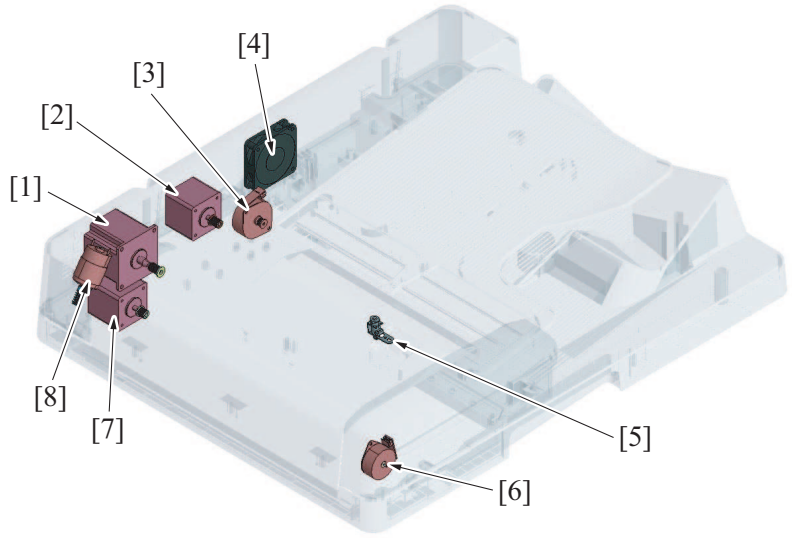


[1]	Length sensor/1 (PS10)	[2]	Length sensor/2 (PS11)
[3]	Empty sensor (PS1)	[4]	Exit sensor (PS7)
[5]	Lift up lower sensor (PS3)	[6]	CIS under guide open/close sensor (PS20)
[7]	Front side cleaning home sensor (PS18)	[8]	Consolidation sensor/3 (PS15)
[9]	Consolidation sensor/2 (PS14)	[10]	Before read sensor (PS6)
[11]	Consolidation sensor/1 (PS13)	[12]	DF temperature sensor (TH)
[13]	Registration sensor (PS5)	[14]	Read roller home sensor (PS8)
[15]	After separate sensor (PS4)	[16]	Back side cleaning home sensor (PS9)
[17]	Document feed sensor (PS21)	[18]	Read open/close sensor (PS16)
[19]	Lift up upper sensor (PS2)	[20]	Restriction plate positional volume (VR1)

1.4 DF-704/SP-501 (Option)

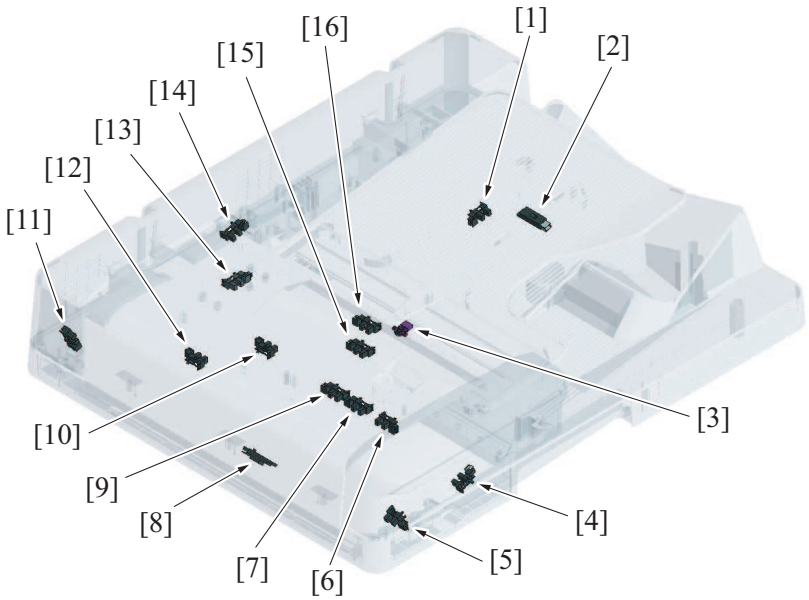


[1]	DF control board (DFCB)	[2]	CIS module (CIS)
[3]	CIS power supply (CISPU)	-	-



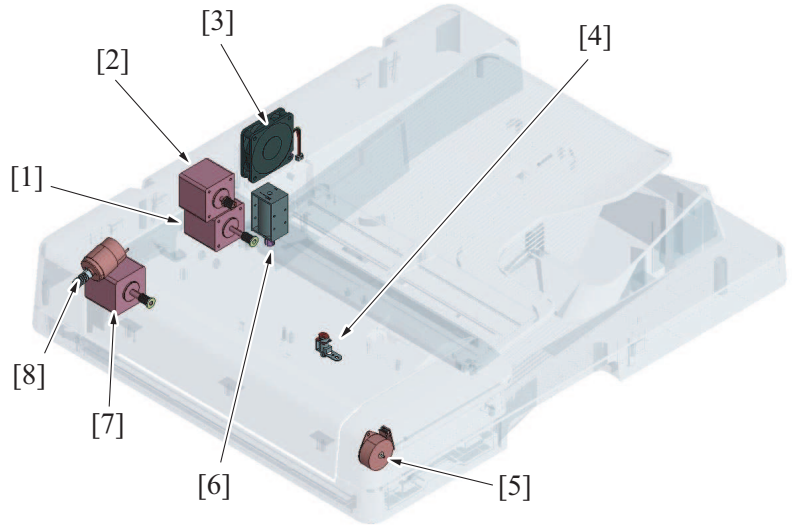
[1]	Document reading motor (M1)	[2]	Document feed motor (M2)
[3]	CIS cleaning motor (M5)	[4]	DF cooling fan motor (FM1)
[5]	Stamp solenoid (SD1) *	[6]	Document reading glass cleaning motor (M6)
[7]	Registration motor (M3)	[8]	Reading roller release motor (M4)

- * : Option



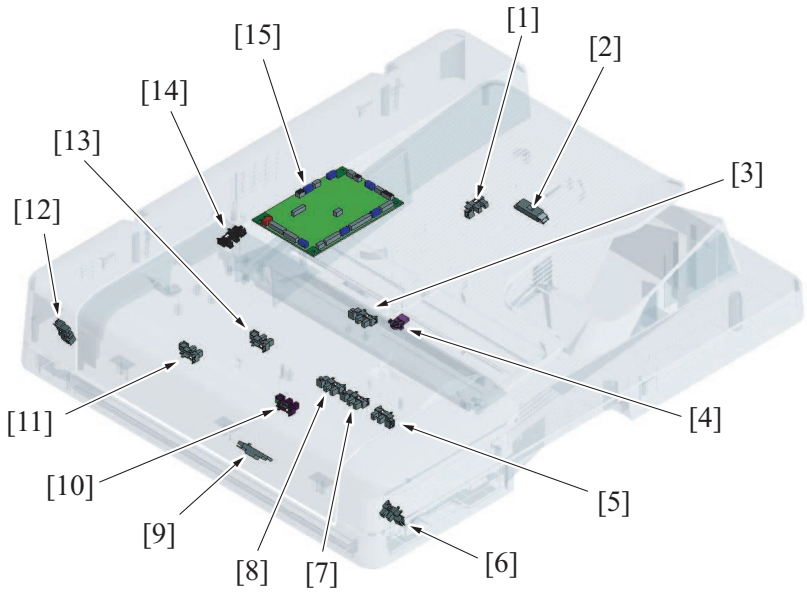
[1]	Document length sensor/1 (PS8)	[2]	Document length sensor/2 (PS9)
[3]	Document width size sensor (VR1)	[4]	CIS cover sensor (PS15)
[5]	Document reading glass cleaning sensor (PS13)	[6]	Mixed original sensor/3 (PS12)
[7]	Mixed original sensor/2 (PS11)	[8]	Document reading sensor (PS6)
[9]	Mixed original sensor/1 (PS10)	[10]	After separate sensor (PS2)
[11]	Reading roll position sensor (PS4)	[12]	Document registration sensor (PS3)
[13]	CIS cleaning sensor (PS7)	[14]	Upper door sensor (PS14)
[15]	Document exit sensor (PS5)	[16]	Document empty sensor (PS1)

1.5 DF-629/SP-501 (Option)



[1]	Registration motor (M3)	[2]	Document feed motor (M2)
[3]	DF cooling fan motor (FM1)	[4]	Stamp solenoid (SD2) *
[5]	Glass cleaning motor (M4)	[6]	Document exit roller release solenoid (SD1)
[7]	Document reading motor (M1)	[8]	Reading roll release motor (M5)

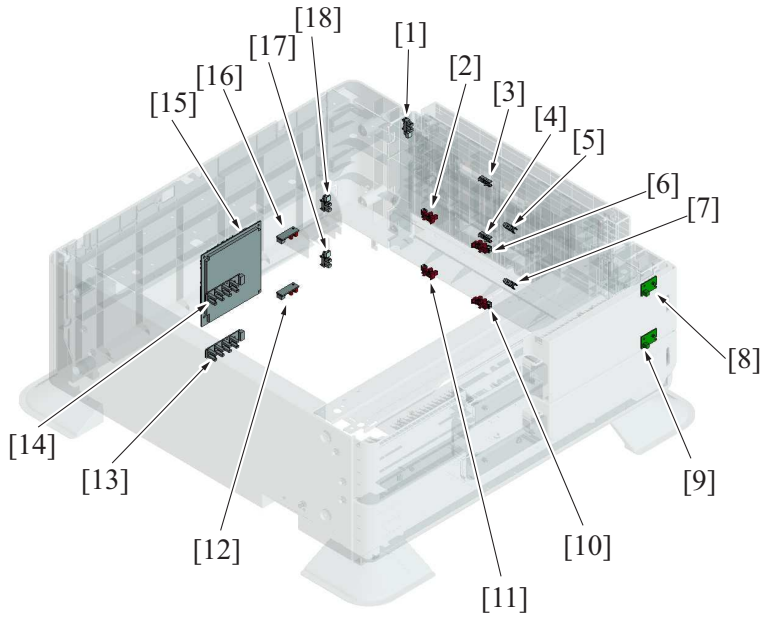
- * : Option



[1]	Document length size sensor/1 (PS6)	[2]	Document length size sensor/2 (PS7)
[3]	Document empty sensor (PS1)	[4]	Document width size sensor (VR1)
[5]	Mixed original sensor/3 (PS10)	[6]	Document reading glass cleaning sensor (PS12)
[7]	Mixed original sensor/2 (PS9)	[8]	Mixed original sensor/1 (PS8)
[9]	Document reading sensor (PS4)	[10]	Document exit sensor (PS5)
[11]	Document registration sensor (PS3)	[12]	Reading roll position sensor (PS11)
[13]	After separate sensor (PS2)	[14]	Upper door sensor (PS13)
[15]	DF control board (DFCB)	-	-

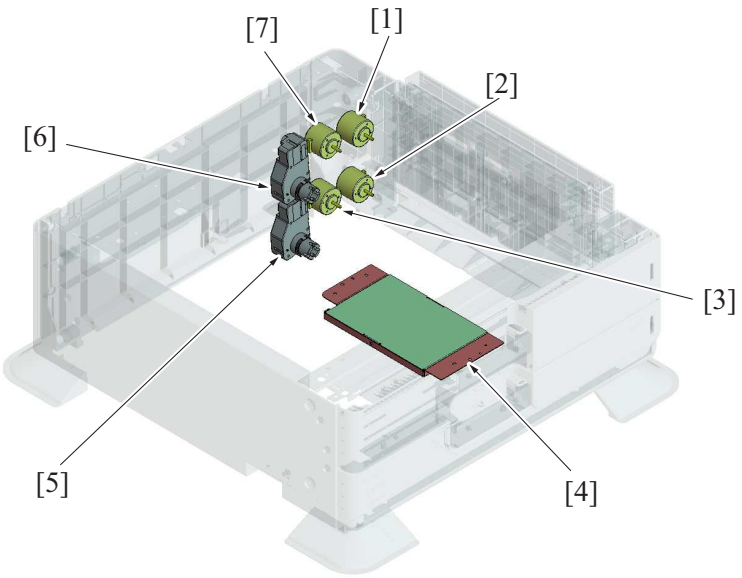
1.6 PC-110/PC-210 (Option)

1.6.1 Board/switch/sensor/others



[1]	Right bottom door sensor (PS111)	[2]	Tray 3 upper limit sensor (PS116)
[3]	Tray 3 vertical transport sensor (PS113)	[4]	Tray 4 vertical transport sensor (PS123)
[5]	Tray 3 paper feed sensor (PS112)	[6]	Tray 3 paper empty sensor (PS114)
[7]	Tray 4 paper feed sensor (PS122)	[8]	Tray 3 paper empty indicator board (PEIB/3)
[9]	Tray 4 paper empty indicator board (PEIB/4)	[10]	Tray 4 paper empty sensor (PS124)
[11]	Tray 4 upper limit sensor (PS126)	[12]	Tray 4 CD paper size board (CDPSB/4)
[13]	Tray 4 FD paper size board (FDPSB/4)	[14]	Tray 3 FD paper size board (FDPSB/3)
[15]	PC control board (PCCB)	[16]	Tray 3 CD paper size board (CDPSB/3)
[17]	Tray 4 paper near empty sensor (PS125)	[18]	Tray 3 paper near empty sensor (PS115)

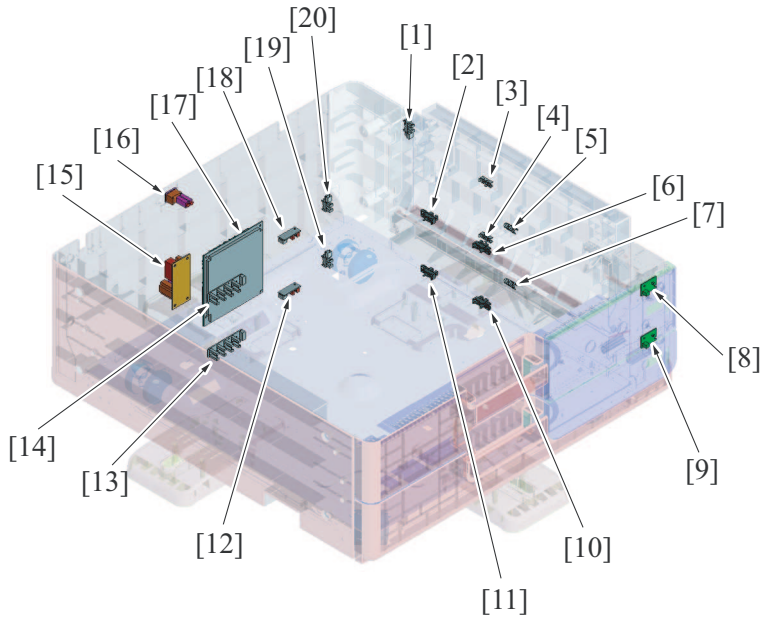
1.6.2 Load



[1]	Tray 3 vertical transport motor (M112)	[2]	Tray 4 vertical transport motor (M122)
[3]	Tray 4 paper feed motor (M121)	[4]	PC dehumidifier heater (DH111)
[5]	Tray 4 lift-up motor (M123)	[6]	Tray 3 lift-up motor (M113)
[7]	Tray 3 paper feed motor (M111)	-	-

1.7 PC-115/PC-215 (Option)

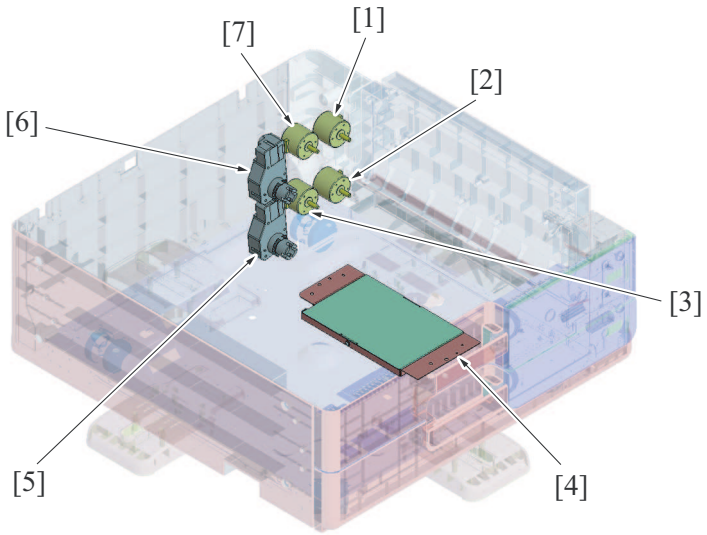
1.7.1 Board/switch/sensor/others



[1]	Right bottom door sensor (PS111)	[2]	Tray 3 upper limit sensor (PS116)
[3]	Tray 3 vertical transport sensor (PS113)	[4]	Tray 4 vertical transport sensor (PS123)
[5]	Tray 3 paper feed sensor (PS112)	[6]	Tray 3 paper empty sensor (PS114)
[7]	Tray 4 paper feed sensor (PS122)	[8]	Tray 3 paper empty indicator board (PEIB/3)
[9]	Tray 4 paper empty indicator board (PEIB/4)	[10]	Tray 4 paper empty sensor (PS124)
[11]	Tray 4 upper limit sensor (PS126)	[12]	Tray 4 CD paper size board (CDPSB/4)
[13]	Tray 4 FD paper size board (FDPSB/4)	[14]	Tray 3 FD paper size board (FDPSB/3)
[15]	Dehumidifier relay board (PCRYB) *	[16]	Dehumidification heater switch (SW4) *
[17]	PC control board (PCCB)	[18]	Tray 3 CD paper size board (CDPSB/3)
[19]	Tray 4 paper near empty sensor (PS125)	[20]	Tray 3 paper near empty sensor (PS115)

- *: Japan model only

1.7.2 Load

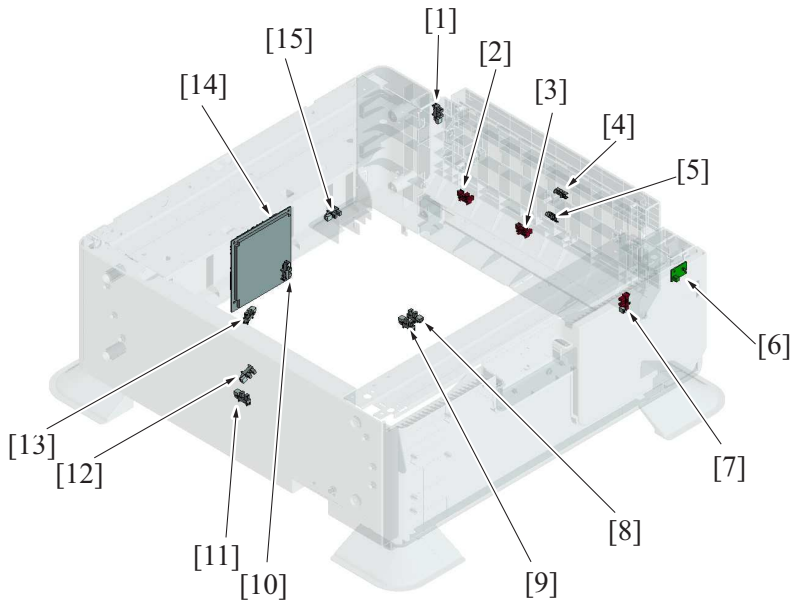


[1]	Tray 3 vertical transport motor (M112)	[2]	Tray 4 vertical transport motor (M122)
[3]	Tray 4 paper feed motor (M121)	[4]	PC dehumidifier heater (DH111)
[5]	Tray 4 lift-up motor (M123)	[6]	Tray 3 lift-up motor (M113)

[7]	Tray 3 paper feed motor (M111)	-	-

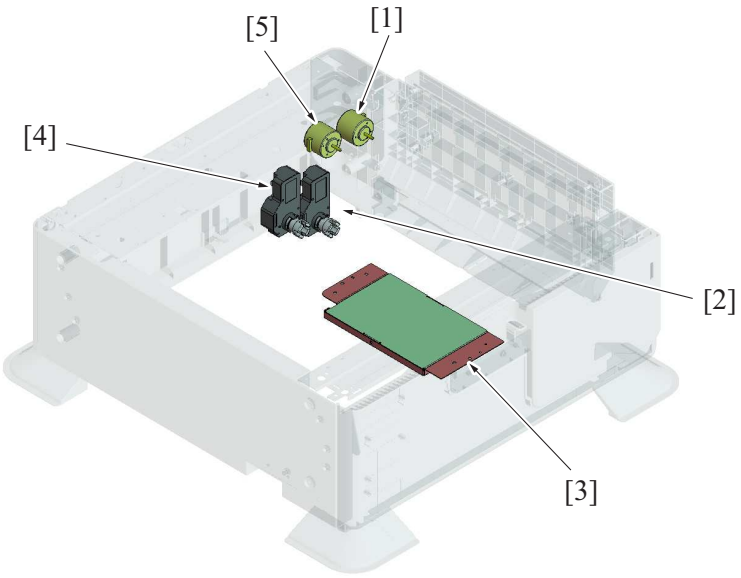
1.8 PC-410 (Option)

1.8.1 Board/switch/sensor/others



[1]	Right bottom door sensor (PS131)	[2]	Main tray upper limit sensor (PS136)
[3]	Main tray upper paper empty sensor (PS137)	[4]	Vertical transport sensor (PS133)
[5]	Paper feed sensor (PS132)	[6]	Tray 3 paper empty indicator board (PEIB/3)
[7]	Cassette set sensor (PS143)	[8]	Main tray paper empty sensor (PS134)
[9]	Shifter stop/lower limit position sensor (PS138)	[10]	Division board sensor (PS142)
[11]	Shifter home sensor (PS139)	[12]	Sub tray paper empty sensor (PS140)
[13]	Sub tray paper remaining amount sensor (PS141)	[14]	PC control board (PCCB)
[15]	Main tray paper near empty sensor (PS135)	-	-

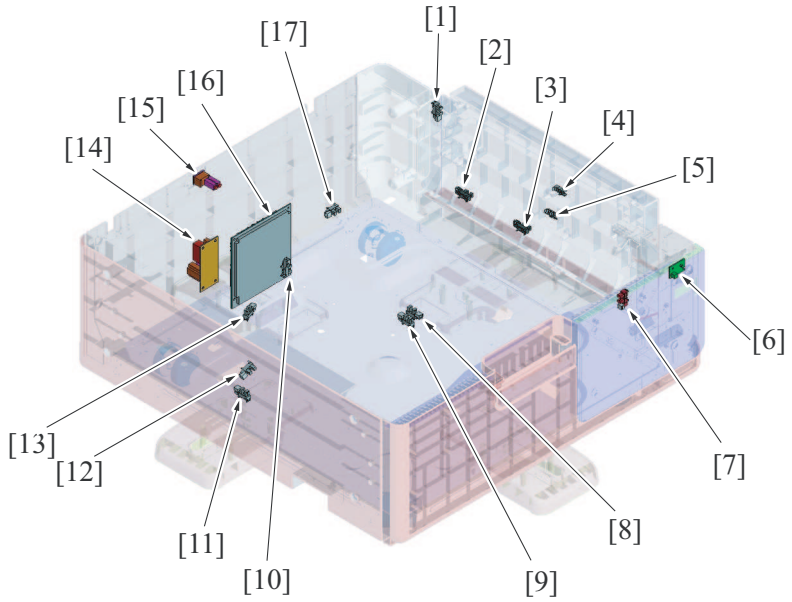
1.8.2 Load



[1]	Vertical transport motor (M132)	[2]	Elevator motor (M134)
[3]	PC dehumidifier heater (DH111)	[4]	Shifter motor (M133)
[5]	Paper feed motor (M131)	-	-

1.9 PC-415 (Option)

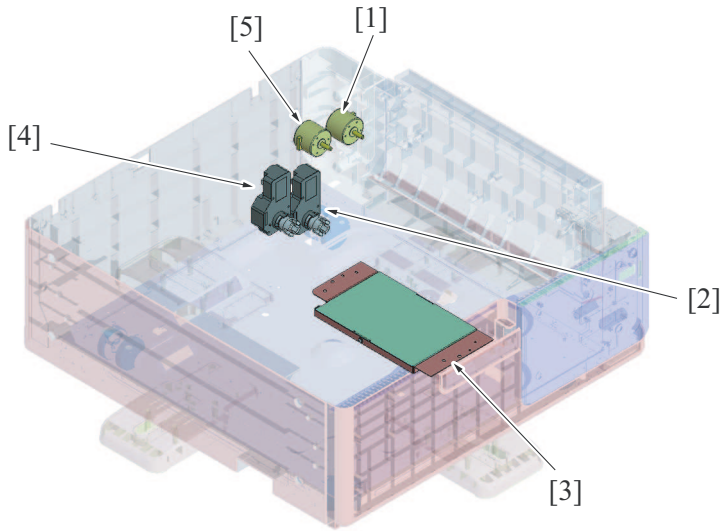
1.9.1 Board/switch/sensor/others



[1]	Right bottom door sensor (PS131)	[2]	Main tray upper limit sensor (PS136)
[3]	Main tray upper paper empty sensor (PS137)	[4]	Vertical transport sensor (PS133)
[5]	Paper feed sensor (PS132)	[6]	Tray 3 paper empty indicator board (PEIB/3)
[7]	Cassette set sensor (PS143)	[8]	Main tray paper empty sensor (PS134)
[9]	Shifter stop/lower limit position sensor (PS138)	[10]	Division board sensor (PS142)
[11]	Shifter home sensor (PS139)	[12]	Sub tray paper empty sensor (PS140)
[13]	Sub tray paper remaining amount sensor (PS141)	[14]	Dehumidifier relay board (PCRYB) *
[15]	Dehumidification heater switch (SW4) *	[16]	PC control board (PCCB)
[17]	Main tray paper near empty sensor (PS135)	-	-

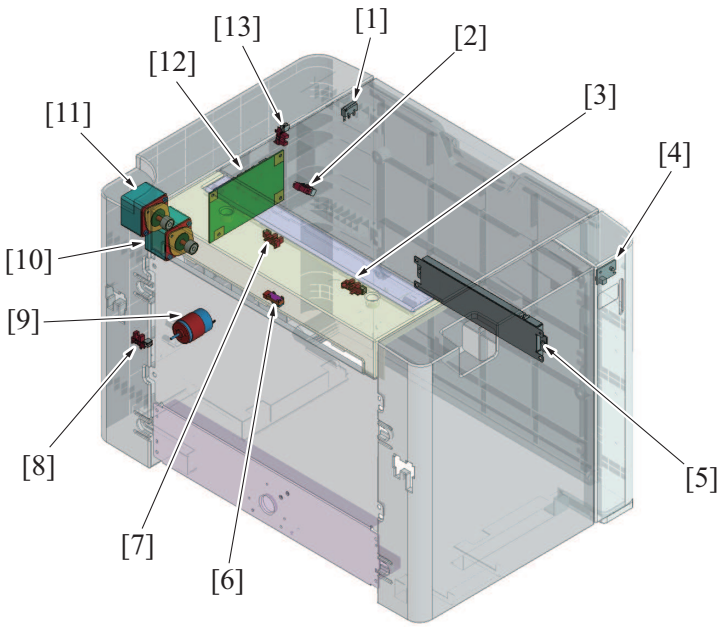
- *: Japan model only

1.9.2 Load



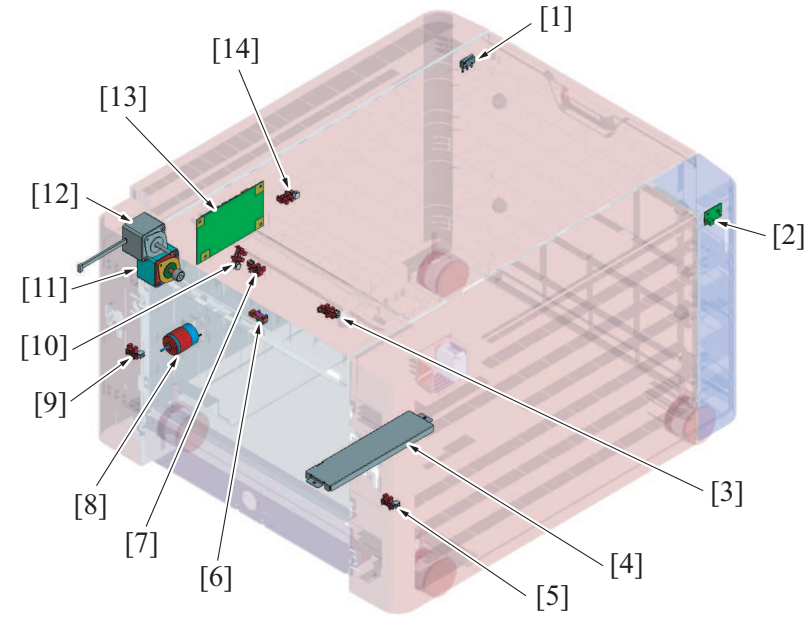
[1]	Vertical transport motor (M132)	[2]	Elevator motor (M134)
[3]	PC dehumidifier heater (DH111)	[4]	Shifter motor (M133)
[5]	Paper feed motor (M131)	-	-

1.10 LU-302 (Option)



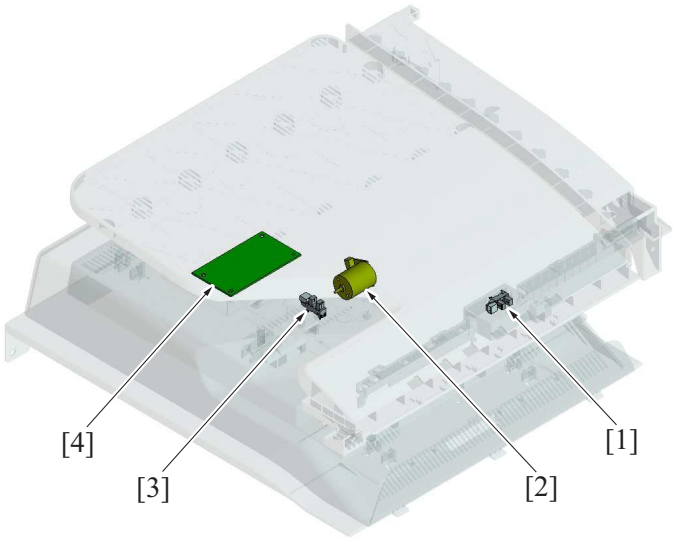
[1]	LU door switch (MS1)	[2]	LU near empty sensor/2 (PS6)
[3]	LU paper empty sensor (PS4)	[4]	Tray LED (LED)
[5]	Dehumidification heater (DH)	[6]	LU paper feed sensor (PS3)
[7]	LU upper limit sensor (PS2)	[8]	LU set sensor (PS1)
[9]	LU lift-up motor (M1)	[10]	LU paper feed motor (M2)
[11]	LU transport motor (M3)	[12]	LU drive board (LUDB)
[13]	LU near empty sensor/1 (PS5)	-	-

1.11 LU-207 (Option)



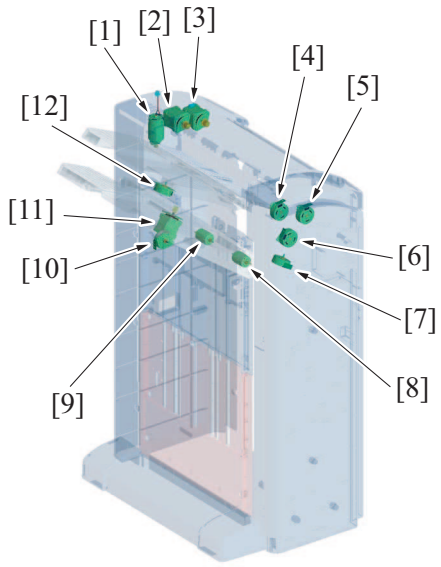
[1]	LU door switch (MS1)	[2]	Tray LED (LED)
[3]	LU paper empty sensor (PS4)	[4]	Dehumidification heater (DH)
[5]	LU set sensor/Fr (PS7)	[6]	LU paper feed sensor (PS3)
[7]	LU upper limit sensor (PS2)	[8]	LU lift-up motor (M1)
[9]	LU set sensor/Rr (PS1)	[10]	LU near empty sensor/2 (PS6)
[11]	LU paper feed motor (M2)	[12]	LU transport motor (M3)
[13]	LU drive board (LUDB)	[14]	LU near empty sensor/1 (PS5)

1.12 JS-506 (Option)

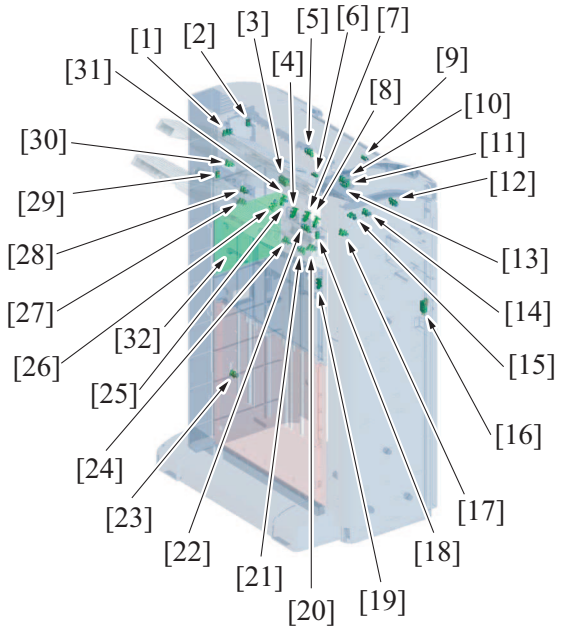


[1]	Exit tray1 full sensor (PS2)	[2]	Tray shift motor (M1)
[3]	Tray shift home sensor (PS1)	[4]	JS control board (JSCB)

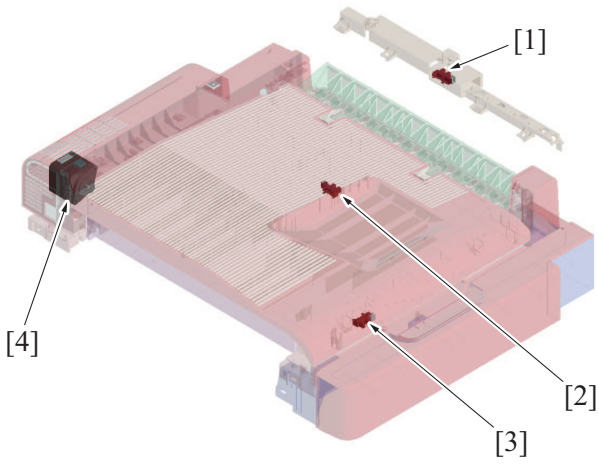
1.13 FS-534 (Option)



[1]	Main tray up/down motor (M11)	[2]	FNS discharge motor (M3)
[3]	FNS entry transport motor (M2)	[4]	FNS paddle motor (M5)
[5]	Receiving roller retraction motor (M4)	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/Front (M7)	[8]	Bundle eject motor (M10)
[9]	Pre-eject drive motor (M9)	[10]	Paper receiving control motor (M12)
[11]	Side stapler movement motor (M13)	[12]	Alignment motor/Rear (M8)

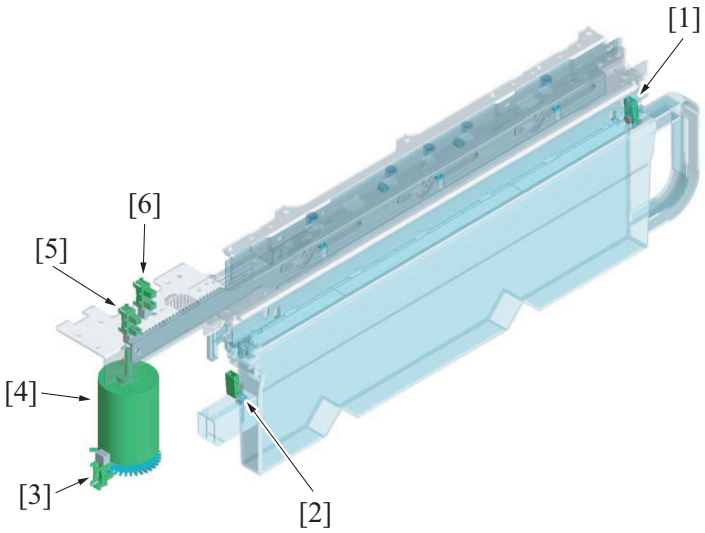


[1]	Stacker motor sensor (PS25)	[2]	Sub tray full detection sensor/out (PS9)
[3]	Main tray upper position detect switch (SW2)	[4]	Pre-eject away sensor (PS22)
[5]	Sub tray exit sensor (PS8)	[6]	Staple stacker paper detection sensor (PS31)
[7]	Pre-eject home sensor (PS21)	[8]	Trailing edge stopper home position detection sensor (PS20)
[9]	FNS entrance sensor (PS4)	[10]	Upper cover open/close detection sensor (PS32)
[11]	Sub tray full detection sensor/in (PS10)	[12]	Exchange folded paper output sensor (PS30)
[13]	Saddle exit sensor (PS5)	[14]	Receiving roller retraction sensor (PS11)
[15]	Upper paddle home position detection sensor (PS14)	[16]	Front door open detect switch (SW1)
[17]	Alignment plate/F home sensor (PS12)	[18]	Main tray upper sensor/in (PS7)
[19]	Paper delivery control sensor (PS28)	[20]	Stapler position sensor (Center) (PS24)
[21]	Gripper motor sensor (PS17)	[22]	Main tray upper position sensor/F (PS27)
[23]	Main tray full detection sensor (PS29)	[24]	Pre-eject encorder sensor (PS15)
[25]	Main tray exit sensor (PS16)	[26]	Gripper home position sensor (PS18)
[27]	Stapler home position sensor (Rear) (PS23)	[28]	Main tray upper position sensor/R (PS26)
[29]	Main tray upper sensor/out (PS6)	[30]	Alignment plate/R home sensor (PS13)
[31]	Gripper position detection sensor (PS19)	[32]	FS control board (FSCB)



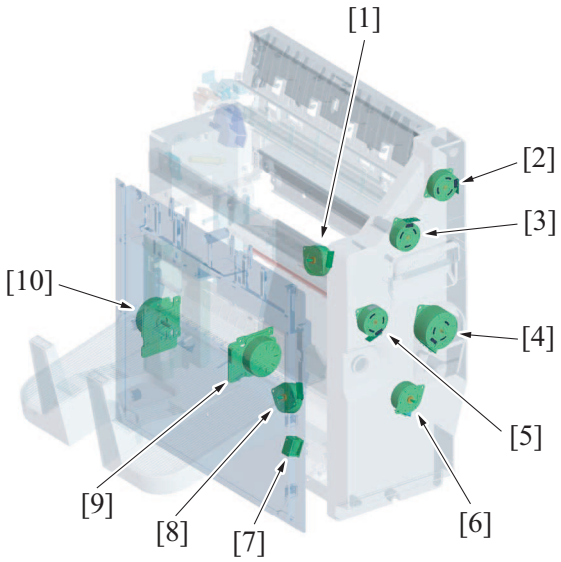
[1]	3rd exit tray full sensor (PS1)	[2]	RU entrance sensor (PS2)
[3]	RU cover open/close detection sensor (PS3)	[4]	RU transport motor (M1)

1.14 PK-520 (Option)

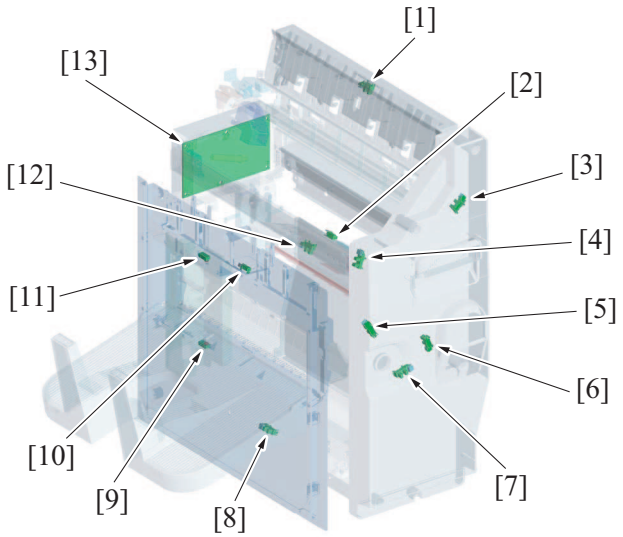


[1]	Punch dust full sensor/out (PS4)	[2]	Punch dust full sensor/in (PS5)
[3]	Punch motor sensor (PS3)	[4]	Punch drive motor (M1)
[5]	Punch position sensor (PS2)	[6]	Punch home sensor (PS1)

1.15 SD-511 (Option)

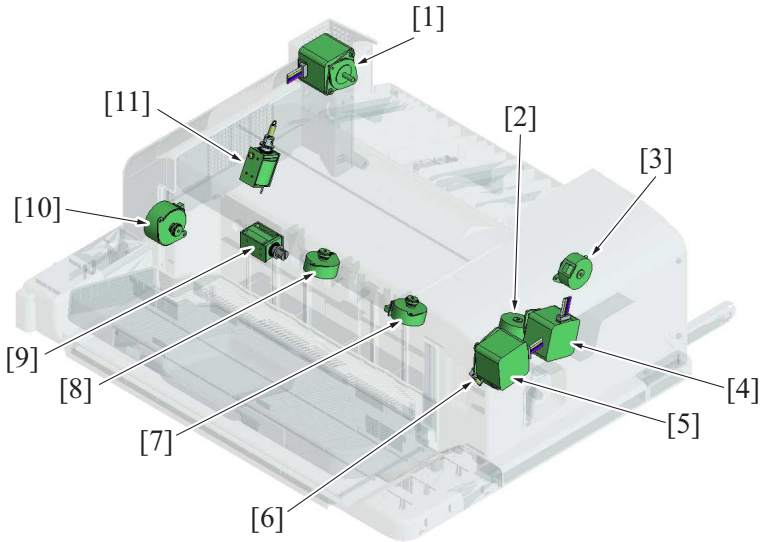


[1]	Alignment motor (M3)	[2]	SD transport motor (M1)
[3]	Paper discharge control motor (M2)	[4]	Center fold guide motor (M8)
[5]	Tri-folding guide motor (M6)	[6]	SD paddle motor (M7)
[7]	Stopper solenoid (SD1)	[8]	Stopper drive motor (M4)
[9]	Center fold knife motor (M9)	[10]	Center fold roller motor (M5)

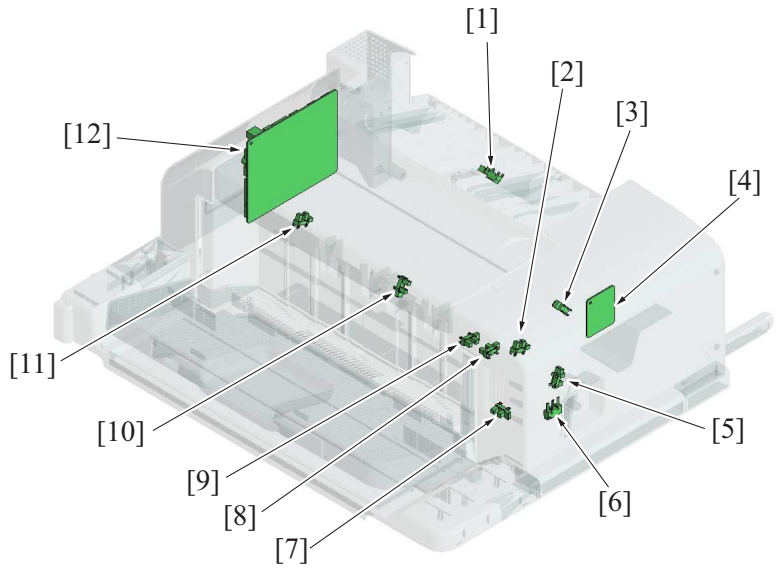


[1]	SD entrance sensor (PS1)	[2]	Center staple/fold stacker paper detect sensor (PS3)
[3]	Curl cover detection sensor (PS2)	[4]	Alignment home sensor (PS4)
[5]	Tri-folding gate home sensor (PS11)	[6]	Guide home sensor (PS7)
[7]	Paddle home sensor (PS5)	[8]	Stopper home sensor (PS6)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Fold exit sensor (PS12)
[11]	Booklet tray empty detection sensor/in (PS13)	[12]	Center fold knife home sensor (PS8)
[13]	SD drive board (SDDB)	-	-

1.16 FS-533 (Option)

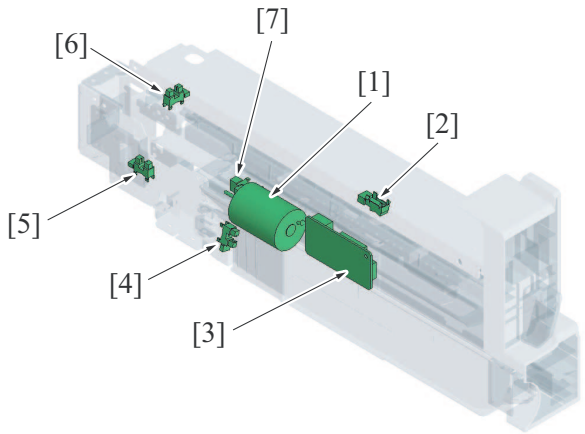


[1]	Paper conveyance motor (M101)	[2]	Stapler movement motor (M107)
[3]	Alignment roller motor (M103)	[4]	Paper exit motor (M102)
[5]	Exit roller lift up motor (M104)	[6]	Paper exit roller solenoid (SD103)
[7]	Alignment motor/F (M105)	[8]	Alignment motor/R (M106)
[9]	Paper surface detect solenoid (SD101)	[10]	Tray lift up motor (M109)
[11]	Batch solenoid (SD102)	-	-



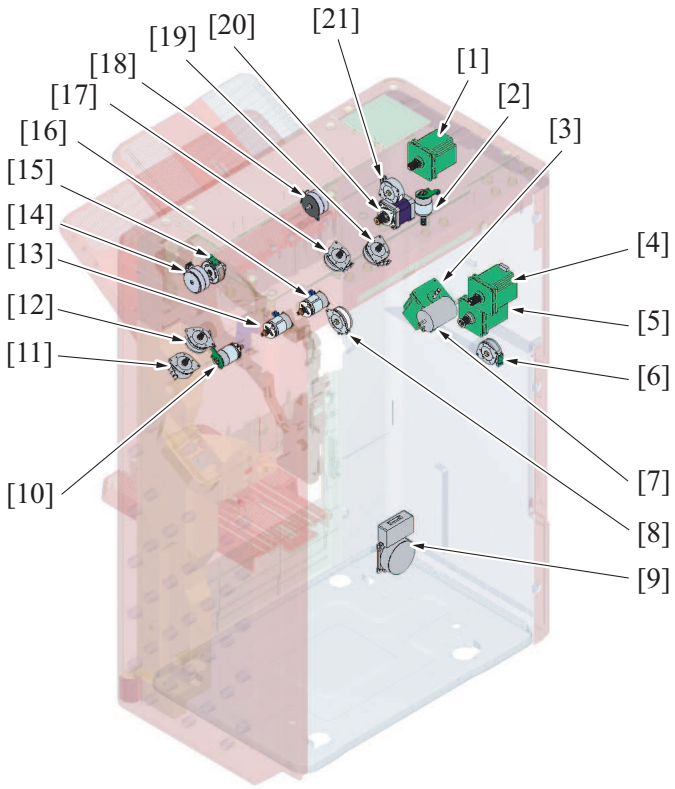
[1]	Paper feed sensor (PS101)	[2]	Alignment plate home sensor/F (PS108)
[3]	Pick up roller position sensor (PS105)	[4]	Stapler relay board (STREYB)
[5]	Stapler home sensor (PS110)	[6]	Finisher lock switch (SW1)
[7]	Paper exit tray home sensor (PS107)	[8]	Paper surface detect sensor/2 (PS104)
[9]	Paper weight lever sensor (PS103)	[10]	Paper surface detect sensor/1 (PS102)
[11]	Alignment plate home sensor/R (PS109)	[12]	FS control board (FSCB)

1.17 PK-519 (Option)

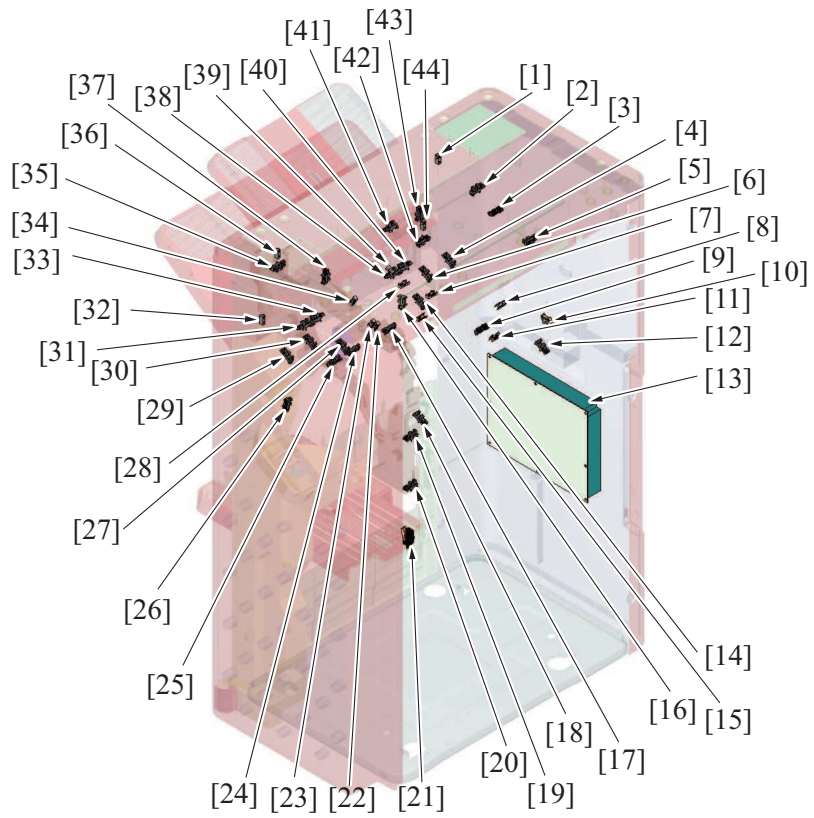


[1]	Punch motor (M201)	[2]	Paper feed sensor (PS201)
[3]	PK control board (PKCB)	[4]	Punch dust full sensor (PS205)
[5]	Puncher drive cam sensor (PS203)	[6]	Puncher home sensor (PS204)
[7]	Punch motor sensor (PS202)	-	-

1.18 FS-537/FS-537SD (Option)

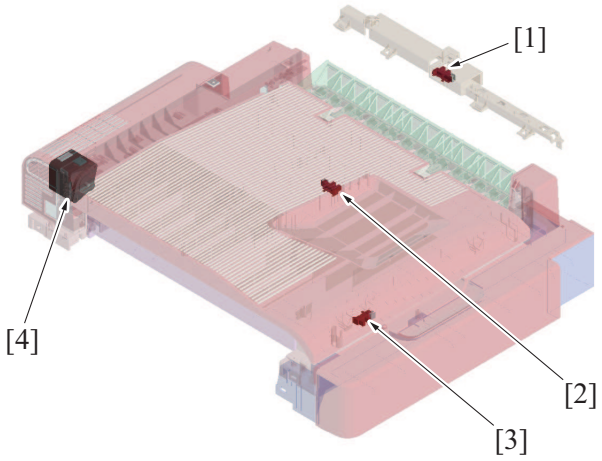


[1]	Sub tray discharge motor (M18)	[2]	Route change gate motor (M4)
[3]	Stapler movement motor (M19)	[4]	FNS entry transport motor (M20)
[5]	ZU discharge motor (M21)	[6]	SD discharge motor (M16)
[7]	Stapler motor (M5)	[8]	Paper receiving control motor (M15)
[9]	Main tray up/down motor (M6)	[10]	Bundle eject motor (M1)
[11]	Alignment motor/front (M14)	[12]	Trail edge stopper motor/F (M12)
[13]	Stacker plate drive motor (M3)	[14]	Arm drive motor (M8)
[15]	FNS paddle motor (M9)	[16]	Pre-eject drive motor (M2)
[17]	Trail edge stopper motor/R (M11)	[18]	Paddle up/down motor (M7)
[19]	Alignment motor/rear (M13)	[20]	FNS discharge motor (M17)
[21]	Receiving roller retraction motor (M10)	-	-



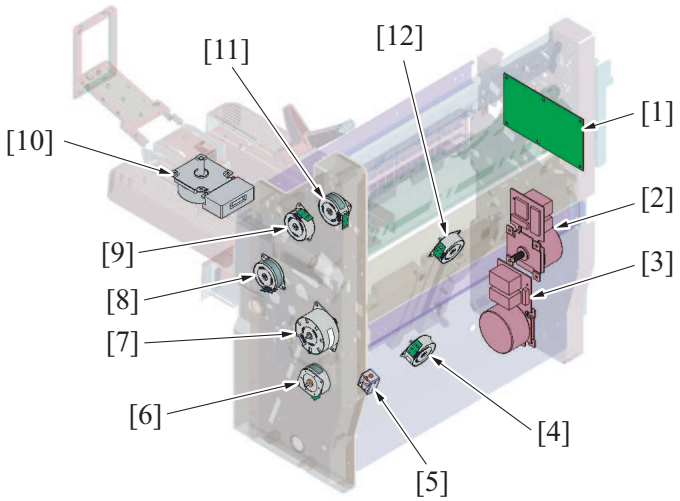
[1]	Sub tray full detection sensor/out (PS39)	[2]	Sub tray/JS route change gate home sensor (PS23)
[3]	Receiving roller retraction sensor (PS22)	[4]	Alignment plate/R home sensor (PS6)
[5]	Route change gate home sensor (PS21)	[6]	Alignment plate/R position sensor (center) (PS5)
[7]	FNS middle sensor (PS36)	[8]	PI discharge sensor (PS33)
[9]	Stapler home position sensor (corner) (PS18)	[10]	Punch scraps box set sensor (PS28)
[11]	FNS entrance sensor (PS34)	[12]	Stapler home position sensor (rear) (PS19)
[13]	FS control board (FSCB)	[14]	Trail edge stopper sensor/R (PS7)
[15]	SD discharge sensor (PS35)	[16]	Gripper home position sensor (PS3)
[17]	Pre-eject encoder sensor (PS2)	[18]	Stapler position sensor (center) (PS20)
[19]	Main tray full detection sensor (FS-537SD) (PS12)	[20]	Main tray full detection sensor (FS-537) (PS12)
[21]	Front door open (SW1)	[22]	Trail edge stopper home sensor (PS31)
[23]	Stacker plate home sensor (PS30)	[24]	Stacker plate encoder sensor (PS4)
[25]	Gripper motor sensor (PS1)	[26]	Paper delivery control sensor (PS11)
[27]	Trail edge stopper sensor/F (PS10)	[28]	Main tray exit sensor (PS37)
[29]	Alignment plate/F home sensor (PS9)	[30]	Alignment plate/F position sensor (center) (PS8)
[31]	Main tray lift up detection sensor/F (PS16)	[32]	Main tray upper sensor/out (PS38) *1
[33]	Main tray lift down detection sensor/F (PS14)	[34]	Stacker plate position sensor (PS29)
[35]	Arm home position sensor (PS26)	[36]	Sub tray full detection sensor/in (PS41)
[37]	Paddle home sensor (PS25)	[38]	Alignment plate paper detection sensor (PS32)
[39]	Main tray lift down detection sensor /R (PS15)	[40]	Main tray lift up detection sensor /R (PS17)
[41]	Sub tray exit sensor (PS24)	[42]	Main tray paper detection sensor (PS13)
[43]	Paddle up/down home sensor (PS27)	[44]	Main tray upper sensor (PS40) *1

- *1: Not used

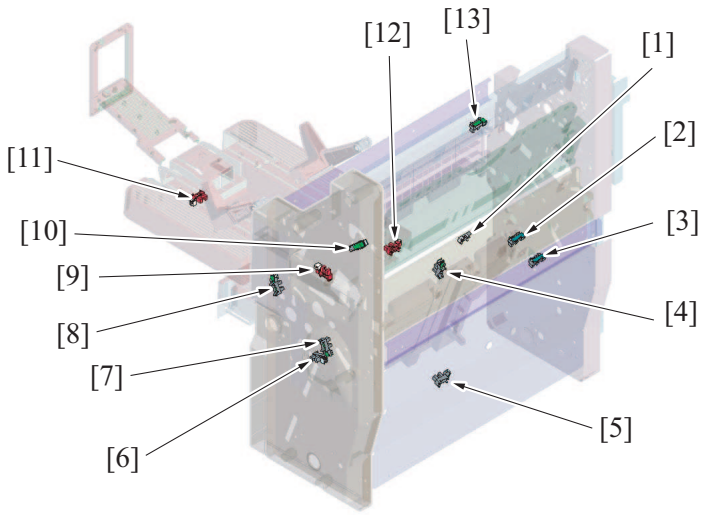


[1]	3rd exit tray full sensor (PS1)	[2]	RU entrance sensor (PS2)
[3]	RU cover open/close detection sensor (PS3)	[4]	RU transport motor (M1)

1.19 FS-537SD saddle section

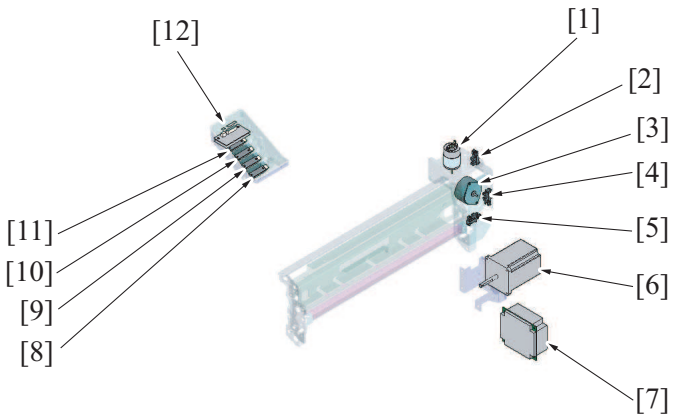


[1]	SD control board (SDCB)	[2]	Center fold roller motor (M5)
[3]	Center fold knife motor (M9)	[4]	Stopper drive motor (M4)
[5]	Stopper solenoid (SD1)	[6]	SD paddle motor (M7)
[7]	Center fold guide motor (M6)	[8]	Tri-folding guide motor (M8)
[9]	Paper discharge control motor (M2)	[10]	Paper transport belt motor (M34)
[11]	SD transport motor (M1)	[12]	Alignment motor (M3)



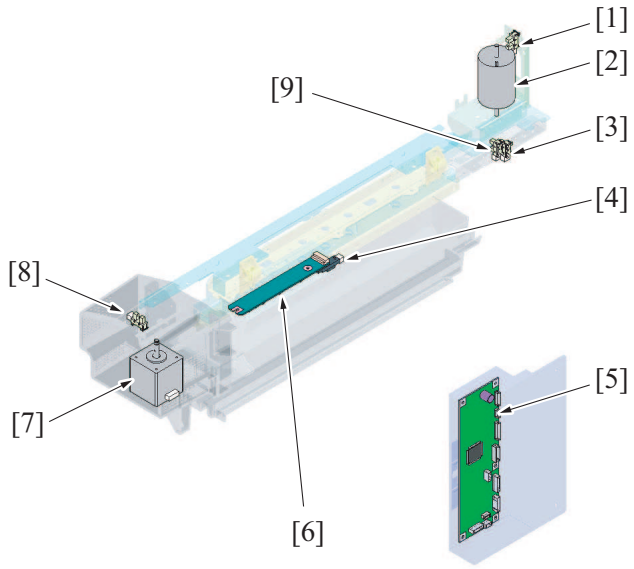
[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Fold exit sensor (PS12)
[3]	Center fold knife home sensor (PS8)	[4]	Alignment home sensor (PS4)
[5]	Stopper home sensor (PS6)	[6]	Paddle home sensor (PS5)
[7]	Guide home sensor (PS7)	[8]	Tri-folding gate home sensor (PS11)
[9]	SD exit full sensor (PS35)	[10]	Curl cover detection sensor (PS2)
[11]	SD exit tray limit sensor (PS41)	[12]	SD exit tray lift sensor (PS43)
[13]	SD entrance sensor (PS1)	-	-

1.20 ZU-609 (Option)



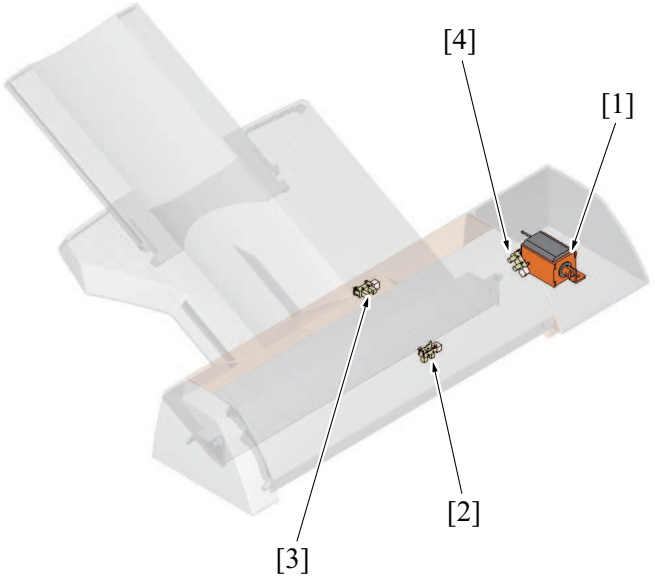
[1]	Pressure motor (M502)	[2]	Press home sensor (PS502)
[3]	Folding guide motor (M501)	[4]	Guide home sensor (PS500)
[5]	Chopper home sensor (PS501)	[6]	ZU transport motor (M500)
[7]	ZU drive board (ZUDB)	[8]	Upper limit sensor4 (PS506)
[9]	Upper limit sensor3 (PS505)	[10]	Upper limit sensor2 (PS504)
[11]	Upper limit sensor1 (PS503)	[12]	ZU relay board (ZURB)

1.21 PK-523 (Option)



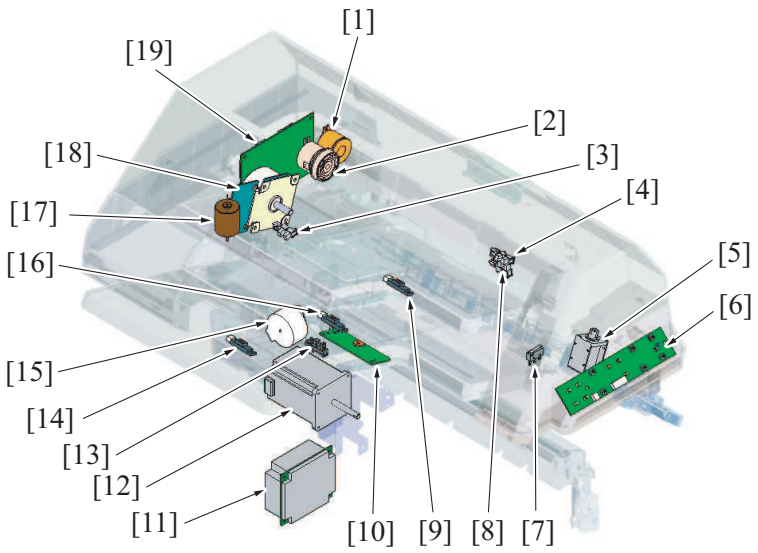
[1]	Punch motor pulse sensor (PS306)	[2]	Punch drive motor (M301)
[3]	PK punch home sensor/1 (PS307)	[4]	PK punch hole scraps box full sensor (PS302)
[5]	Punch control board (PKCB)	[6]	Paper size detect board (PSDTB)
[7]	Punch oscillating motor (M302)	[8]	PK punch oscillating home sensor (PS303)
[9]	PK punch home sensor/2 (PS301)	-	-

1.22 JS-602 (Option)



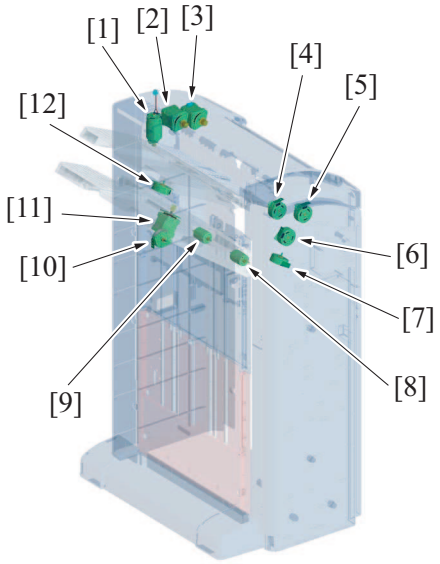
[1]	Entrance switching solenoid (SD401)	[2]	Job tray paper exit sensor (PS402)
[3]	Job tray full sensor (PS403)	[4]	Job tray door sensor (PS401)

1.23 PI-507 (Option)

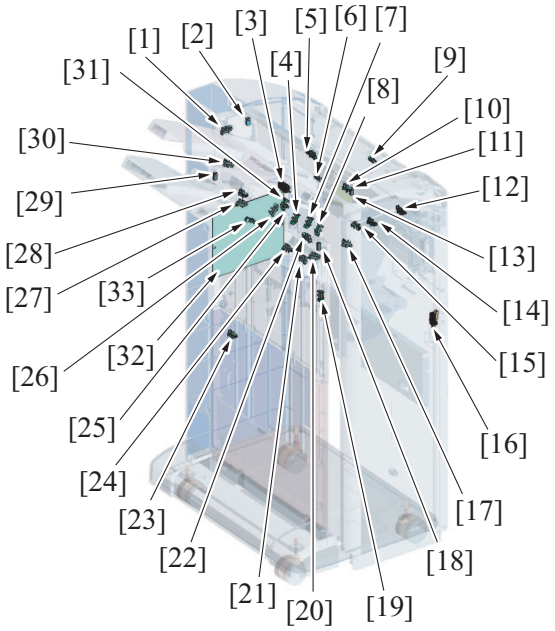


[1]	Registration clutch (CL203)	[2]	Transfer clutch /Lw (CL202)
[3]	Tray lower limit sensor /Lw (PS210)	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Pick-up solenoid /Lw (SD202)	[6]	PI operation board (PIOB)
[7]	Upper door open/close switch (MS205)	[8]	Paper entrance sensor /Lw (PS206)
[9]	Paper empty sensor /Lw (PS207)	[10]	Paper size VR /Lw (VR202)
[11]	PI relay board (PIRB)	[12]	Transport roller drive motor (M204)
[13]	Chopper home sensor (PS501)	[14]	L size sensor /Lw (PS212)
[15]	Folding guide motor (M501)	[16]	Paper set sensor /Lw (PS208)
[17]	Tray lift motor /Lw (M202)	[18]	Transfer motor (M203)
[19]	PI drive board (PIDB)	-	-

1.24 FS-536 (Option)

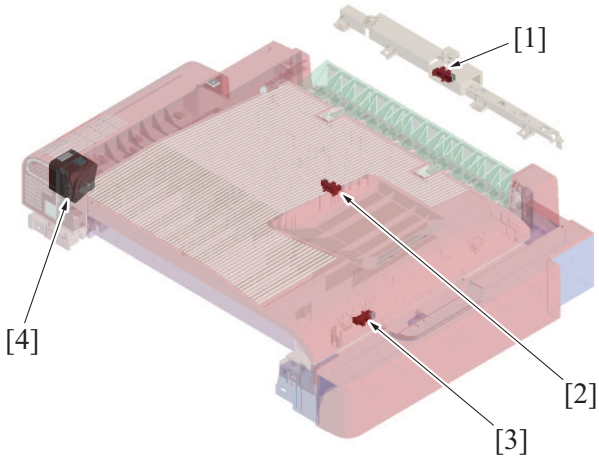


[1]	Main tray up/down motor (M11)	[2]	FNS discharge motor (M3)
[3]	FNS entry transport motor (M2)	[4]	FNS paddle motor (M5)
[5]	Receiving roller retraction motor (M4)	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/front (M7)	[8]	Bundle eject motor (M10)
[9]	Pre-eject drive motor (M9)	[10]	Paper receiving control motor (M12)
[11]	Side stapler movement motor (M13)	[12]	Alignment motor/rear (M8)



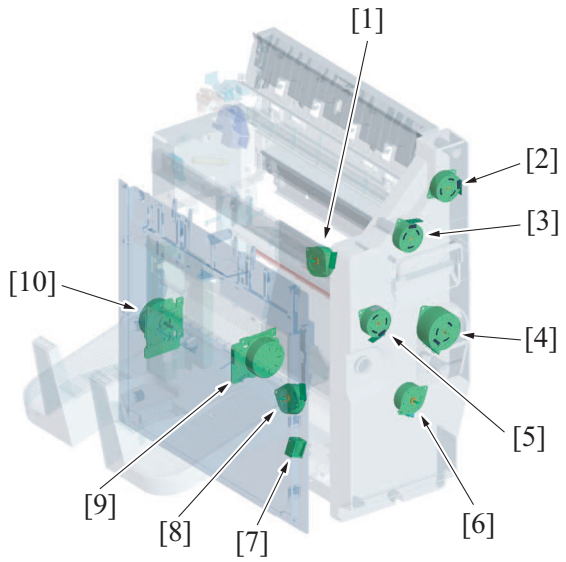
[1]	Stacker motor sensor (PS25)	[2]	Sub tray full detection sensor/out (PS9)
[3]	Main tray upper position detect switch (SW2)	[4]	Pre-eject away sensor (PS22)
[5]	Sub tray exit sensor (PS8)	[6]	Main tray exit sensor (PS16)
[7]	Pre-eject home sensor (PS21)	[8]	Trailing edge stopper home position detection sensor (PS20)
[9]	FNS entrance sensor (PS4)	[10]	Upper door open/close detection sensor (PS32)
[11]	Sub tray full detection sensor/in (PS10)	[12]	Exchange folded paper output sensor (PS30)
[13]	Saddle exit sensor (PS5)	[14]	Receiving roller retraction sensor (PS11)
[15]	Upper paddle home position detection sensor (PS14)	[16]	Front door open detect switch (SW1)
[17]	Alignment plate/F home sensor (PS12)	[18]	Main tray upper sensor/in (PS7) *1
[19]	Paper delivery control sensor (PS28)	[20]	Stapler position sensor (center) (PS24)
[21]	Gripper motor sensor (PS17)	[22]	Main tray upper position sensor/F (PS27)
[23]	Main tray full detection sensor (PS29)	[24]	Pre-eject encoder sensor (PS15)
[25]	Staple stacker paper detection sensor (PS31)	[26]	Gripper position detection sensor (PS19)
[27]	Stapler home position sensor (rear) (PS23)	[28]	Main tray upper position sensor/R (PS26)
[29]	Main tray upper sensor/out (PS6) *1	[30]	Alignment plate/R home sensor (PS13)
[31]	Gripper home position sensor (PS18)	[32]	FS control board (FSCB)
[33]	Wide Flat limit Sensor (PS36)	-	-

- *1: Not used

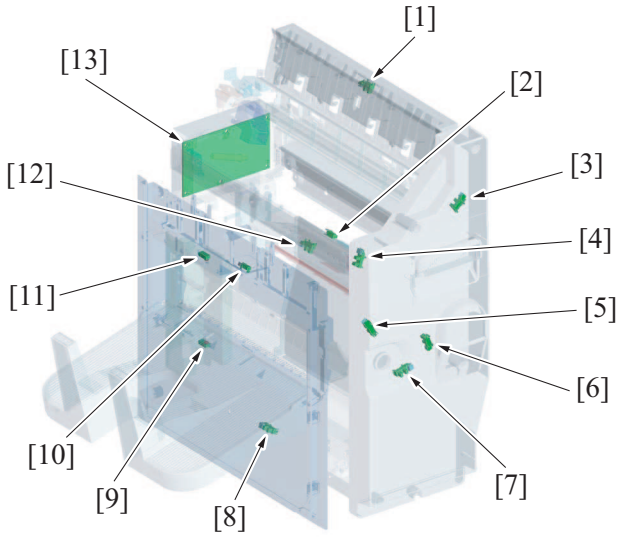


[1]	3rd exit tray full sensor (PS1)	[2]	RU entrance sensor (PS2)
[3]	RU cover open/close detection sensor (PS3)	[4]	RU transport motor (M1)

1.25 FS-536SD saddle section

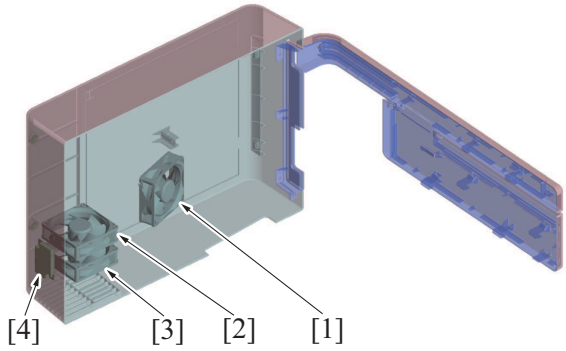


[1]	Alignment motor (M3)	[2]	SD transport motor (M1)
[3]	Paper discharge control motor (M2)	[4]	Center fold guide motor (M6)
[5]	Tri-folding guide motor (M8)	[6]	SD paddle motor (M7)
[7]	Stopper solenoid (SD1)	[8]	Stopper drive motor (M4)
[9]	Center fold knife motor (M9)	[10]	Center fold roller motor (M5)



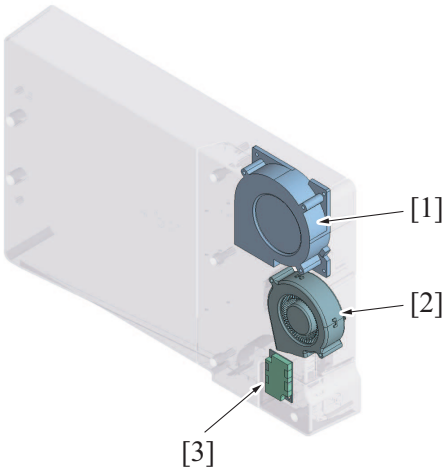
[1]	SD entrance sensor (PS1)	[2]	Center staple/fold stacker paper detect sensor (PS3)
[3]	Curl cover detection sensor (PS2)	[4]	Alignment home sensor (PS4)
[5]	Tri-folding gate home sensor (PS11)	[6]	Guide home sensor (PS7)
[7]	Paddle home sensor (PS5)	[8]	Stopper home sensor (PS6)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Fold exit sensor (PS12)
[11]	Booklet tray empty detection sensor/in (PS13)	[12]	Center fold knife home sensor (PS8)
[13]	SD control board (SDCB)	-	-

1.26 CU-101 (Option)



[1]	Suction fan (FM16)	[2]	Exhaust fan/1 (FM14)
[3]	Exhaust fan/2 (FM15)	[4]	Clean unit drive board (CUDB)

1.27 CU-102 (Option)



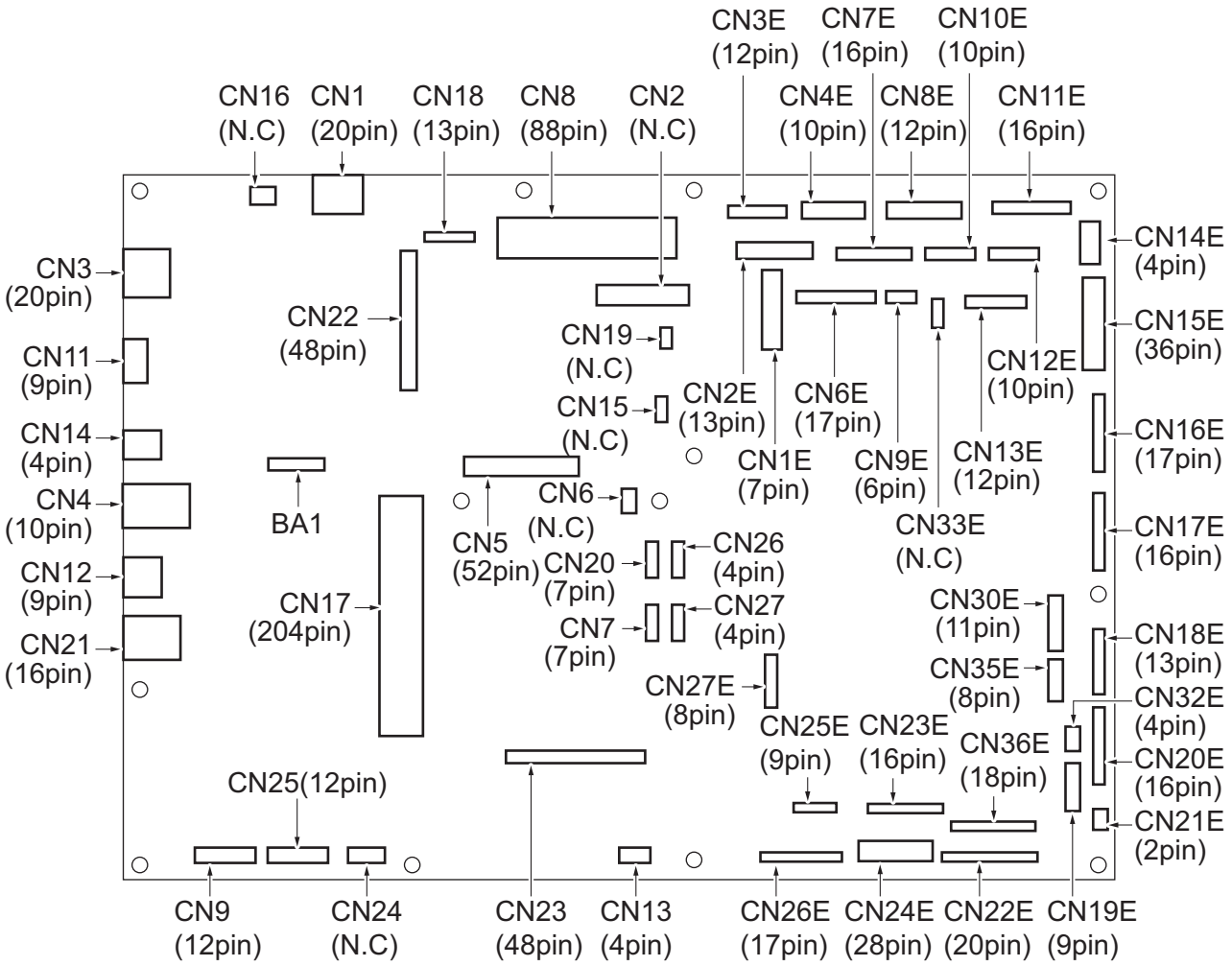
[1]	Exhaust fan1 (FM14)	[2]	Exhaust fan2 (FM15)
[3]	Clean unit drive board (CUDB)	-	-

2. CONNECTOR LAYOUT DRAWING

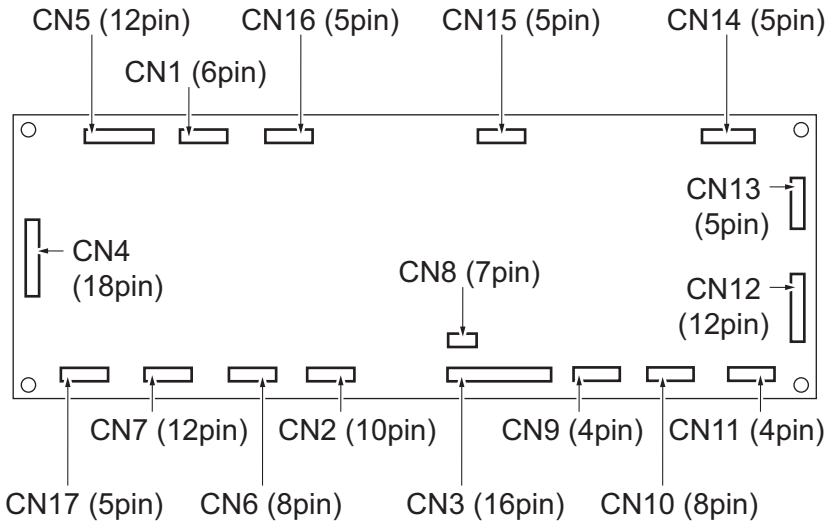
2.1 BOARD CONNECTOR LAYOUT DRAWING (bizhub C368/C308/C258)

2.1.1 bizhub C368/C308/C258

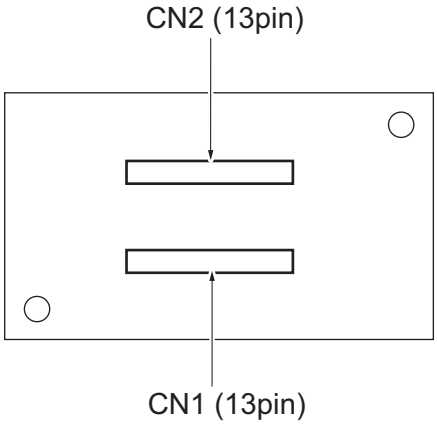
(1) MFP board (MFPB)



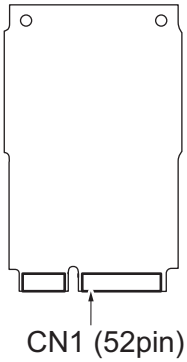
(2) Front side board (FRB)



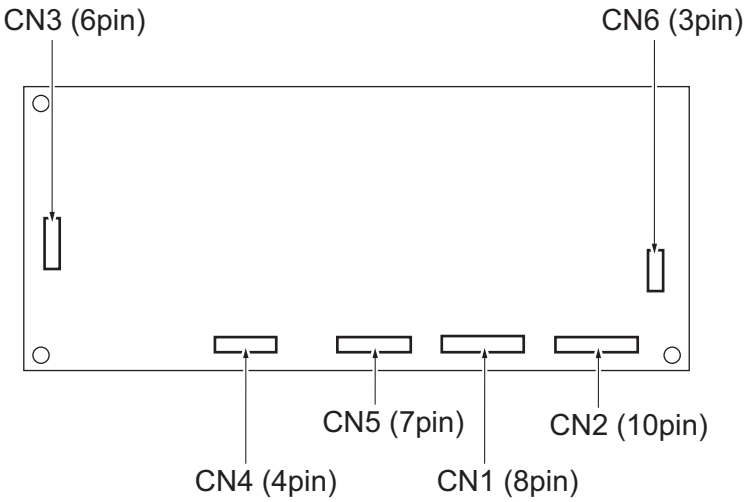
(3) PH relay board (PHRYB)



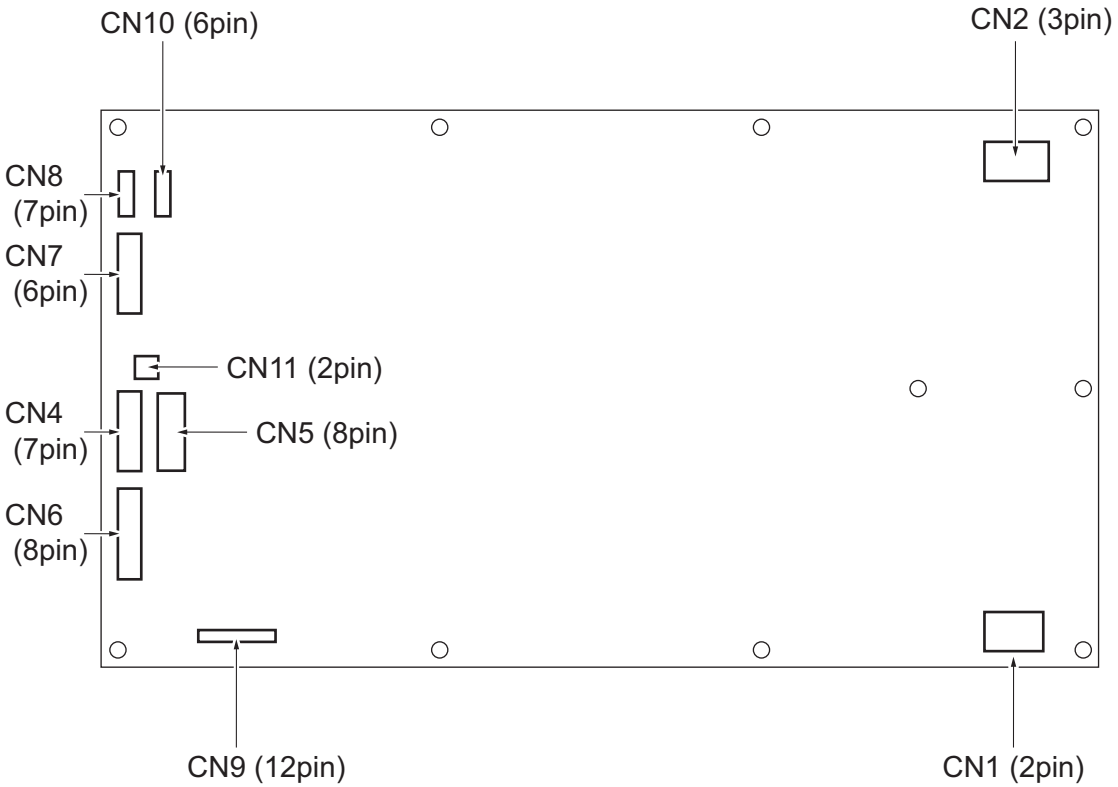
(4) eMMC board (eMMC)



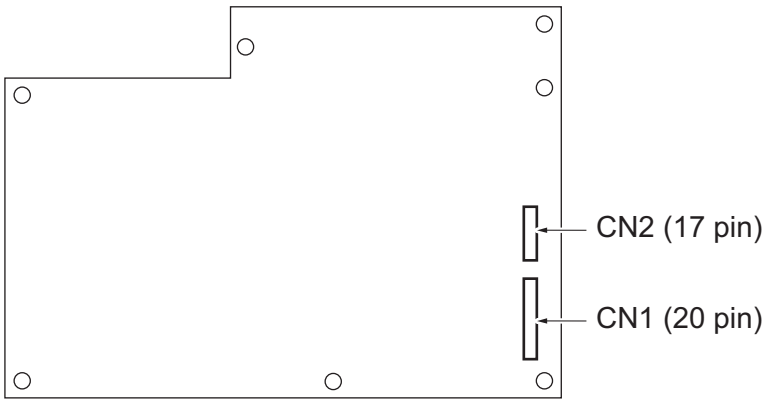
(5) Scanner drive board (SCDB)



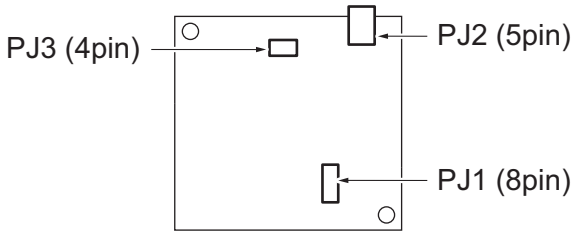
(6) DC power supply (DCPU)



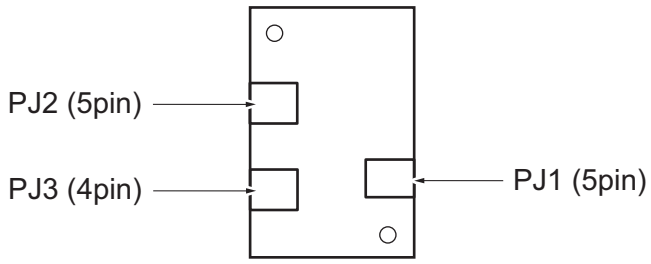
(7) High voltage unit (HV)



(8) Wireless LAN board (PWB-WLAN) (Option: UK-212)

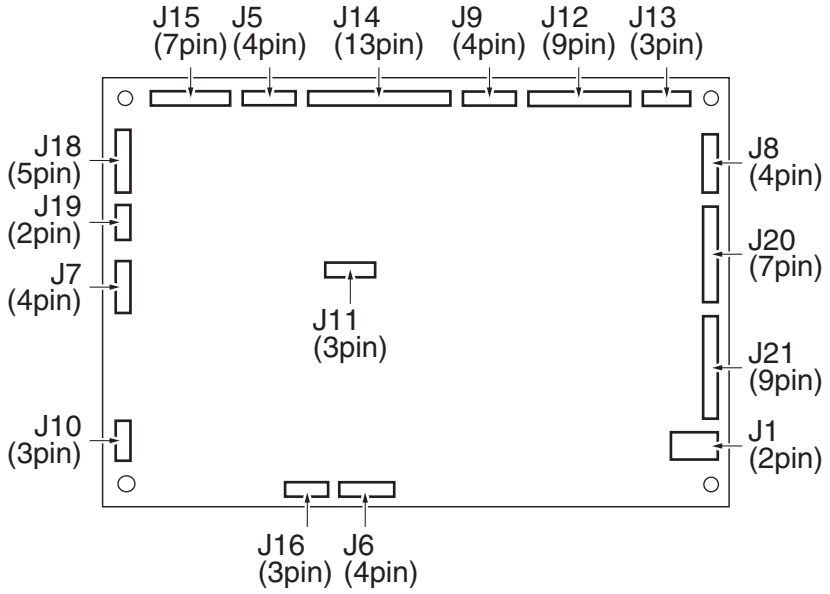


(9) Wireless LAN board (PWB-WLAN) (Option: UK-215)

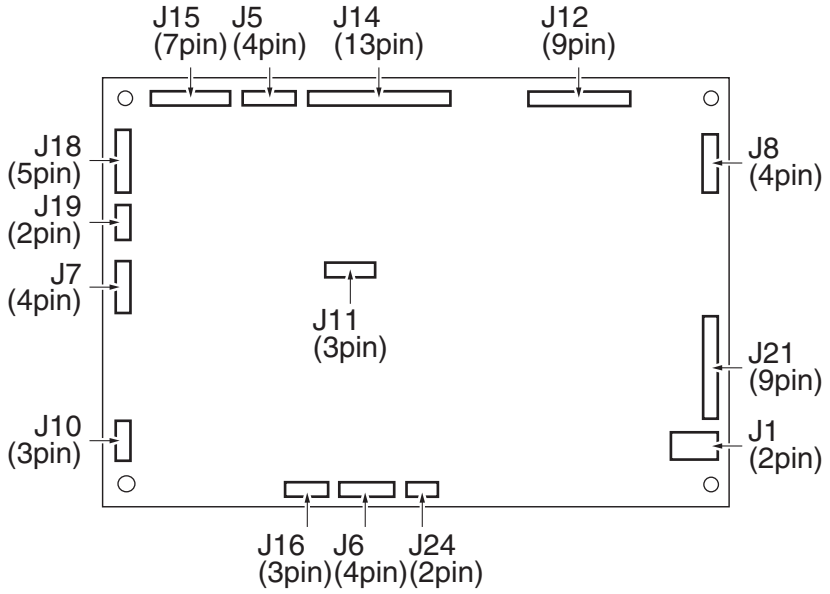


2.1.2 DF control board (DFCB)

(1) DF-704

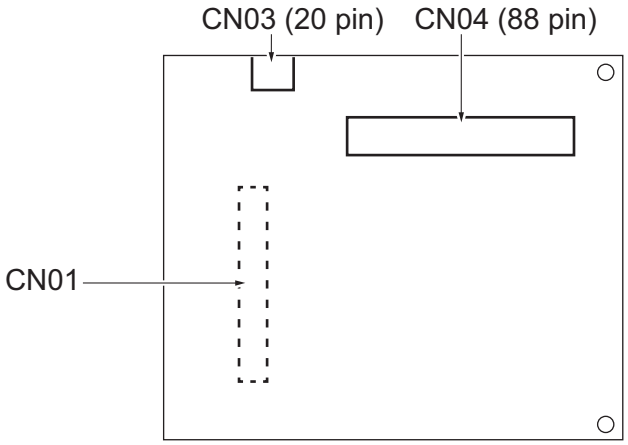


(2) DF-629



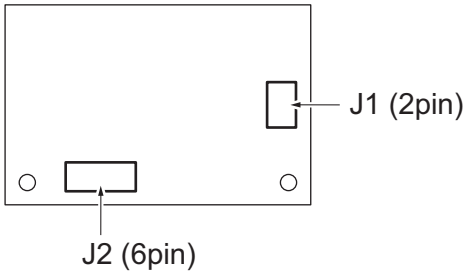
2.1.3 Dual scan image processing board (DSIPB)

(1) DF-704



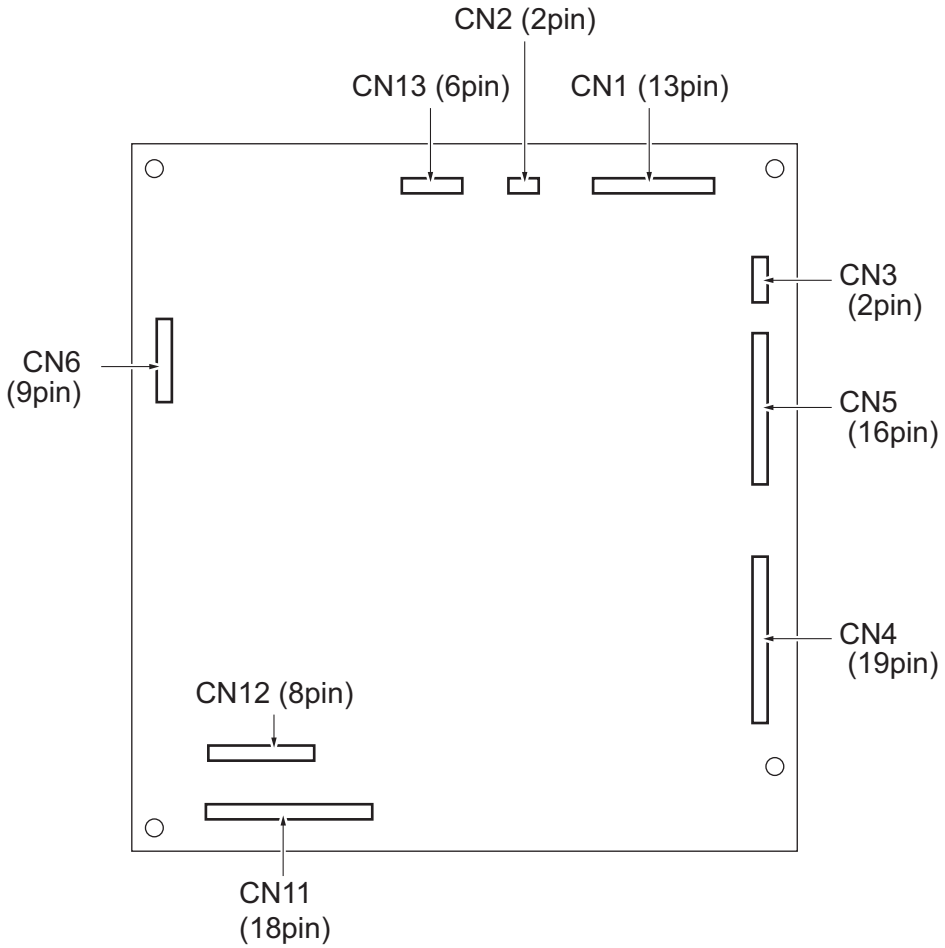
2.1.4 CIS power supply (CISPU)

(1) DF-704

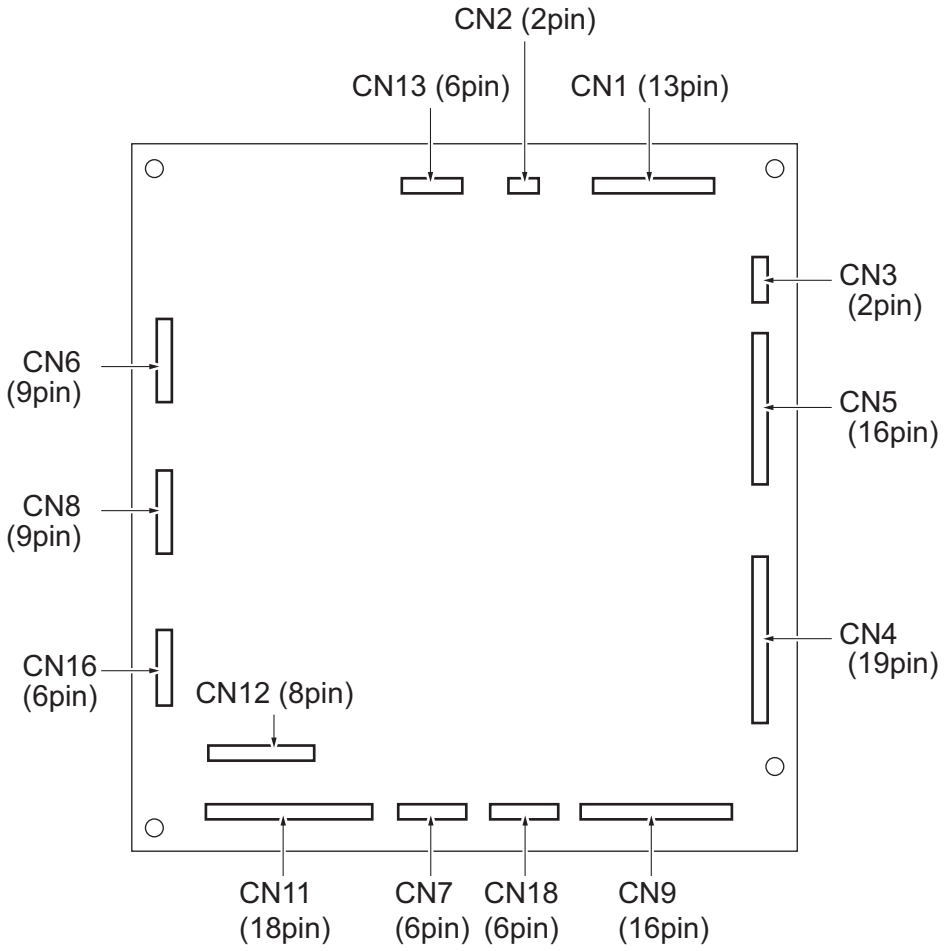


2.1.5 PC control board (PCCB)

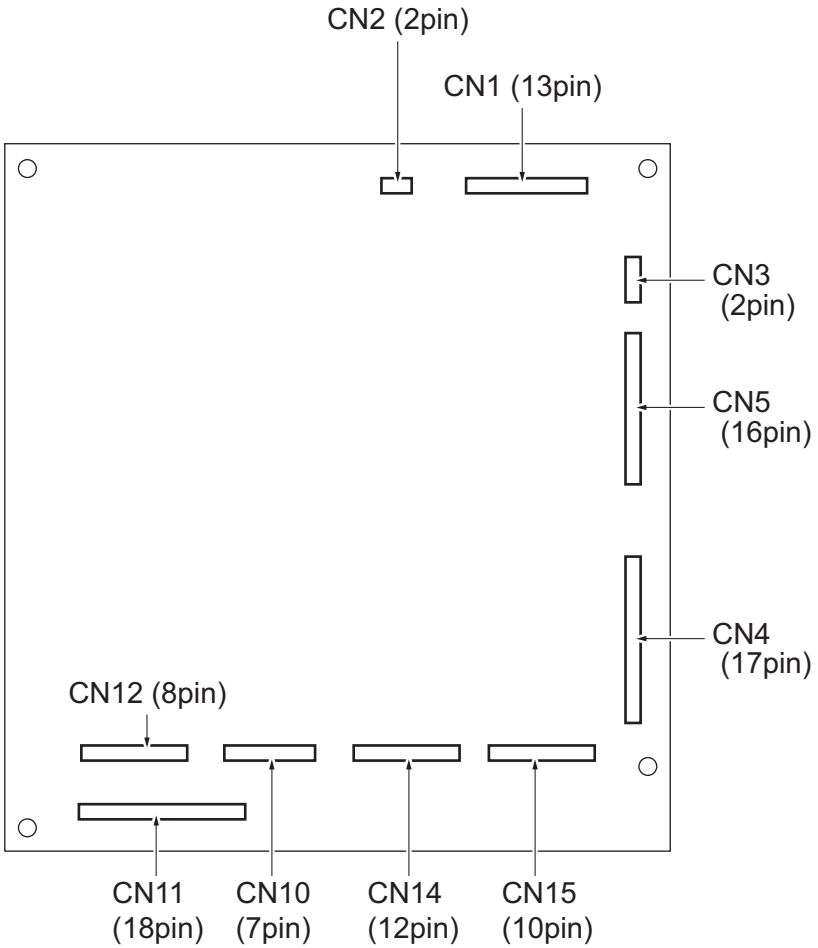
(1) PC-110


CN2 (2pin)
CN13 (6pin)
CN1 (13pin)
CN3
(2pin)
CN6
(9pin)
CN5
(16pin)
CN4
(19pin)
CN12 (8pin)
CN11
(18pin)

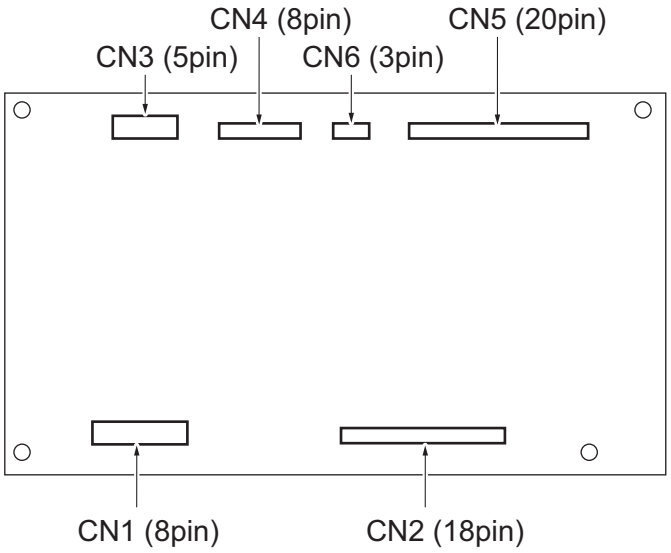
(2) PC-210


CN2 (2pin)
CN13 (6pin)
CN1 (13pin)
CN3
(2pin)
CN6
(9pin)
CN5
(16pin)
CN8
(9pin)
CN4
(19pin)
CN16
(6pin)
CN12 (8pin)
CN11
(18pin)
CN7
(6pin)
CN18
(6pin)
CN9
(16pin)

(3) PC-410

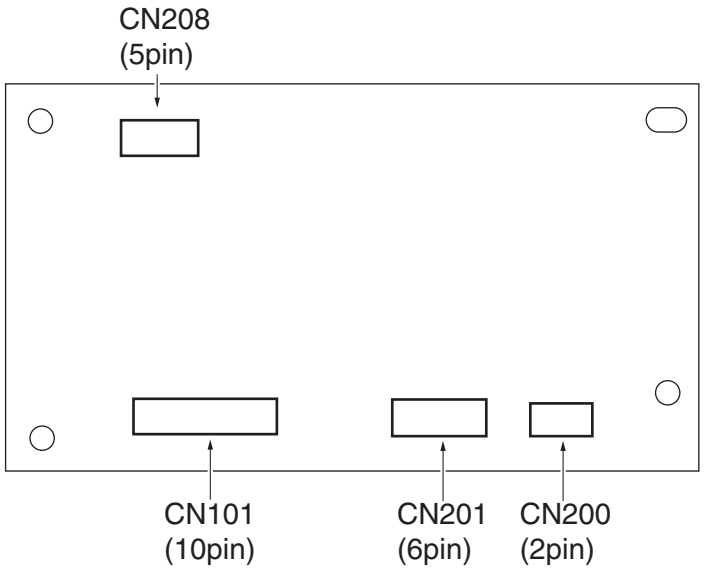


2.1.6 LU drive board (LUDB)



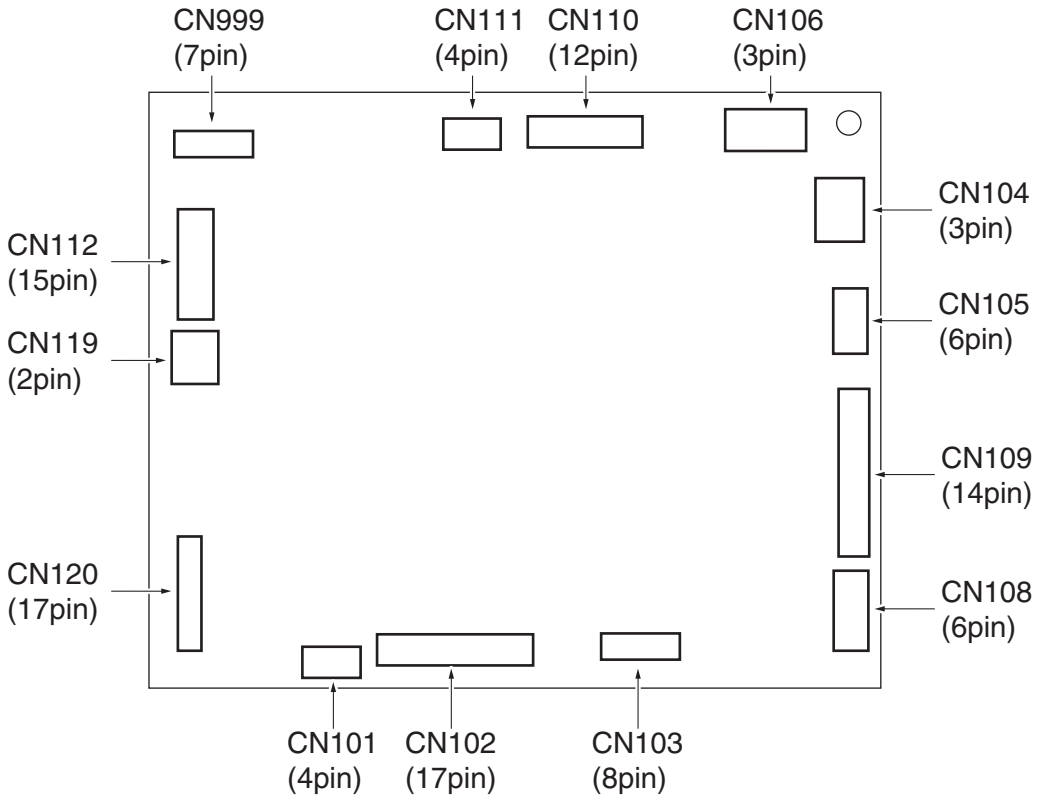
2.1.7 JS control board (JSCB)

(1) JS-506

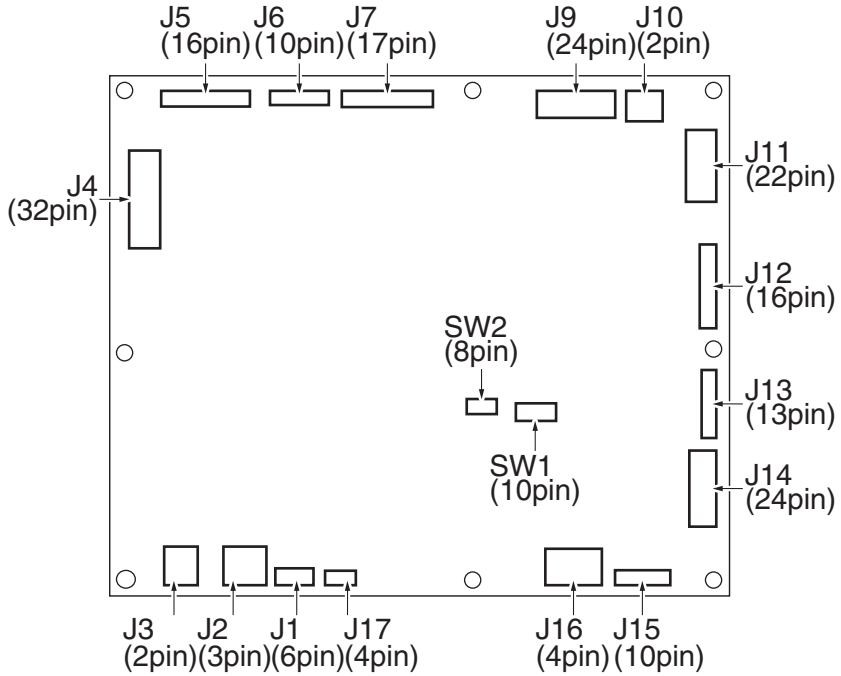


2.1.8 FS control board (FSCB)

(1) FS-533

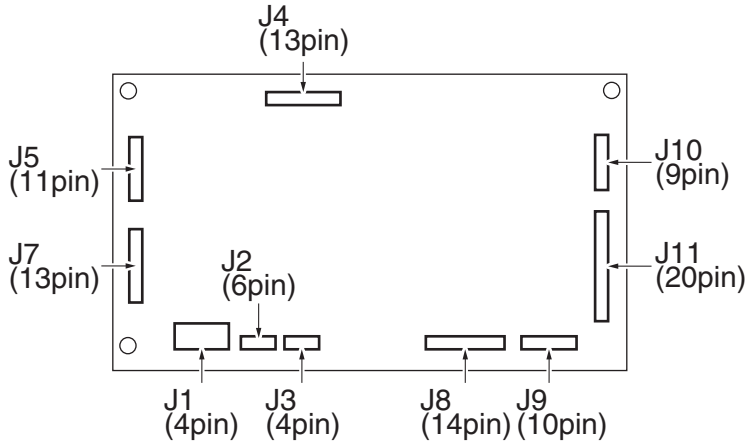


(2) FS-534



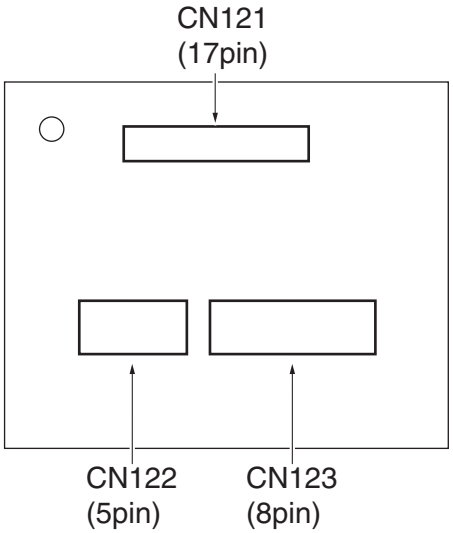
2.1.9 SD drive board (SDDB)

(1) SD-511



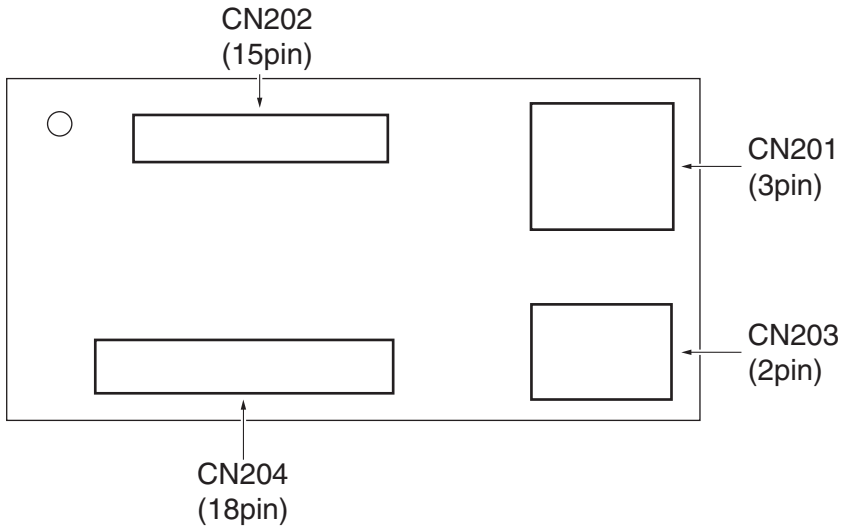
2.1.10 Stapler relay board (STREYB)

(1) FS-533



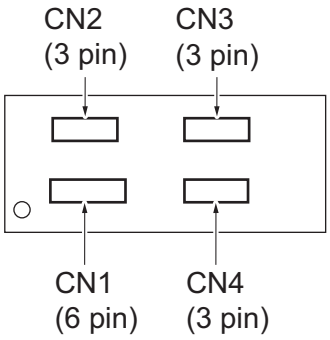
2.1.11 PK control board (PKCB)

(1) PK-519



2.1.12 Clean unit drive board (CUDB)

(1) CU-101



2.1.13 FAX board (FAXB)

(1) FK-514 (line 1/2)



(2) FK-515 (line 3/4)

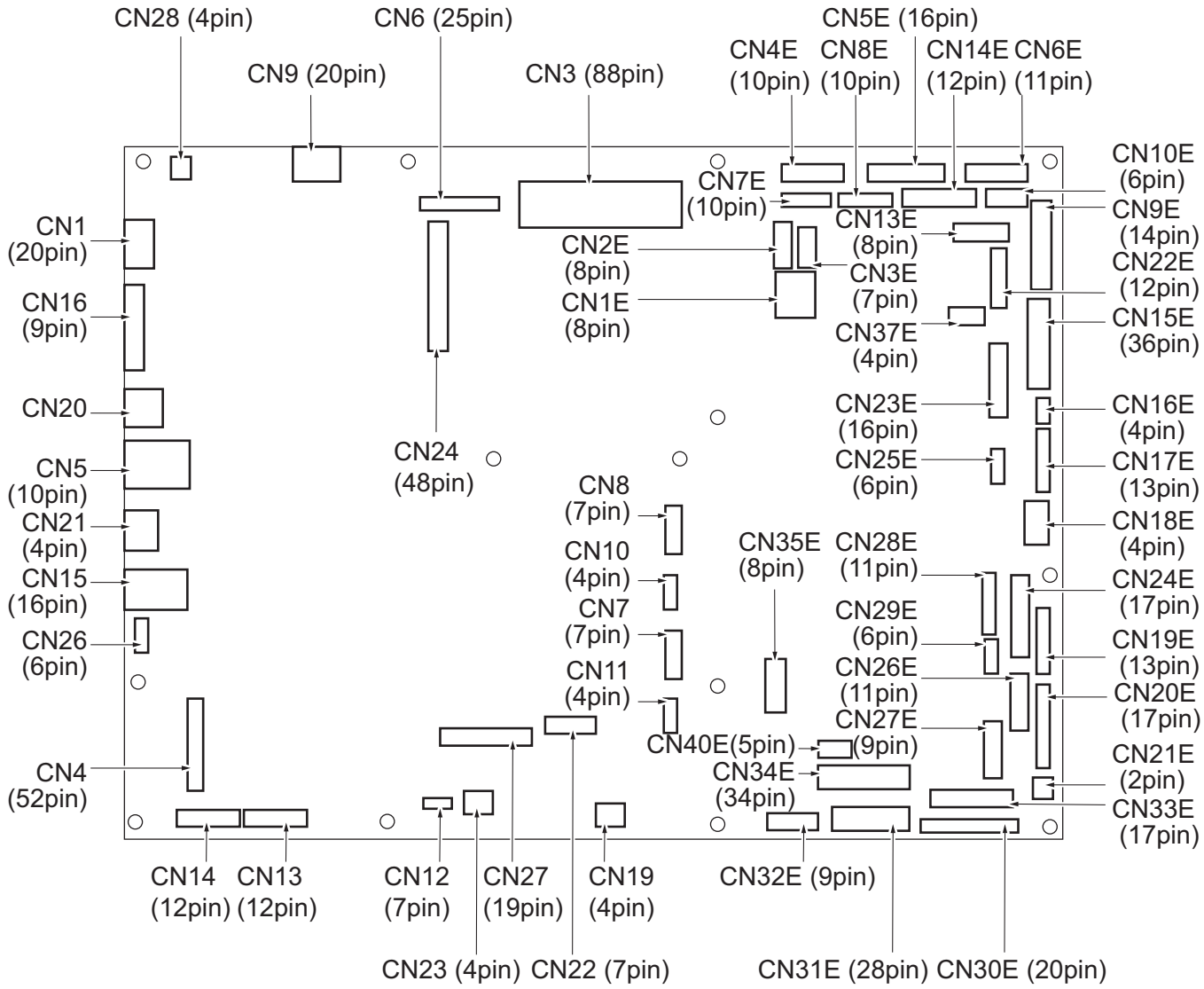


2.2 BOARD CONNECTOR LAYOUT DRAWING (bizhub C658/C558/C458)

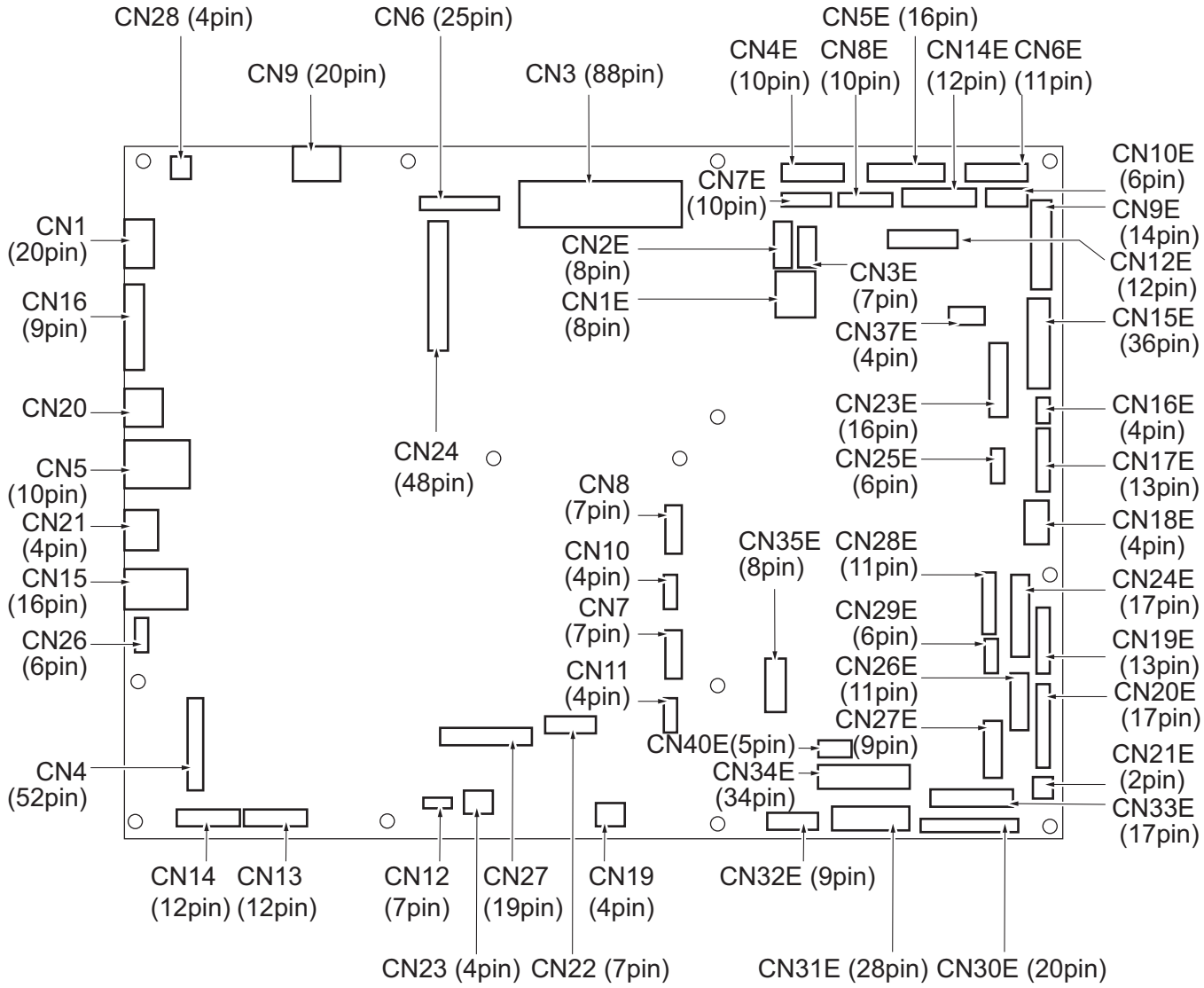
2.2.1 bizhub C658/C558/C458

(1) MFP board (MFPB)

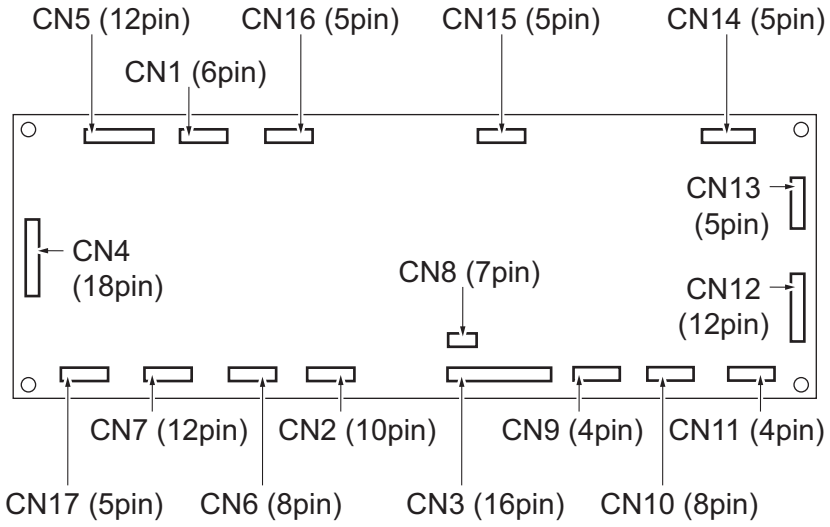
bizhub C658/C558



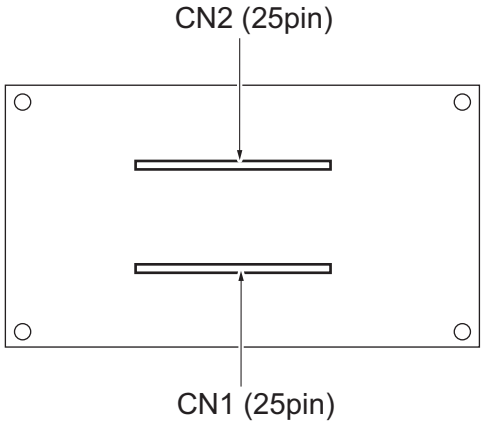
bizhun C458



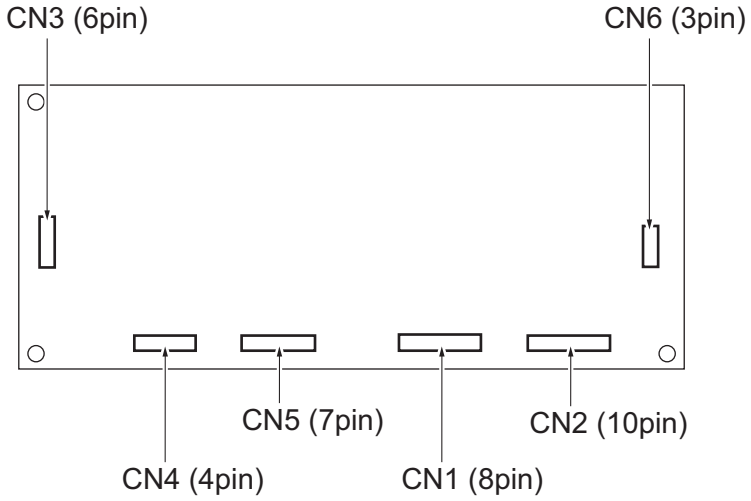
(2) Front side board (FRB)



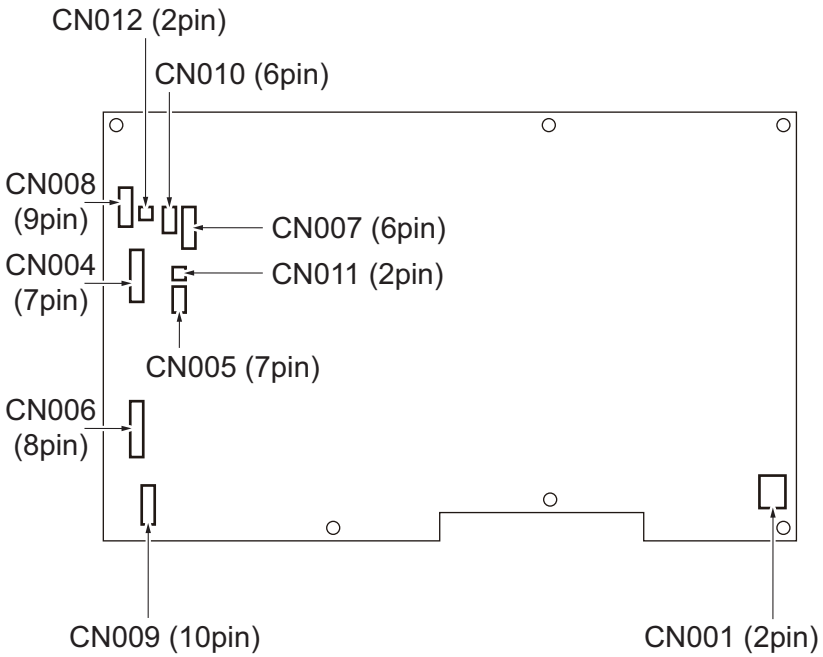
(3) PH relay board (PHRYB)



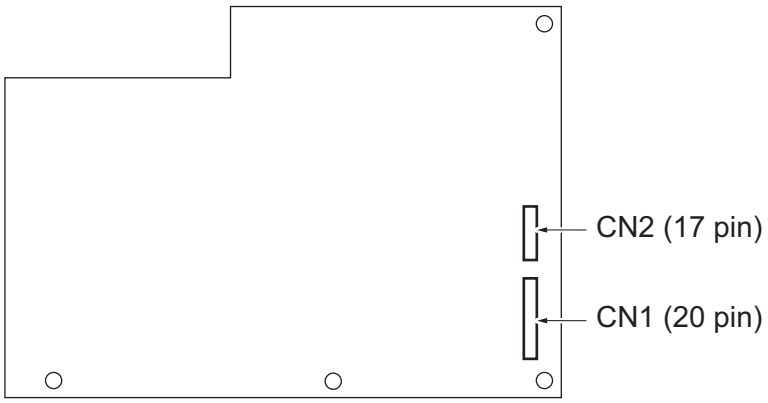
(4) Scanner drive board (SCDB)



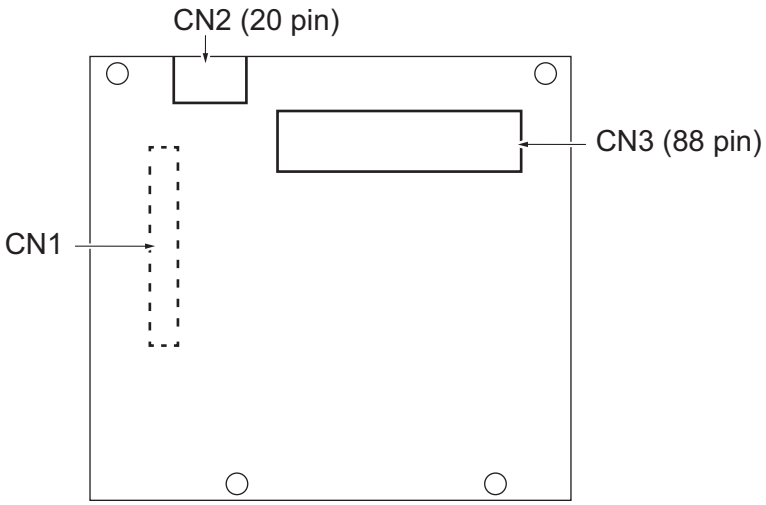
(5) DC power supply (DCPU)



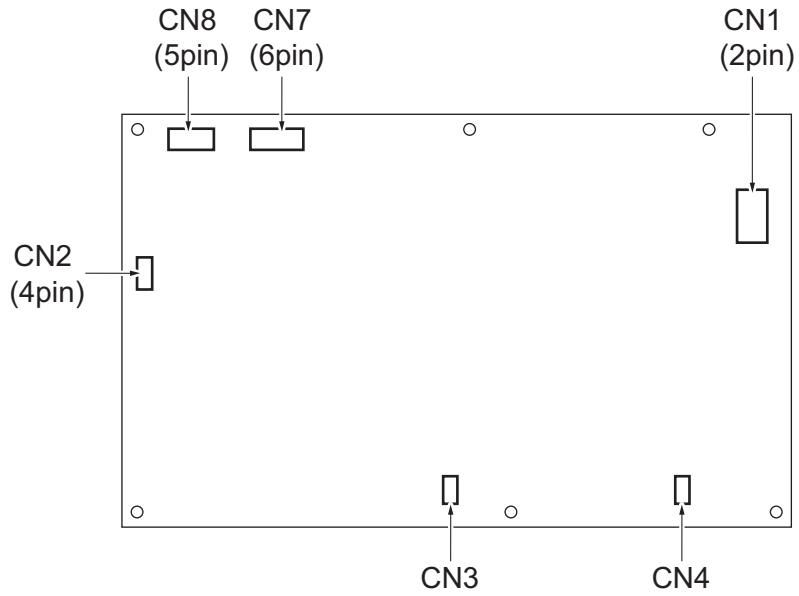
(6) High voltage unit (HV)



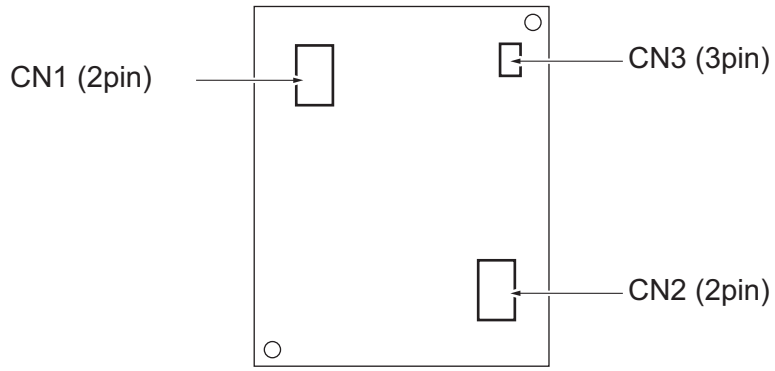
(7) Dual scan image processing board (DSIPB)



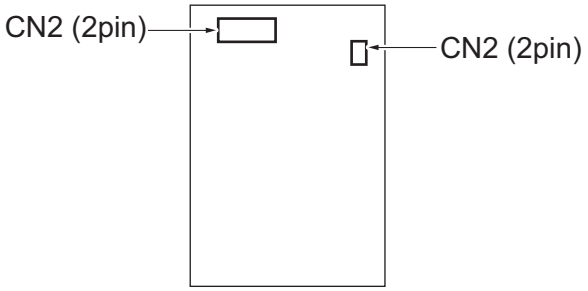
(8) IH power supply (IHPU) (C658/C558)



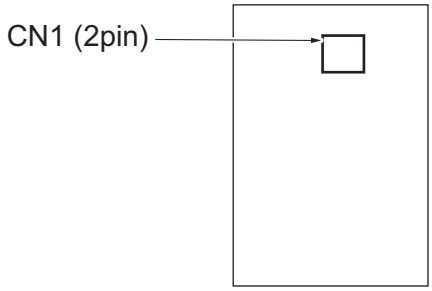
(9) NF board (NFB)



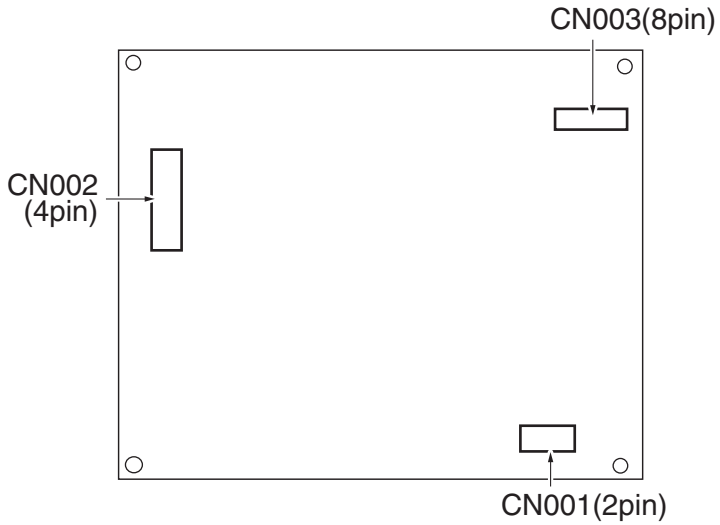
(10) IH magnetic erasing board (IHMEB) (C658)



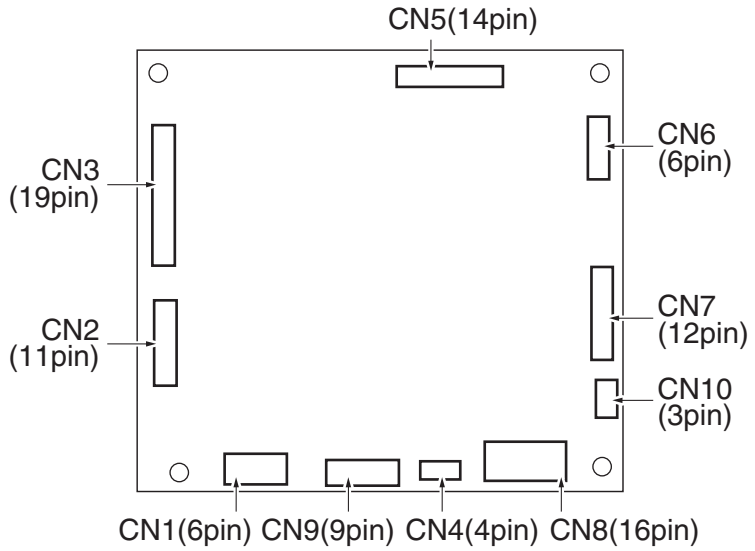
(11) IH magnetic erasing board (IHMEB) (C558)



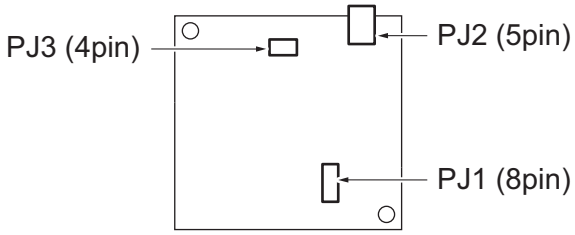
(12) Fusing power supply (FUPU) (C458)



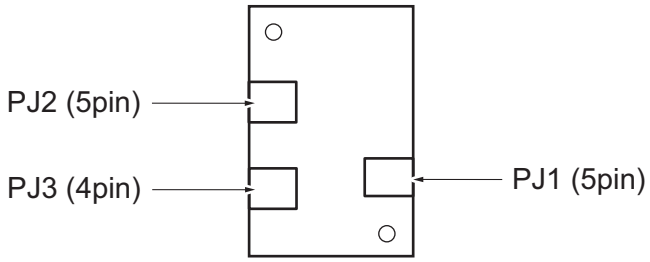
(13) Expansion control board (EXCB)



(14) Wireless LAN board (PWB-WLAN) (Option: UK-212)

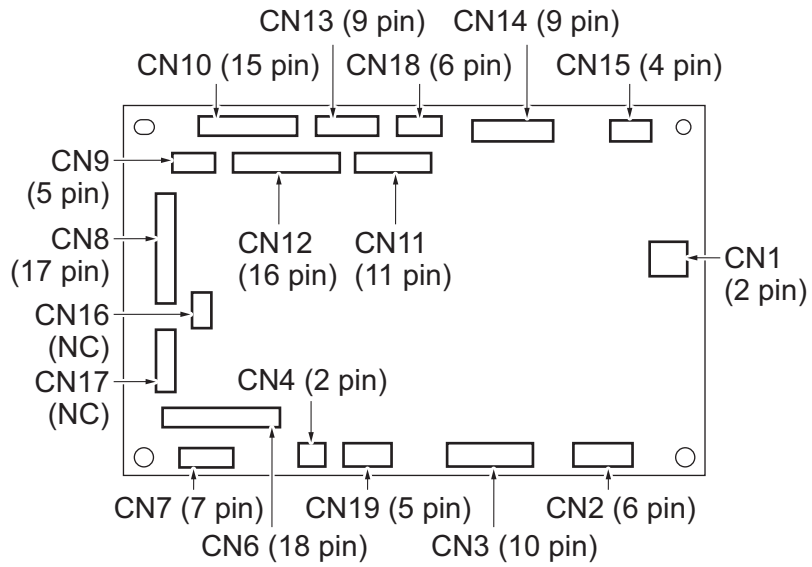


(15) Wireless LAN board (PWB-WLAN) (Option: UK-215)

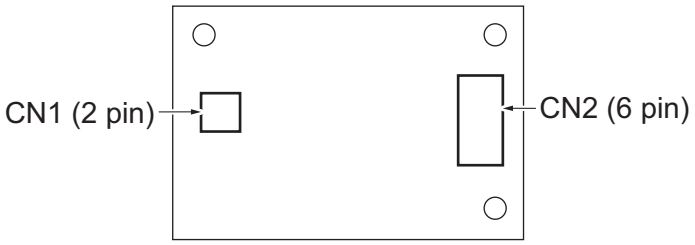


2.2.2 Dual scan document feeder

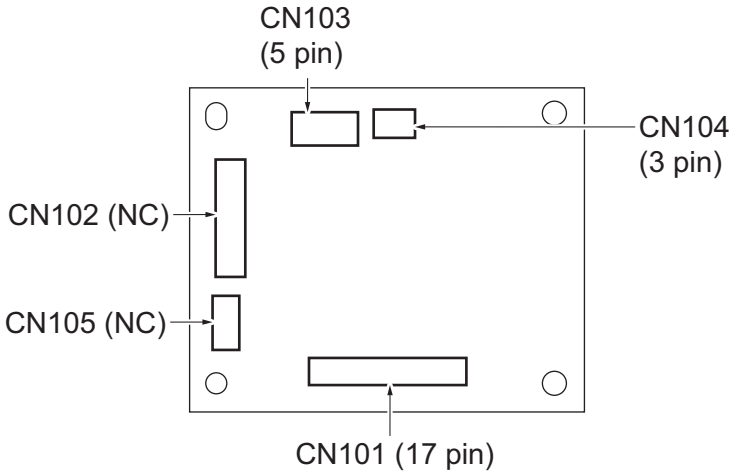
(1) DF control board (DFCB)



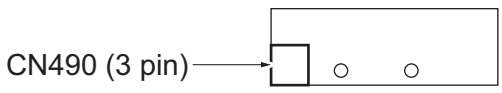
(2) DF power supply (DFPU)



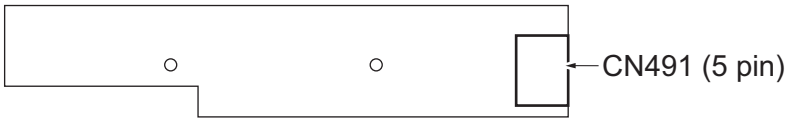
(3) Sensor control board (SCB)



(4) Multi feed detection board/1 (transmitter) (MFDB/1)

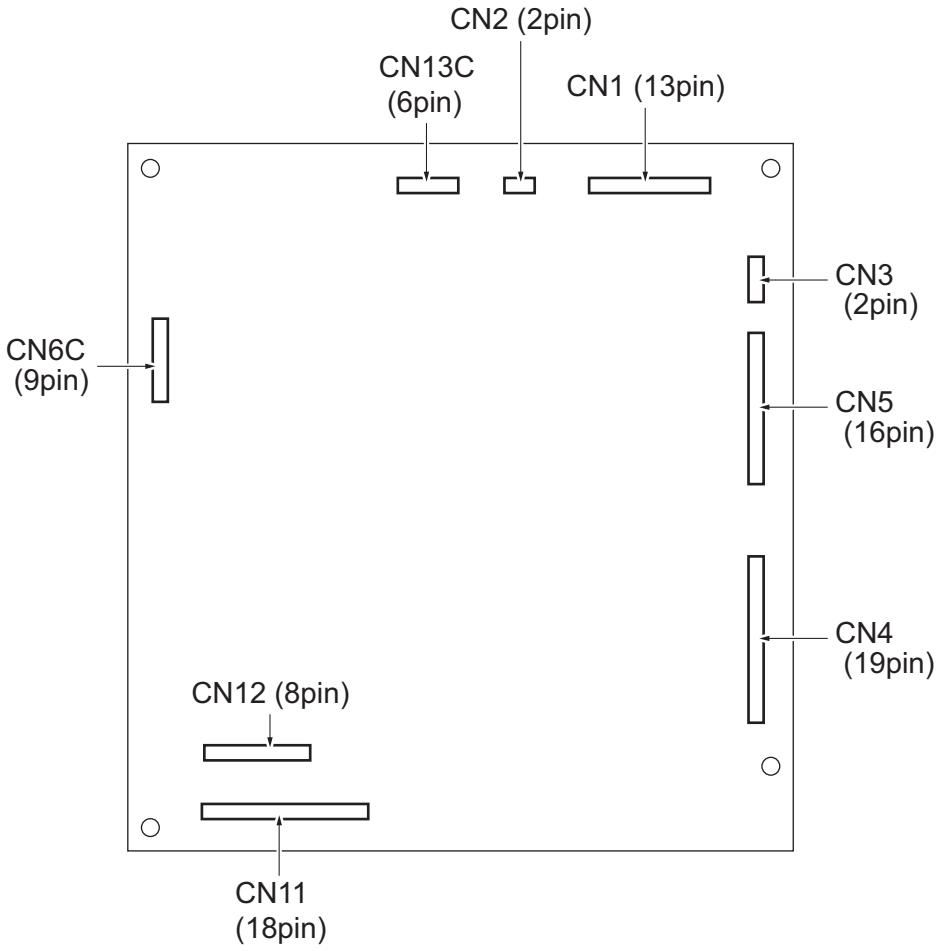


(5) Multi feed detection board/2 (receiver) (MFDB/2)

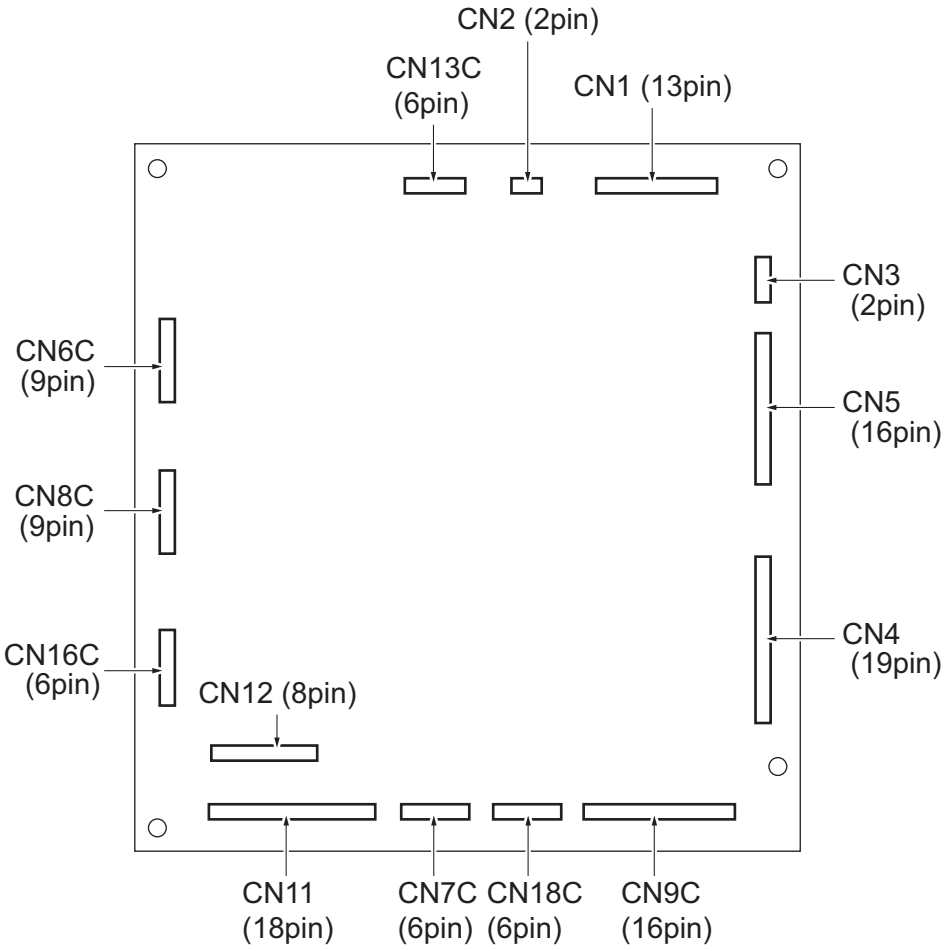


2.2.3 PC control board (PCCB)

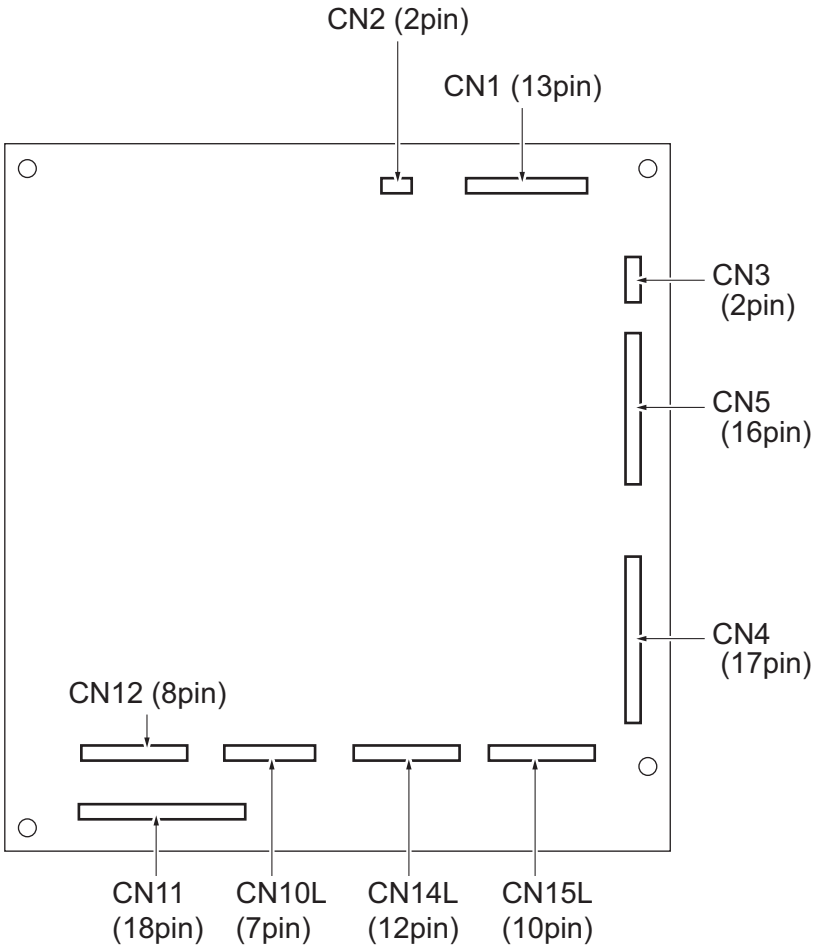
(1) PC-115



(2) PC-215

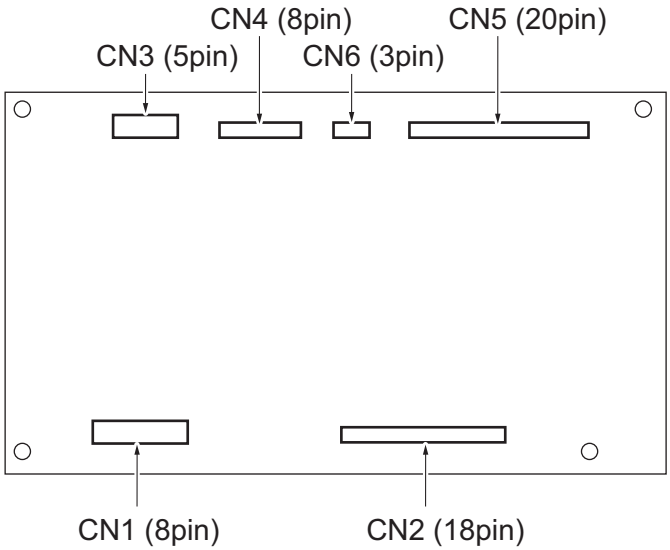

CN2 (2pin)
CN13C (6pin)
CN1 (13pin)
CN3 (2pin)
CN6C (9pin)
CN5 (16pin)
CN8C (9pin)
CN4 (19pin)
CN16C (6pin)
CN12 (8pin)
CN11 (18pin)
CN7C (6pin)
CN18C (6pin)
CN9C (16pin)

(3) PC-415



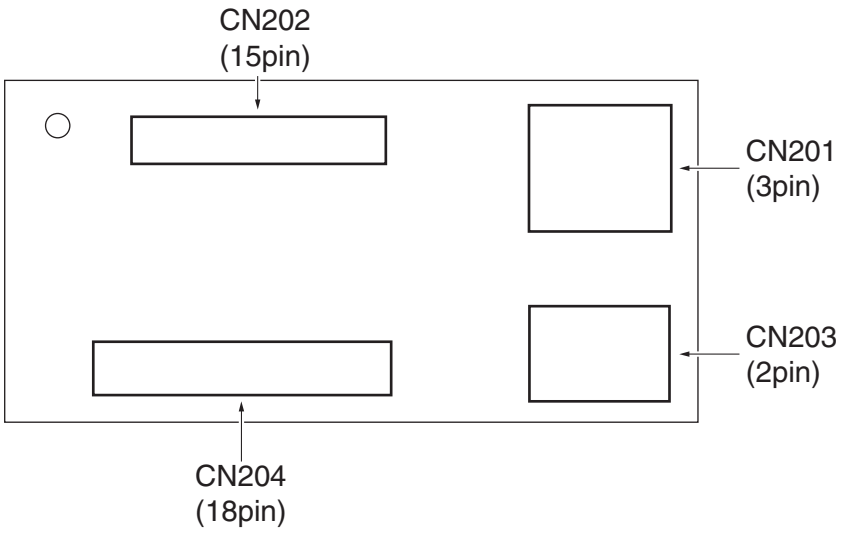
2.2.4 LU drive board (LUDB)

(1) LU-207/LU-302

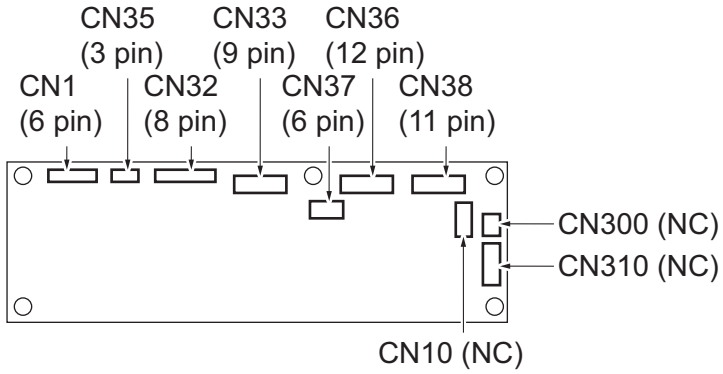


2.2.5 PK control board (PKCB)

(1) PK-519

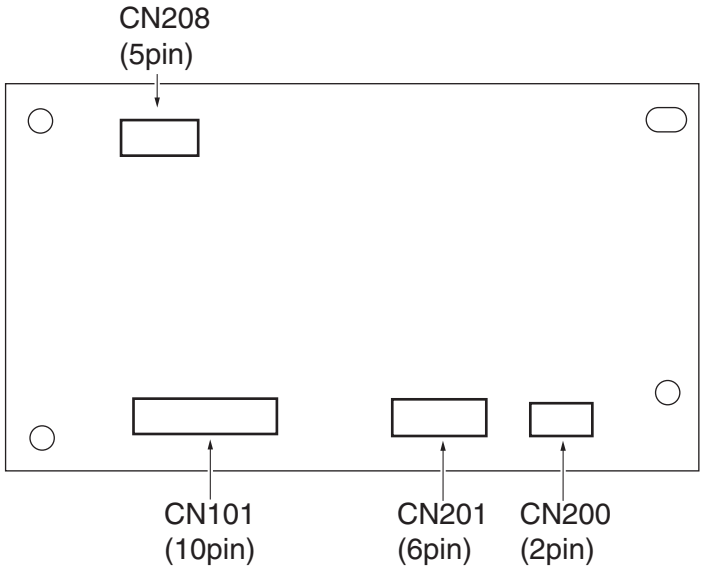


(2) PK-523

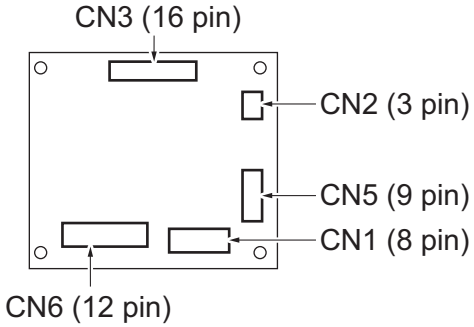


2.2.6 JS control board (JSCB)

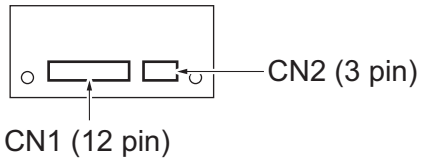
(1) JS-506



2.2.7 ZU drive board (ZUDB)

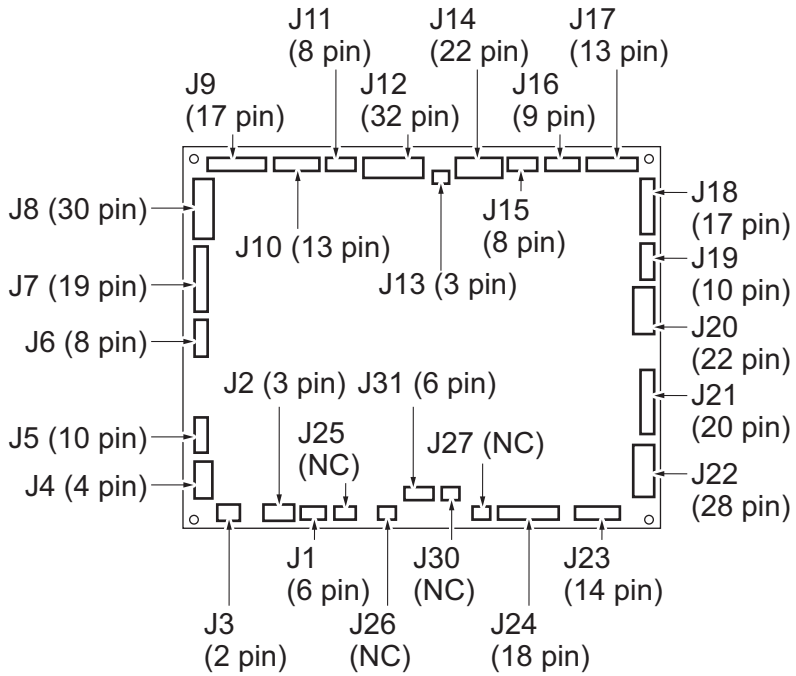


2.2.8 ZU relay board (ZURB)

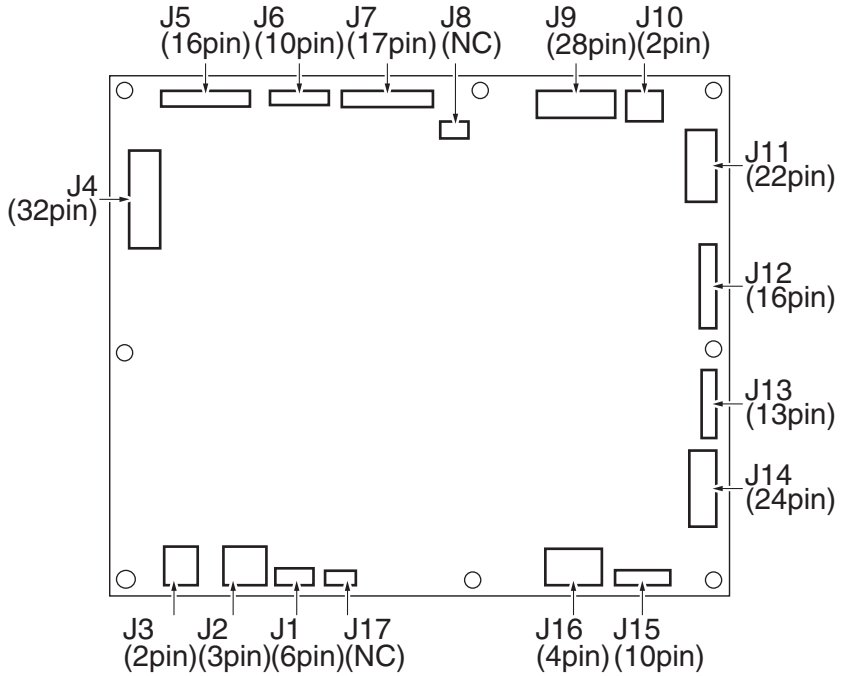


2.2.9 FS control board (FSCB)

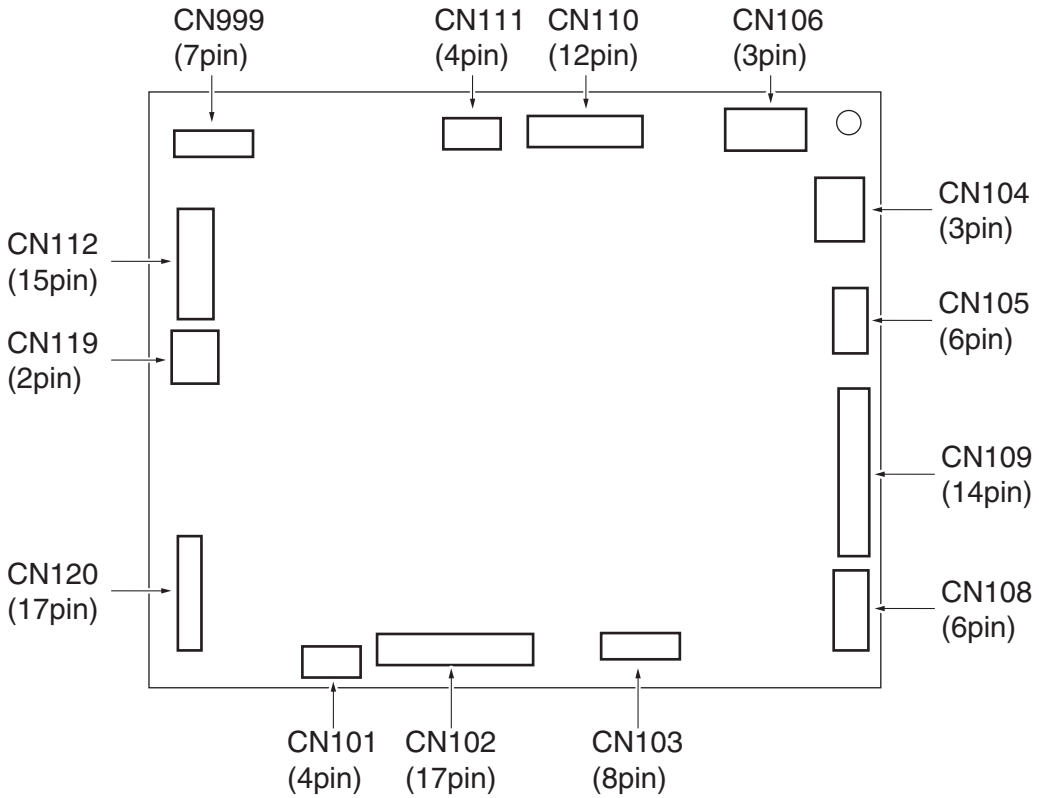
(1) FS-537/FS-537SD



(2) FS-536/FS-536SD

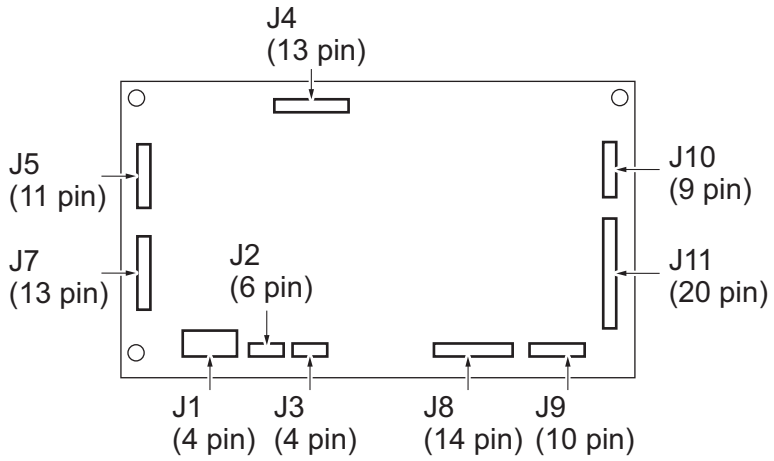


(3) FS-533

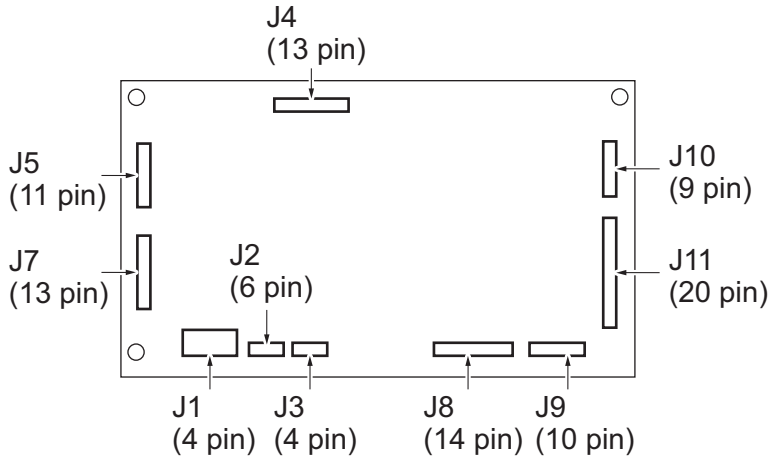


2.2.10 SD control board (SDCB)

(1) FS-536SD saddle section

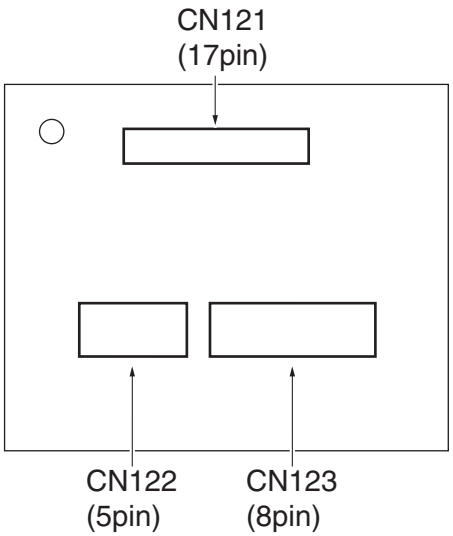


(2) FS-537SD saddle section

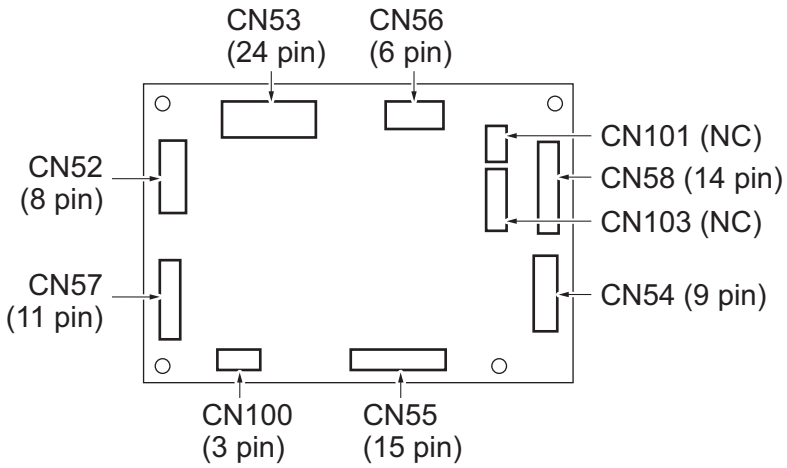


2.2.11 Stapler relay board (STREYB)

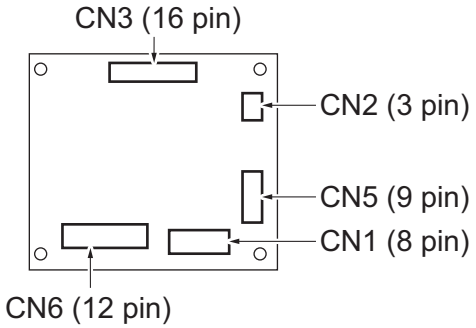
(1) FS-533



2.2.12 PI drive board (PIDB)

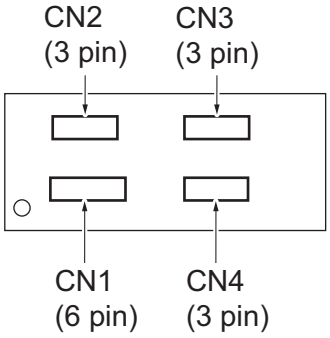


2.2.13 PI relay board (PIRB)



2.2.14 Clean unit drive board (CUDB)

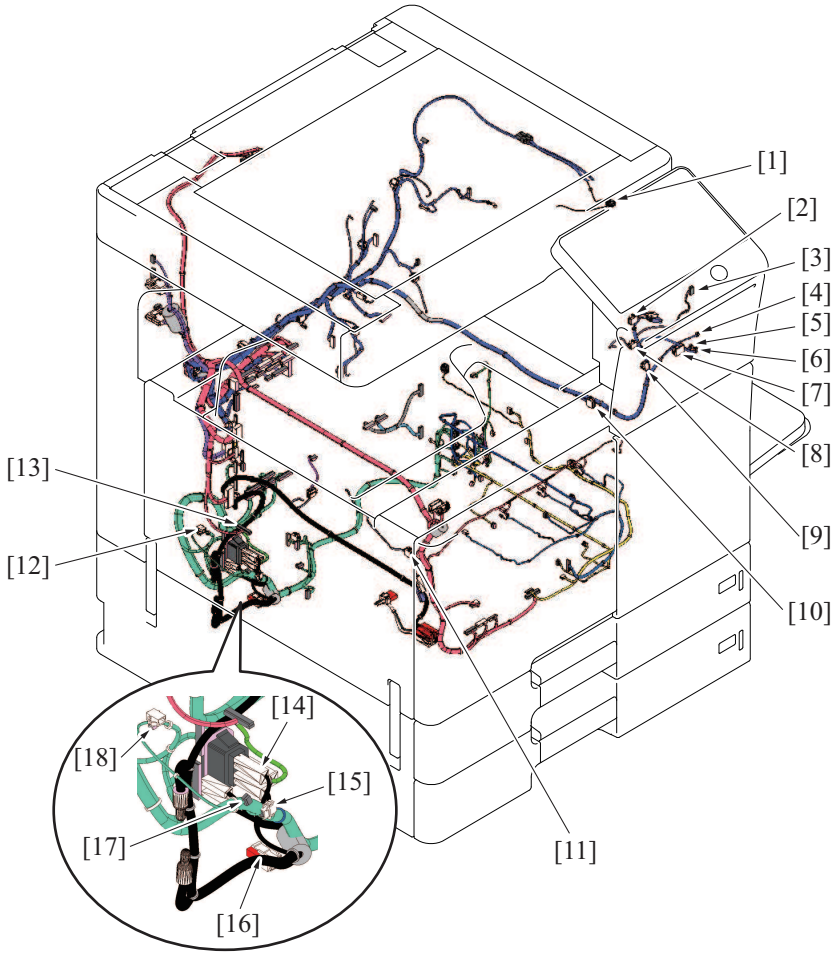
(1) CU-102



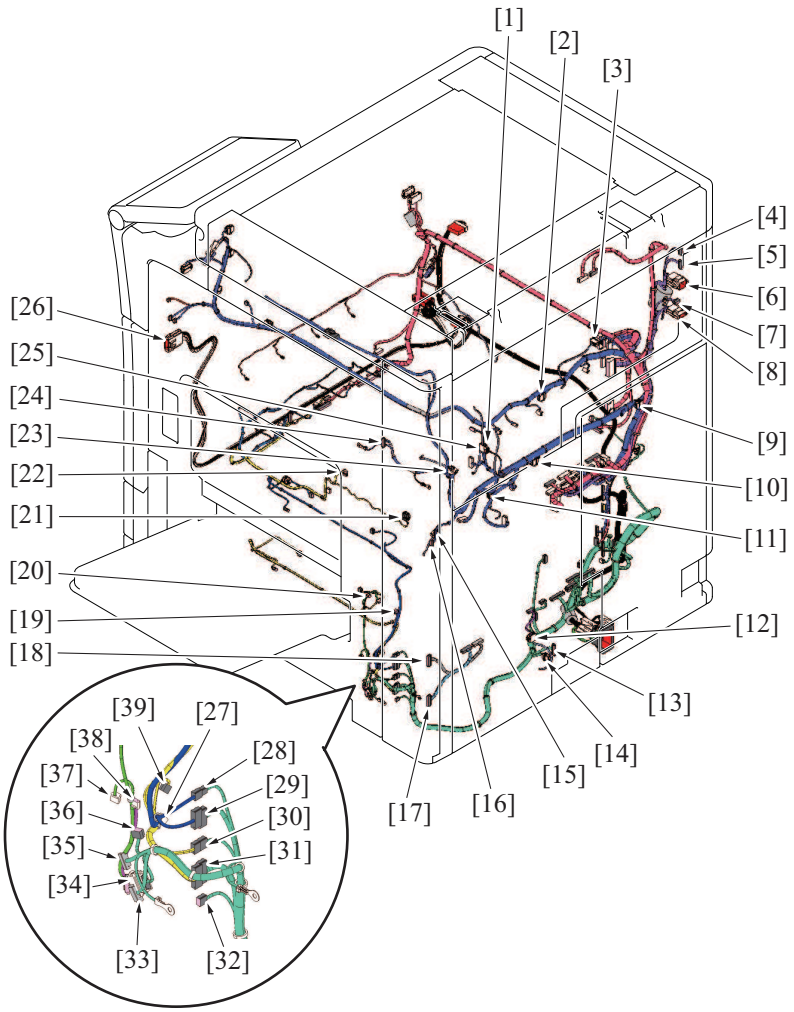
2.3 RELAY CONNECTOR LAYOUT DRAWING

2.3.1 bizhub C368/C308/C258

(1) Main body



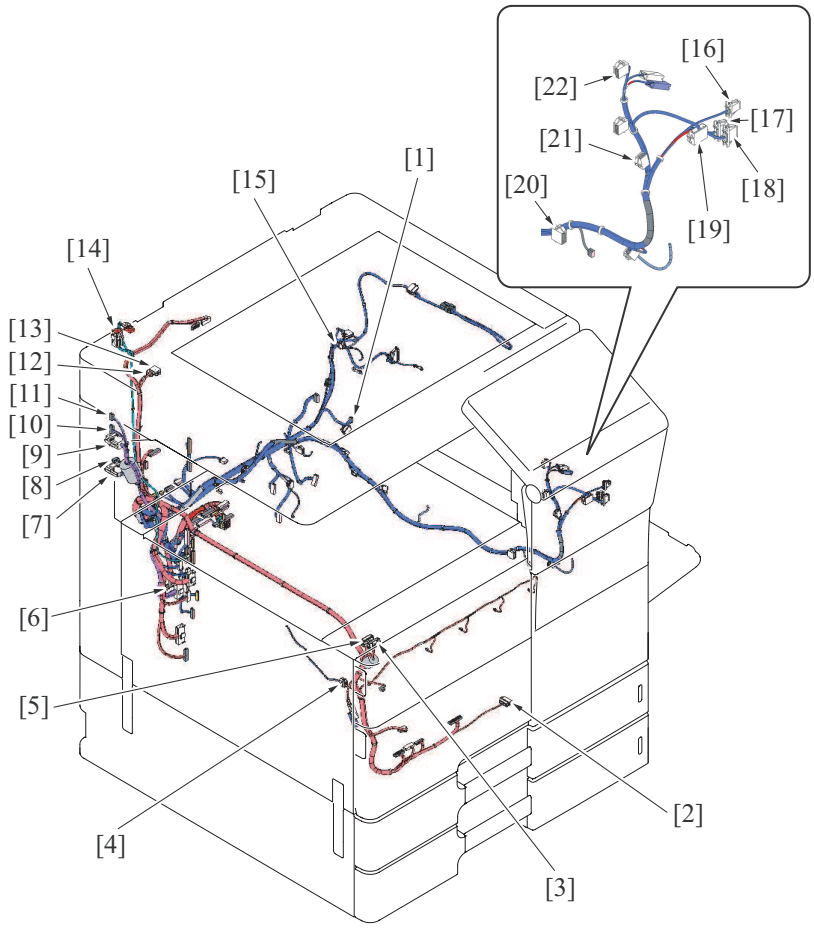
No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN603	2 Pin	24-Q	[2]	CN156	2 Pin	13-C
[3]	CN613	2 Pin	22-Q	[4]	CN108	2 Pin	7-C
[5]	CN104	3 Pin	11-C	[6]	CN99	4 Pin	11-C
[7]	CN98	5 Pin	10-C	[8]	CN612	2 Pin	21-Q
[9]	CN153	3 Pin	10-C	[10]	CN126	4 Pin	17-C
[11]	CN115	3 Pin	9-C	[12]	CN64	2 Pin	27-H
[13]	CN151	12 Pin	9-K	[14]	CN1AC	2 Pin	17-X, 18-X
[15]	CN29	2 Pin	24-H	[16]	CN2AC	2 Pin	23-D
[17]	CN26	3 Pin	24-H	[18]	CN63	3 pin	24-D



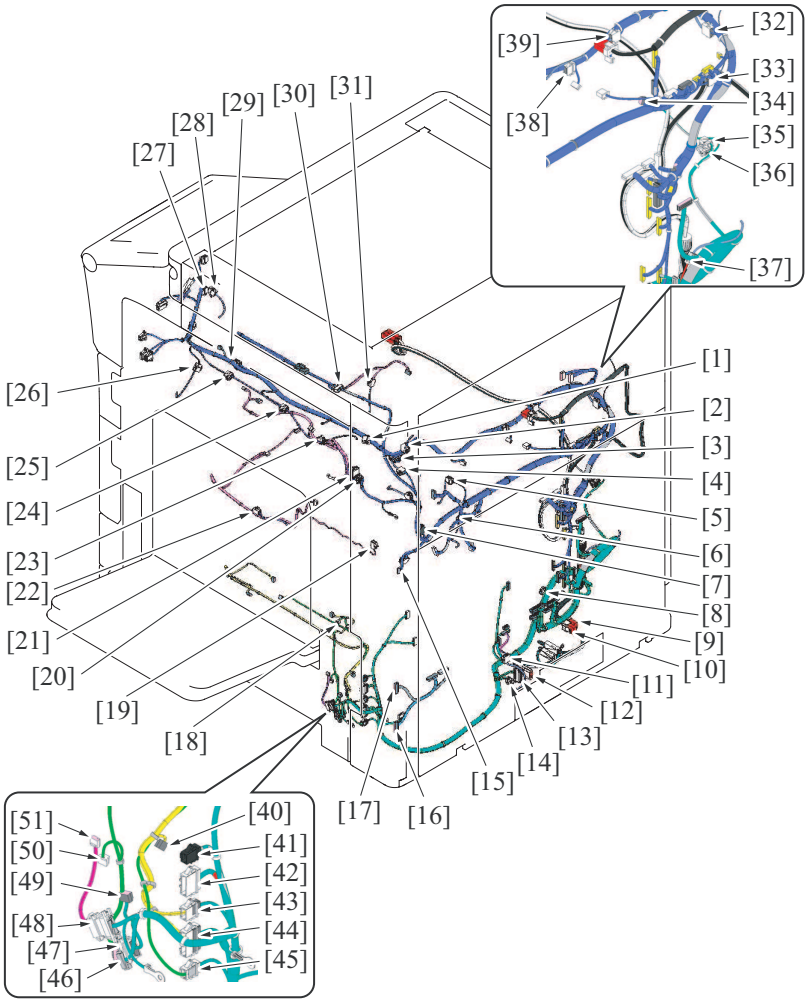
No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN118	2 Pin	8-C	[2]	CN113	3 Pin	10-C
[3]	CN125	4 Pin	15-C	[4]	CN3DF	7 Pin	16-I
[5]	CN2DF	9 Pin	15-I	[6]	CN1DF	4 Pin	15-I
[7]	CN2FN	6 Pin	17-I	[8]	CN1FN	3 Pin	17-I
[9]	CN141	3 Pin	9-D	[10]	CN157	3 Pin	9-C
[11]	CN159	2 Pin	7-C	[12]	CN301	4 Pin	20-C
[13]	CN66	13 Pin	23-D	[14]	CN65	2 Pin	23-D
[15]	CN12	2 Pin	7-C	[16]	CN9	6 Pin	5-D
[17]	CN154	12 Pin	3-T	[18]	CN155	12 Pin	5-T
[19]	CN20	2 Pin	22-I	[20]	CN33	2 Pin	25-C
[21]	CN73	2 Pin	5-K	[22]	CN142	2 Pin	8-C
[23]	CN72	2 Pin	6-K	[24]	CN5	10 Pin	4-D
[25]	CN106	3 Pin	9-C	[26]	CN1FIX	3 Pin	11-C
[27]	CN43	2 Pin	28-C	[28]	CN34	3 Pin	26-D
[29]	CN30	8 Pin	25-D	[30]	CN37	4 Pin	27-D
[31]	CN40	10 Pin	27-D	[32]	CN152	3 Pin	27-D
[33]	CN19	7 Pin	22-H	[34]	CN59	4 Pin	24-I
[35]	CN16	6 Pin	21-H	[36]	CN13	3 Pin	24-H
[37]	CN21	2 Pin	22-I	[38]	CN60	3 Pin	24-I
[39]	CN44	2 Pin	28-C	-	-	-	-

2.3.2 bizhub C658/C558

(1) Main body



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN9	6 Pin	24-S	[2]	CN700	6 Pin	26-Q
[3]	CN151	12 Pin	8-J	[4]	CN115	3 Pin	28-P
[5]	CN79	8 Pin	27-Q	[6]	CN220	12 Pin	25-Q
[7]	CN1FN	3 Pin	12-I	[8]	CN2FN	6 Pin	11-I
[9]	CN1DF	6 Pin	13-I	[10]	CN3DF	7 Pin	12-I
[11]	CN2DF	9 Pin	13-I	[12]	CN167	2 Pin	23-W
[13]	CN166	5 Pin	22-Y, 23-Y	[14]	CN150	4 Pin	18-P
[15]	CN142	2 Pin	24-T	[16]	CN96	3 Pin	22-C
[17]	CN100	5 Pin	23-C	[18]	CN95	6 Pin	22-C
[19]	CN120	6 Pin	9-D	[20]	CN126	4 Pin	26-T
[21]	CN156	2 Pin	9-C	[22]	CN153	3 Pin	17-C



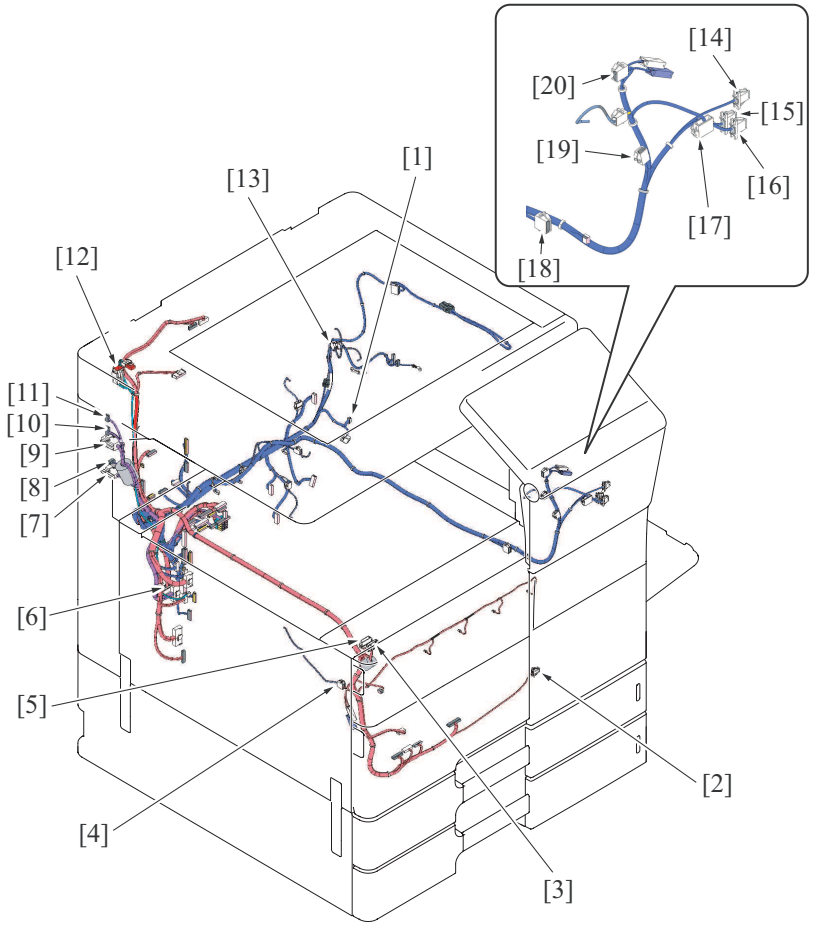
No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN138 *1	4 Pin	18-C	[2]	CN109	4 Pin	18-C
[3]	CN78	3 Pin	27-T	[4]	CN106	3 Pin	16-C
[5]	CN118	2 Pin	25-T	[6]	CN159	2 Pin	16-C
[7]	CN112	4 Pin	16-C	[8]	CN29	2 Pin	23-I
[9]	CN3AC	2 Pin	16-X	[10]	CN1AC	2 Pin	15-X
[11]	CN301	4 Pin	2-O	[12]	CN2AC	2 Pin	28-D
[13]	CN66	13 Pin	27-D	[14]	CN65	2 Pin	27-D
[15]	CN224	4 Pin	24-Q	[16]	CN155	12 Pin	4-R
[17]	CN154	12 Pin	5-S	[18]	CN20	2 Pin	22-I
[19]	CN73 *2	2 Pin	4-K	[20]	CN823	6 Pin	24-Q
[21]	CN5	12 Pin	7-D	[22]	CN72	2 Pin	4-K
[23]	CN810	2 Pin	7-C	[24]	CN802	3Pin	24-P
[25]	CN801	3 Pin	25-P	[26]	CN77	3 Pin	26-T
[27]	CN108	2 Pin	17-D	[28]	CN208	2 Pin	17-C
[29]	CN119	4 Pin	9-C	[30]	CN820	6 Pin	15-D
[31]	CN204	2 Pin	15-C	[32]	CN125	4 Pin	12-C
[33]	CN146	3 Pin	16-C	[34]	CN26	3 Pin	23-I
[35]	CN64	2 Pin	25-H	[36]	CN63	4 Pin	26-D
[37]	CN62	3 Pin	24-I	[38]	CN113	3 Pin	18-C
[39]	CN128	4 Pin	11-C	[40]	CN43	2 Pin	27-I
[41]	CN34	3 Pin	28-I	[42]	CN30	8 Pin	27-H
[43]	CN37	4 Pin	26-H	[44]	CN40	10 Pin	26-H
[45]	CN152	3 Pin	26-H	[46]	CN19	7 Pin	22-H
[47]	CN16	6 Pin	21-H	[48]	CN59	4 Pin	23-H
[49]	CN13	3 Pin	22-H	[50]	CN21	2 Pin	22-I
[51]	CN60	3 Pin	23-I	-	-	-	-

- *1: bizhub C658 only

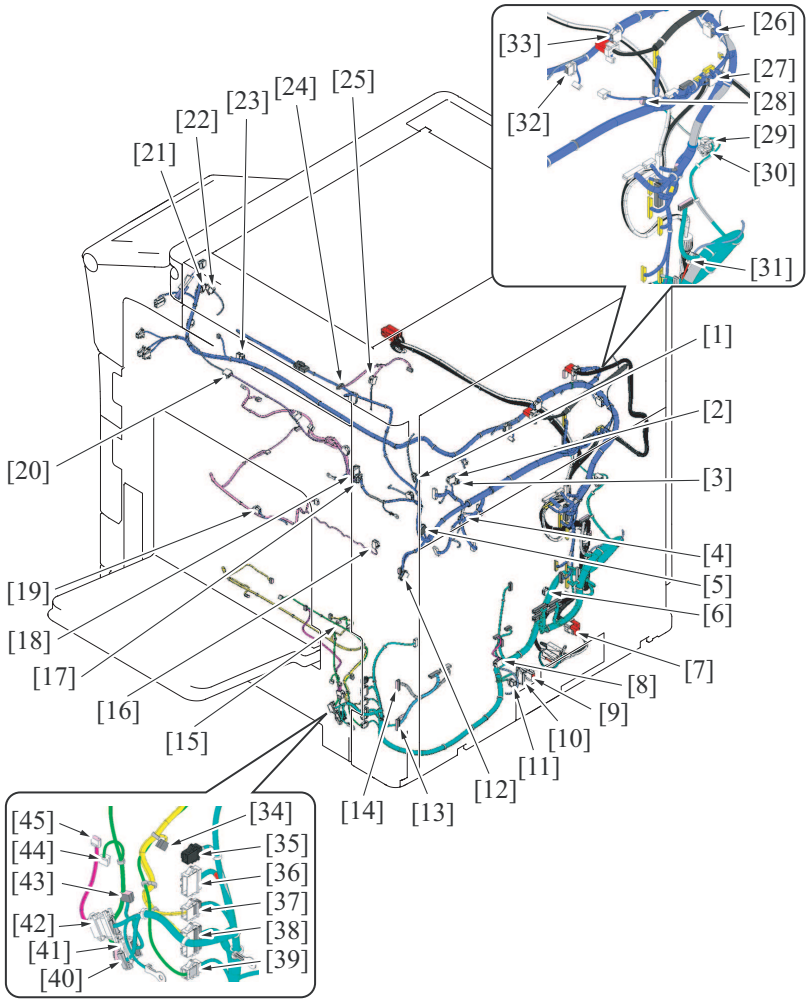
- *2: bizhub C558 only

2.3.3 bizhub C458

(1) Main body



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN9	6 Pin	24-S	[2]	CN700	6 Pin	26-Q
[3]	CN151	12 Pin	8-J	[4]	CN115	3 Pin	28-P
[5]	CN79	8 Pin	27-Q	[6]	CN220	12 Pin	25-Q
[7]	CN1FN	3 Pin	12-I	[8]	CN2FN	6 Pin	11-I
[9]	CN1DF	6 Pin	13-I	[10]	CN3DF	7 Pin	12-I
[11]	CN2DF	9 Pin	13-I	[12]	CN150	4 Pin	18-P
[13]	CN142	2 Pin	24-T	[14]	CN104	3 Pin	24-C
[15]	CN99	4 Pin	24-C	[16]	CN98	5 Pin	24-C
[17]	CN120	6 Pin	11-D	[18]	CN126	4 Pin	26-T
[19]	CN156	2 Pin	11-C	[20]	CN153	3 Pin	21-C

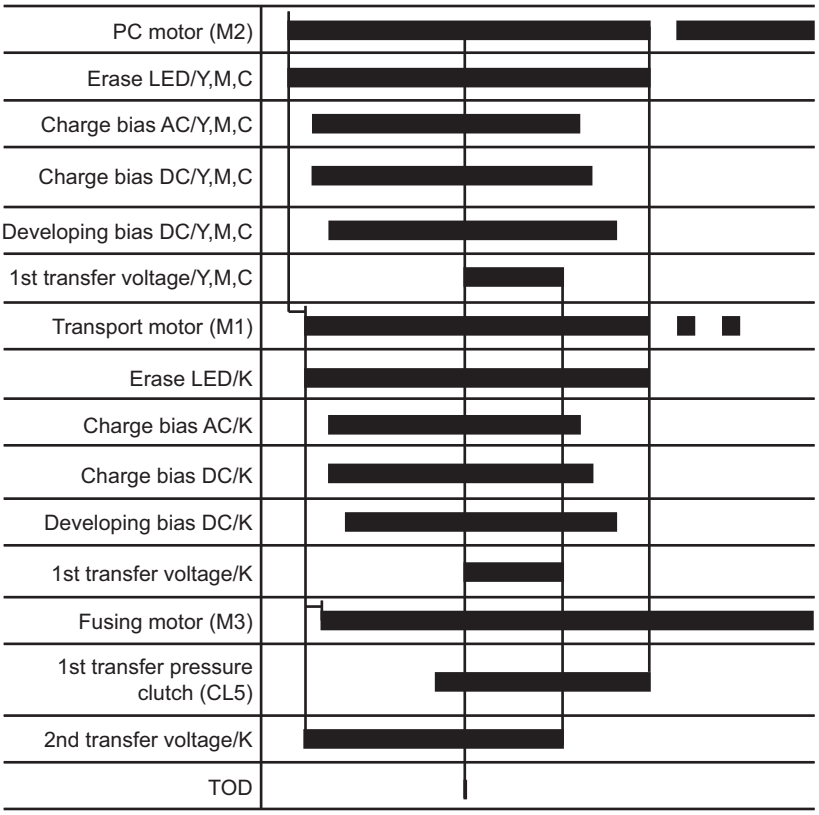


No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN106	3 Pin	20-C	[2]	CN118	2 Pin	25-T
[3]	CN111	4 Pin	26-C	[4]	CN159	2 Pin	20-C
[5]	CN112	4 Pin	19-C	[6]	CN29	2 Pin	23-I
[7]	CN1AC	2 Pin	17-X	[8]	CN301	4 Pin	2-O
[9]	CN2AC	2 Pin	28-D	[10]	CN66	13 Pin	27-D
[11]	CN65	2 Pin	27-D	[12]	CN224	4 Pin	24-Q
[13]	CN155	12 Pin	4-R	[14]	CN154	12 Pin	5-S
[15]	CN20	2 Pin	22-I	[16]	CN73	2 Pin	4-K
[17]	CN823	6 Pin	24-Q	[18]	CN5	12 Pin	8-D
[19]	CN72	2 Pin	4-K	[20]	CN801	3 Pin	25-P
[21]	CN108	2 Pin	21-D	[22]	CN208	2 Pin	21-C
[23]	CN119	4 Pin	10-C	[24]	CN820	6 Pin	19-D
[25]	CN204	2 Pin	19-C	[26]	CN125	4 Pin	12-C
[27]	CN146	3 Pin	20-C	[28]	CN26	3 Pin	23-I
[29]	CN64	2 Pin	25-H	[30]	CN63	4 Pin	26-D
[31]	CN62	3 Pin	24-I	[32]	CN113	3 Pin	21-C
[33]	CN128	4 Pin	11-C	[34]	CN43	2 Pin	27-I
[35]	CN34	3 Pin	28-I	[36]	CN30	8 Pin	27-H
[37]	CN37	4 Pin	26-H	[38]	CN40	10 Pin	26-H
[39]	CN152	3 Pin	26-H	[40]	CN19	7 Pin	22-H
[41]	CN16	6 Pin	21-H	[42]	CN59	4 Pin	23-H
[43]	CN13	3 Pin	22-H	[44]	CN21	2 Pin	22-I
[45]	CN60	3 Pin	23-I	-	-	-	-

M TIMING CHART

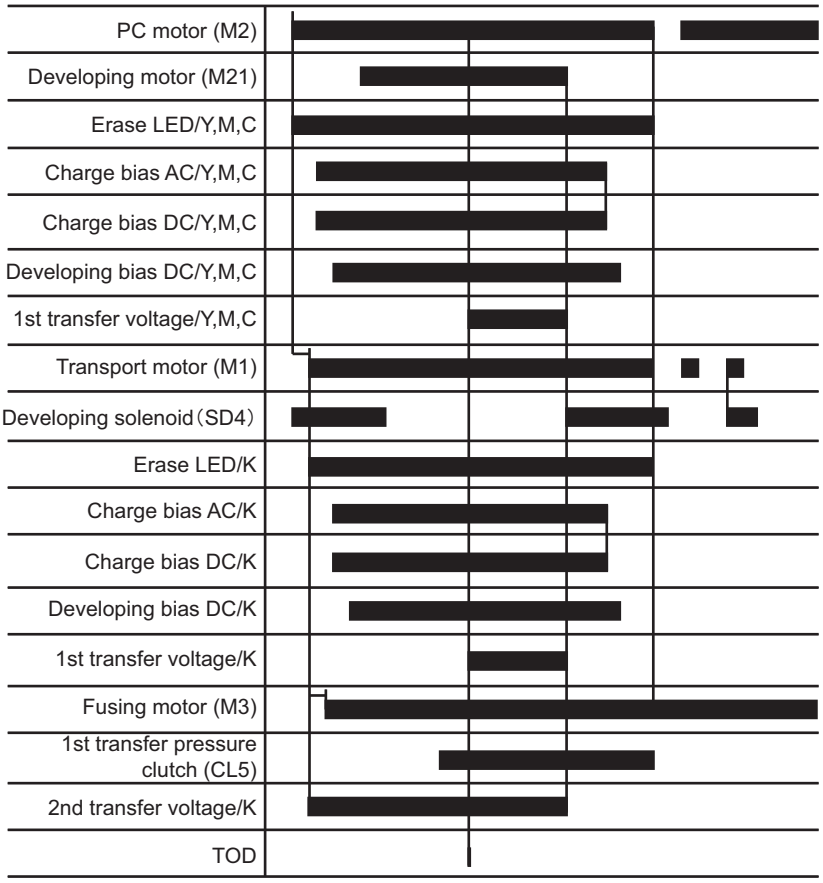
1. bizhub C368/C308/C258

1.1 Timing chart when the main power switch is turned ON



2. bizhub C658/C558/C458

2.1 Timing chart when the main power switch is turned ON



3. FS-534/SD-511

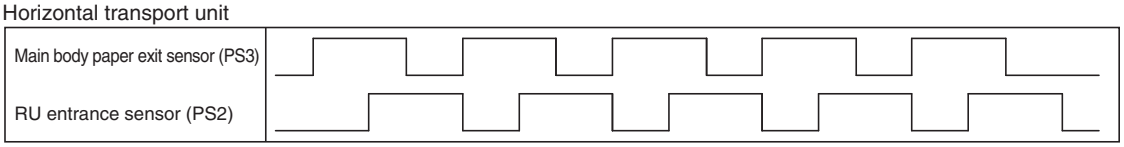
3.1 Shift mode

3.1.1 Operating conditions

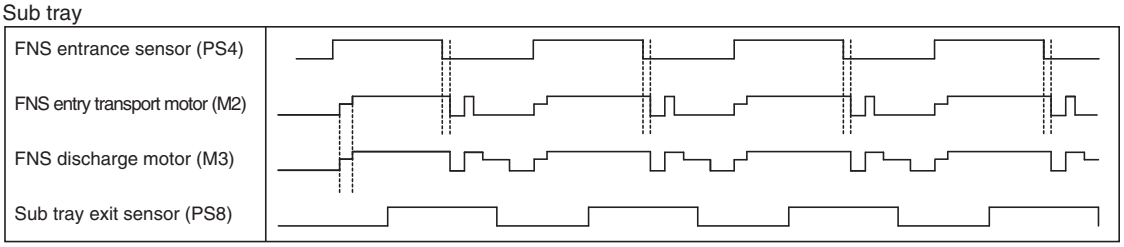
Paper size	A4 or 8 $^1/_2$ x 11
Sheet of original	2 originals
Type of original	1-side
Number of copies	2 sets

3.1.2 Timing chart

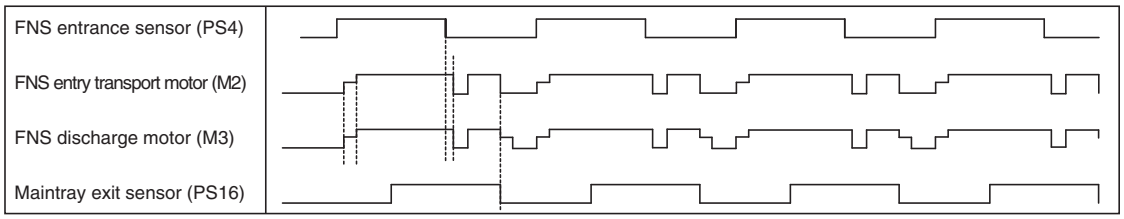
Horizontal transport unit



Sub tray



Main tray/Saddle tray

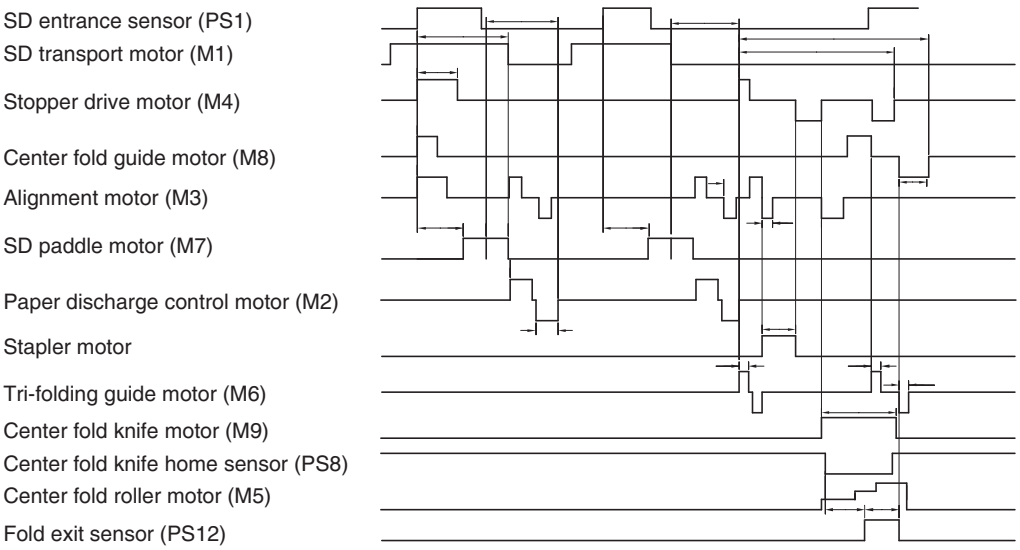


3.2 Center staples mode

3.2.1 Operating conditions

Paper size	A4S or 8 $^1/_2$ x 11S
Sheet of original	2 originals
Type of original	1-side
Number of copies	1 sets

3.2.2 Timing chart

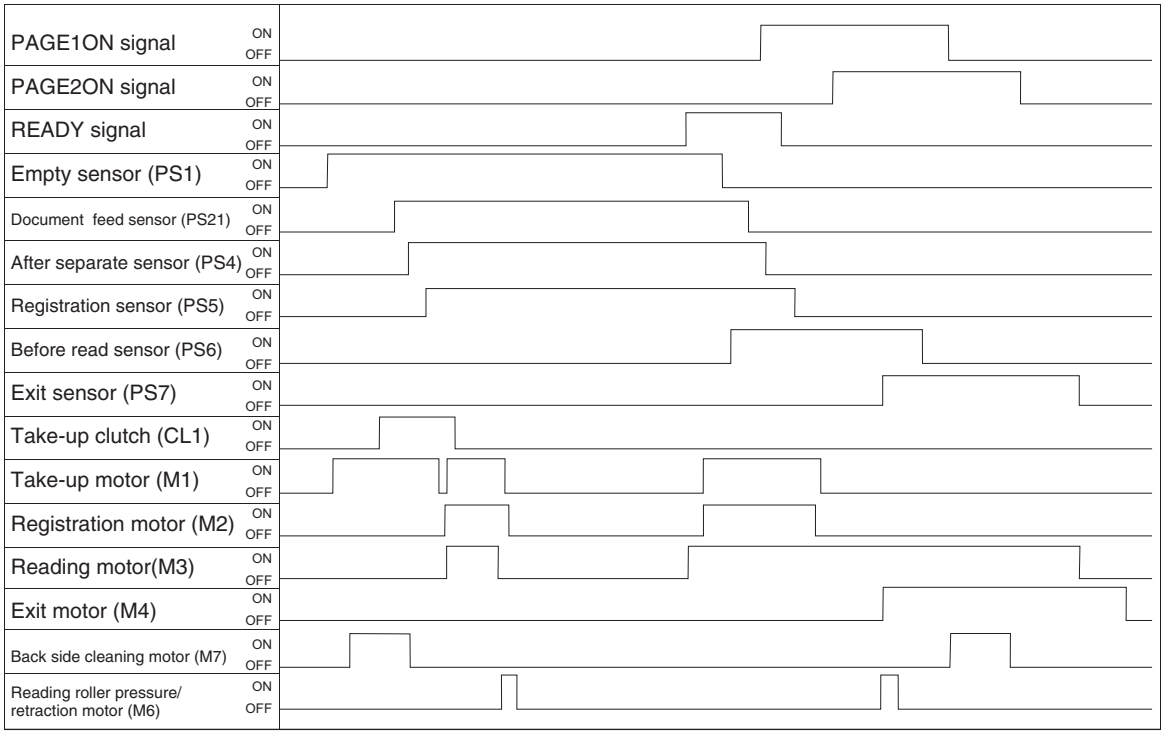


4. Dual Scan Document Feeder (bizhub C658/C558/C458)

4.1 Operating conditions

Paper size	A4 or 8 $^{1}/_{2}$ x 11
Zoom ratio	Full size
Sheet of original	1 originals
Original mode	2 sided original mode
Scaning resolution	600 dpi

4.2 Timing chart

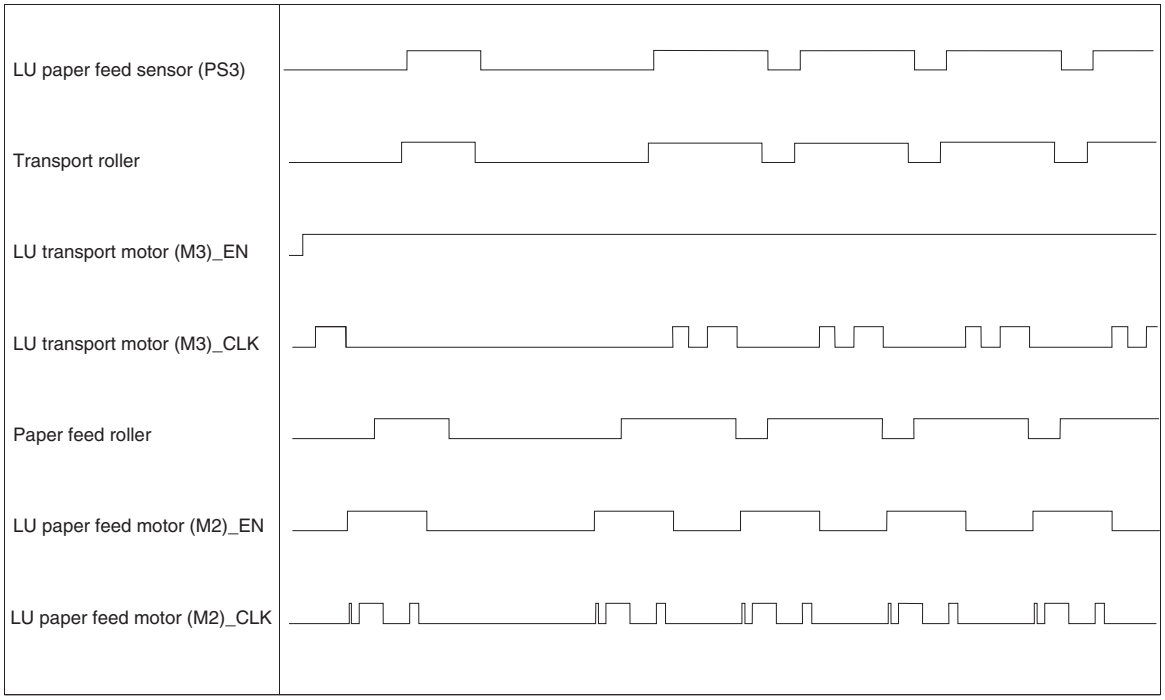


5. LU-207/LU-302

5.1 Operating conditions

MFP main body (bizhub C658/C558/C458)	LU-207
MFP main body (bizhub C658/C558/C458/C368/C308/C258)	LU-302
Paper type	Plain paper
Paper size	A4(LEF) or 8 $^{1}/_{2}$ x 11(LEF)
Paper feeding mode	Multi feed print

5.2 Timing chart



6. FS-536/FS-536SD

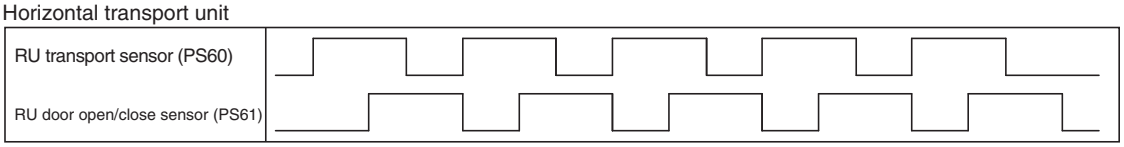
6.1 Shift mode

6.1.1 Operating conditions

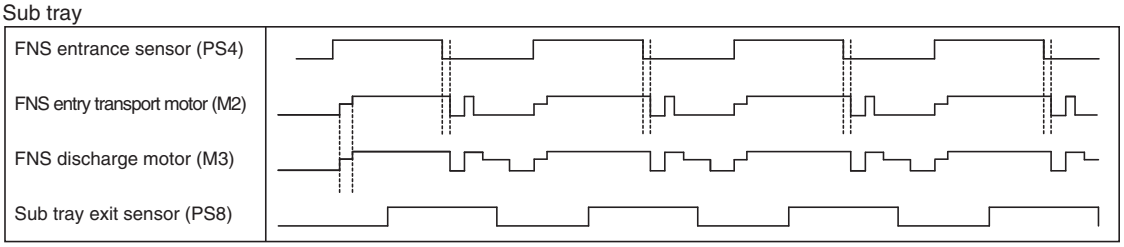
Paper size	A4 or 8 $^1/_2$ x 11
Sheet of original	2 originals
Type of original	1-side
Copies	2 sets

6.1.2 Timing chart

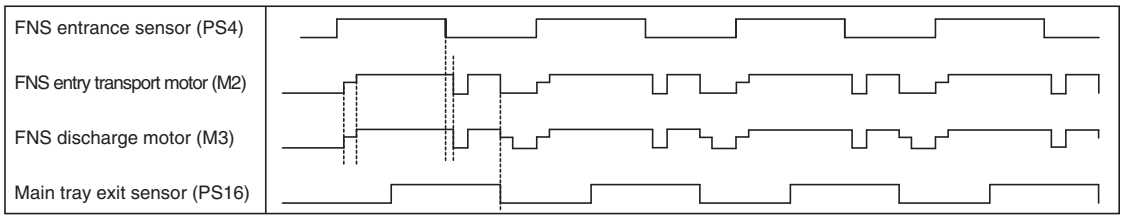
Horizontal transport unit



Sub tray



Main tray/Saddle tray

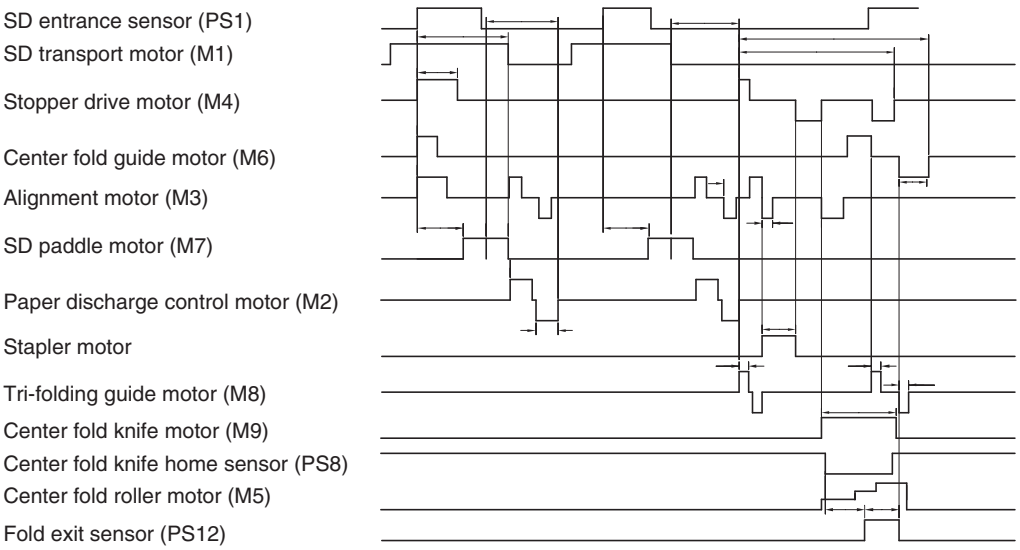


6.2 Center staples mode

6.2.1 Operating conditions

Paper size	A4S or 8 $^1/_2$ x 11S
Sheet of original	2 originals
Type of original	1-side
Copies	1 set

6.2.2 Timing chart

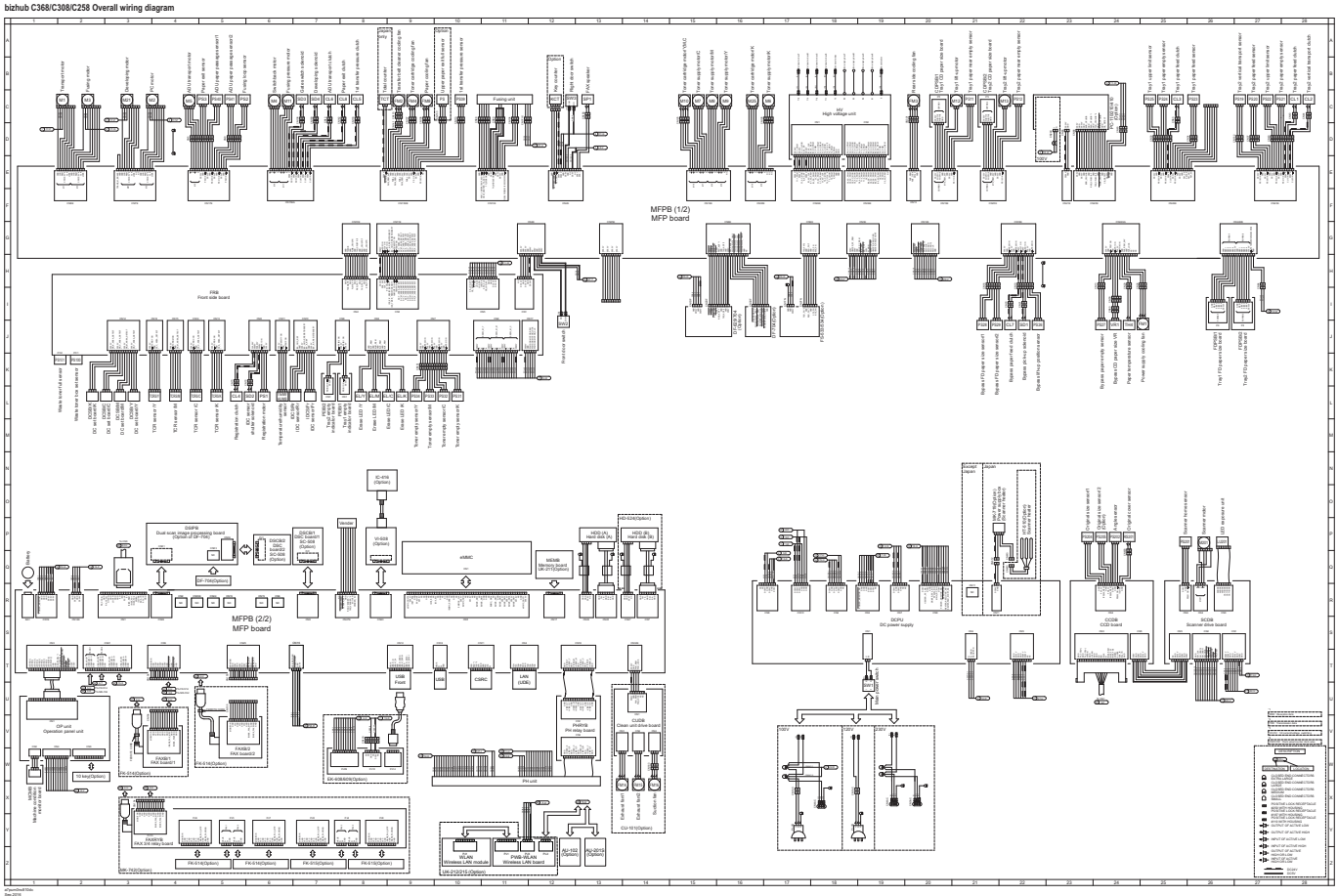


N WIRING DIAGRAM

1. bizhub C368/C308/C258

1.1 Main body

bizhub C368/C308/C258 Overall wiring diagram

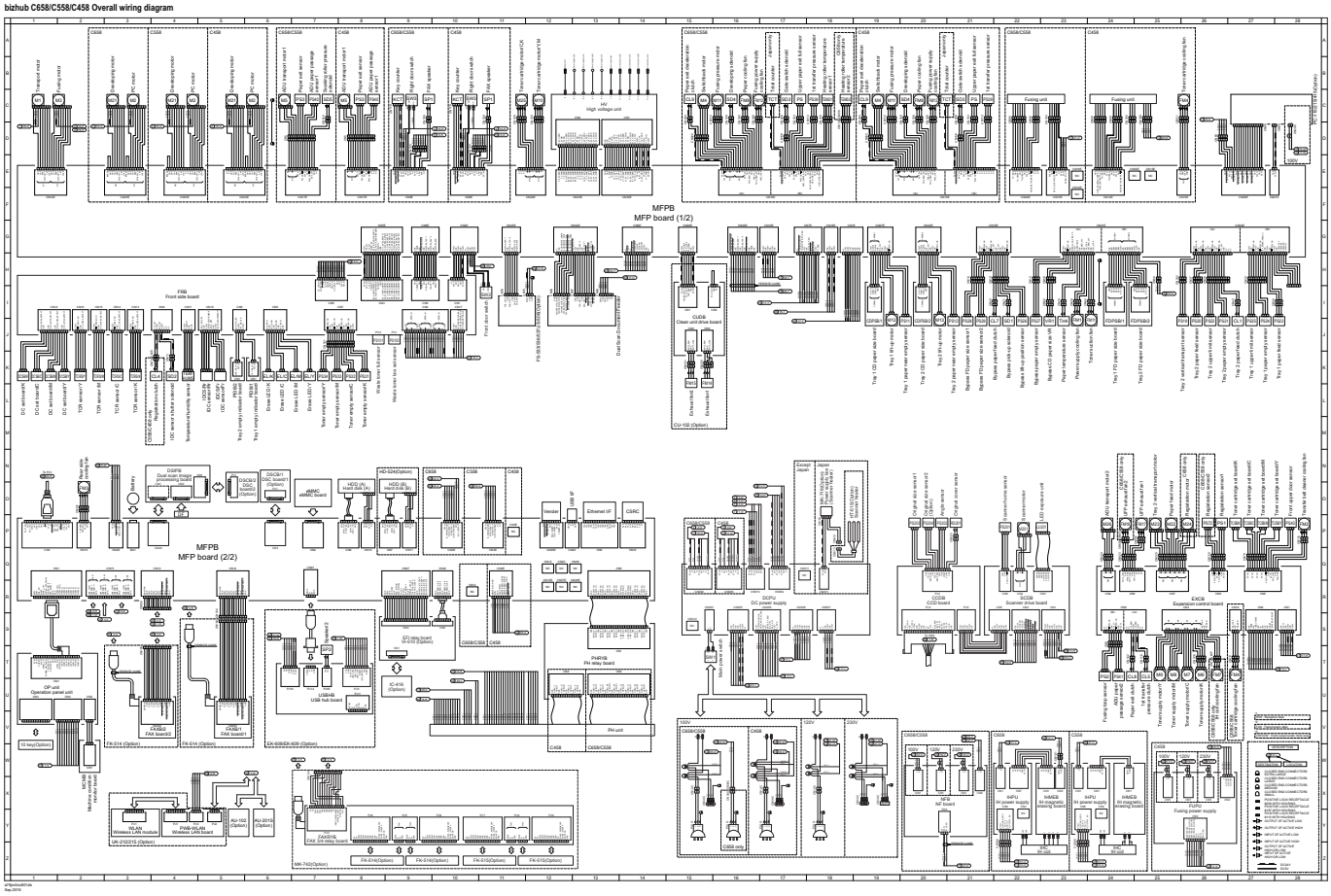


- bizhub C368/C308/C258 Wiring diagram (a7pum0nc810dc.pdf 0.8 MB)
- bizhub C368/C308/C258 Wiring diagram A3 size (1/4) (a7pum0nc811dc.pdf 0.7 MB)
- bizhub C368/C308/C258 Wiring diagram A3 size (2/4) (a7pum0nc812dc.pdf 0.7 MB)
- bizhub C368/C308/C258 Wiring diagram A3 size (3/4) (a7pum0nc813dc.pdf 0.7 MB)
- bizhub C368/C308/C258 Wiring diagram A3 size (4/4) (a7pum0nc814dc.pdf 0.7 MB)

2. bizhub C658/C558/C458

2.1 Main body

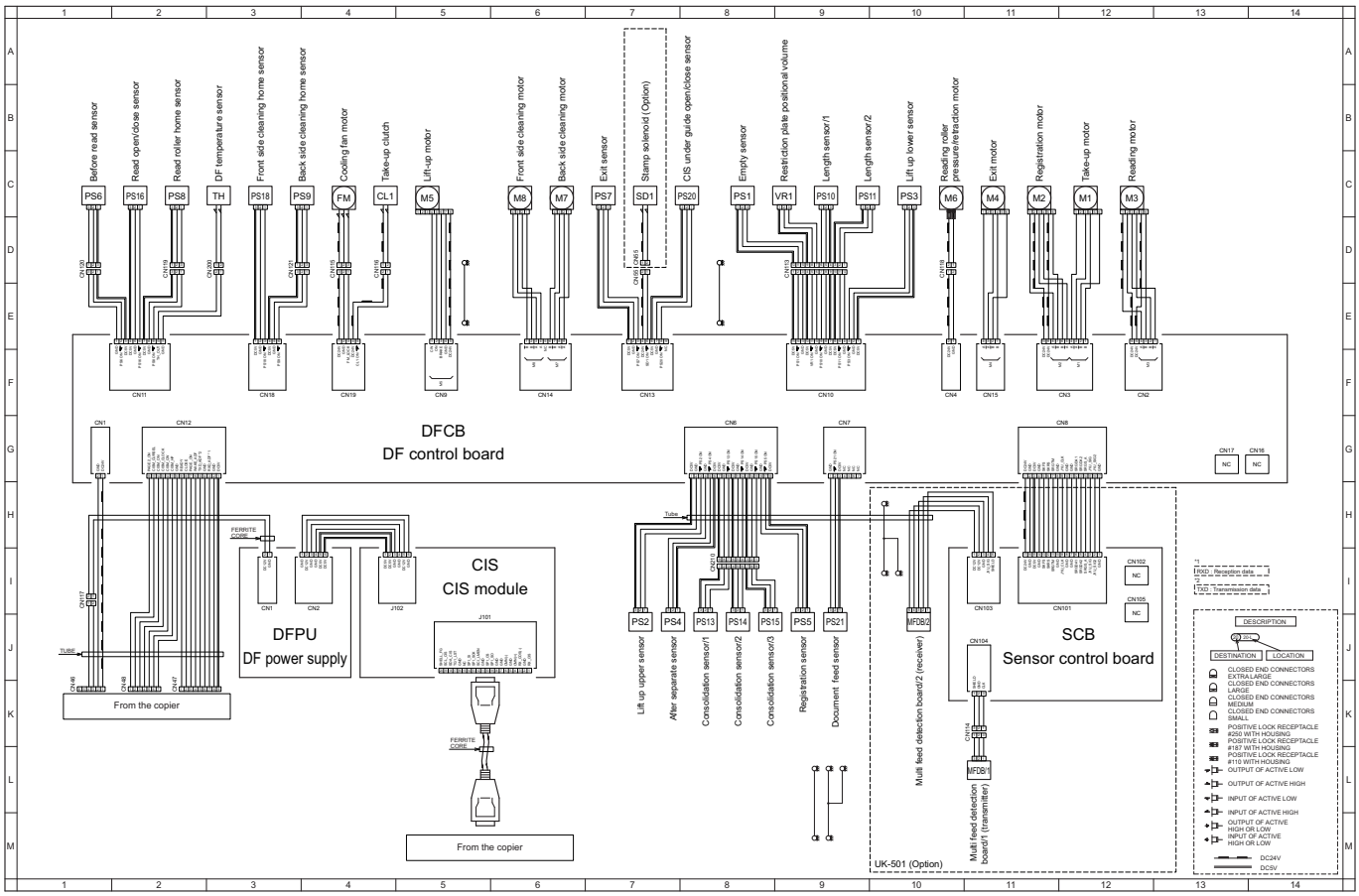
bizhub C658/C558/C458 Overall wiring diagram



- bizhub C658/C558/C458 Wiring diagram (a79jm0nc801db.pdf 0.9 MB)
- bizhub C658/C558/C458 Wiring diagram A3 size (1/4) (a79jm0nc814db.pdf 0.7 MB)
- bizhub C658/C558/C458 Wiring diagram A3 size (2/4) (a79jm0nc824db.pdf 0.7 MB)
- bizhub C658/C558/C458 Wiring diagram A3 size (3/4) (a79jm0nc834db.pdf 0.7 MB)
- bizhub C658/C558/C458 Wiring diagram A3 size (4/4) (a79jm0nc844db.pdf 0.7 MB)

3. Dual scan document feeder

Dual scan document feeder Overall wiring diagram



a796m0nc802db
May 2016

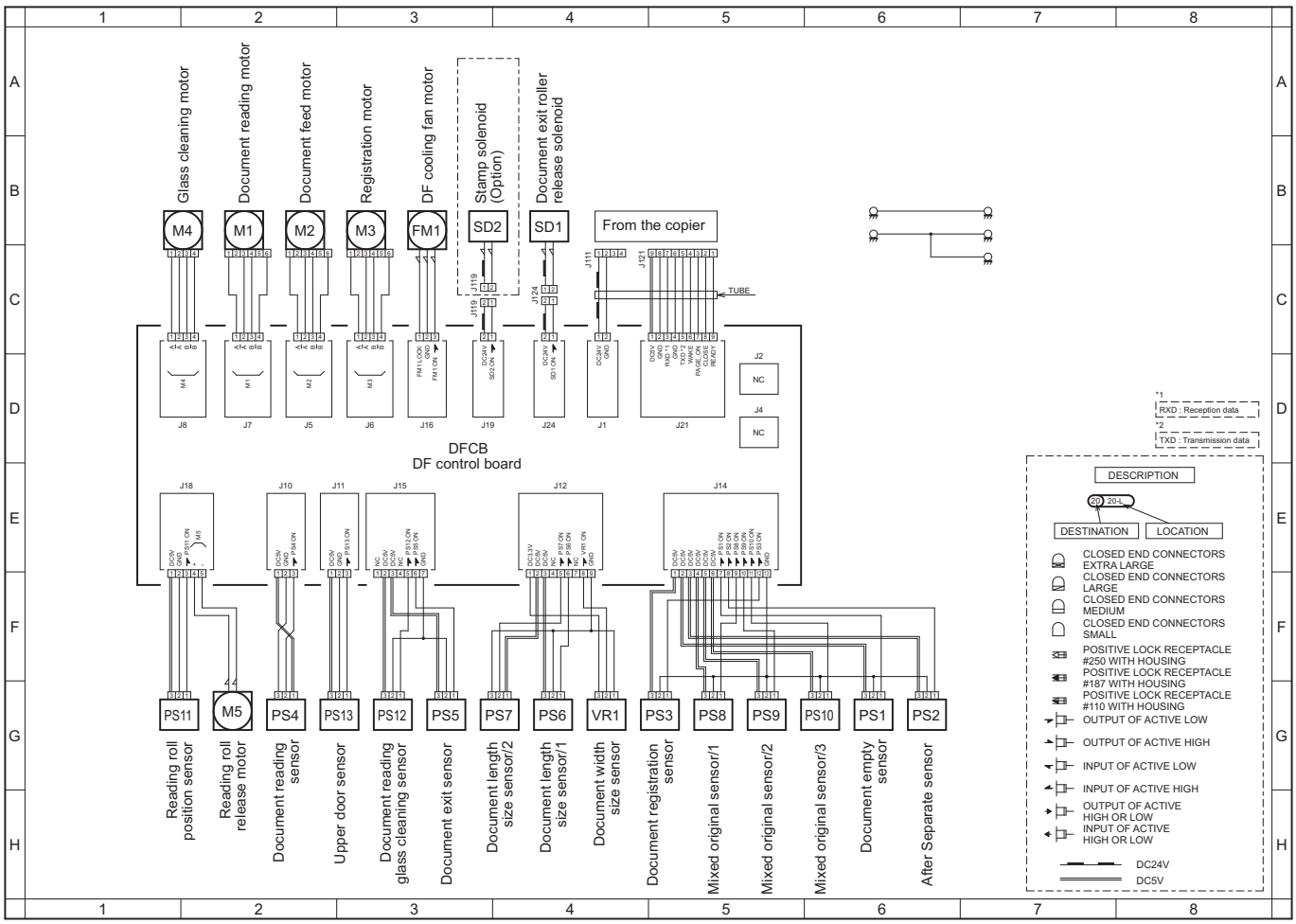
- Dual scan document feeder Wiring diagram (a796m0nc802db.pdf 0.5 MB)

4. Option

4.1 DF-629

4.1.1 DF-629

DF-629 Overall wiring diagram



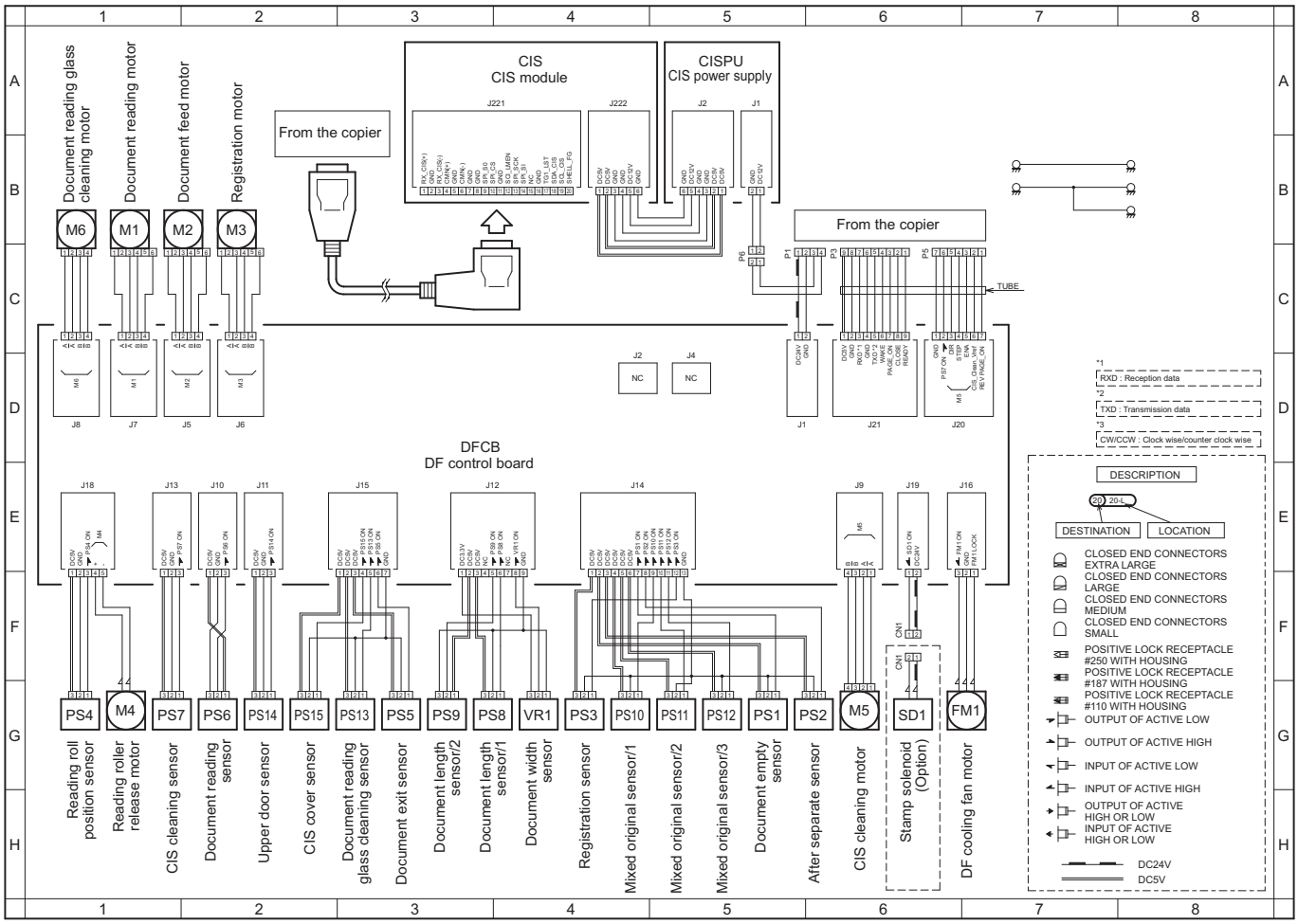
a3cfm0nc820da
May 2015

- DF-629 Wiring diagram (a3cfm0nc820da.pdf 1.1 MB)

4.2 DF-704

4.2.1 DF-704

DF-704 Overall wiring diagram



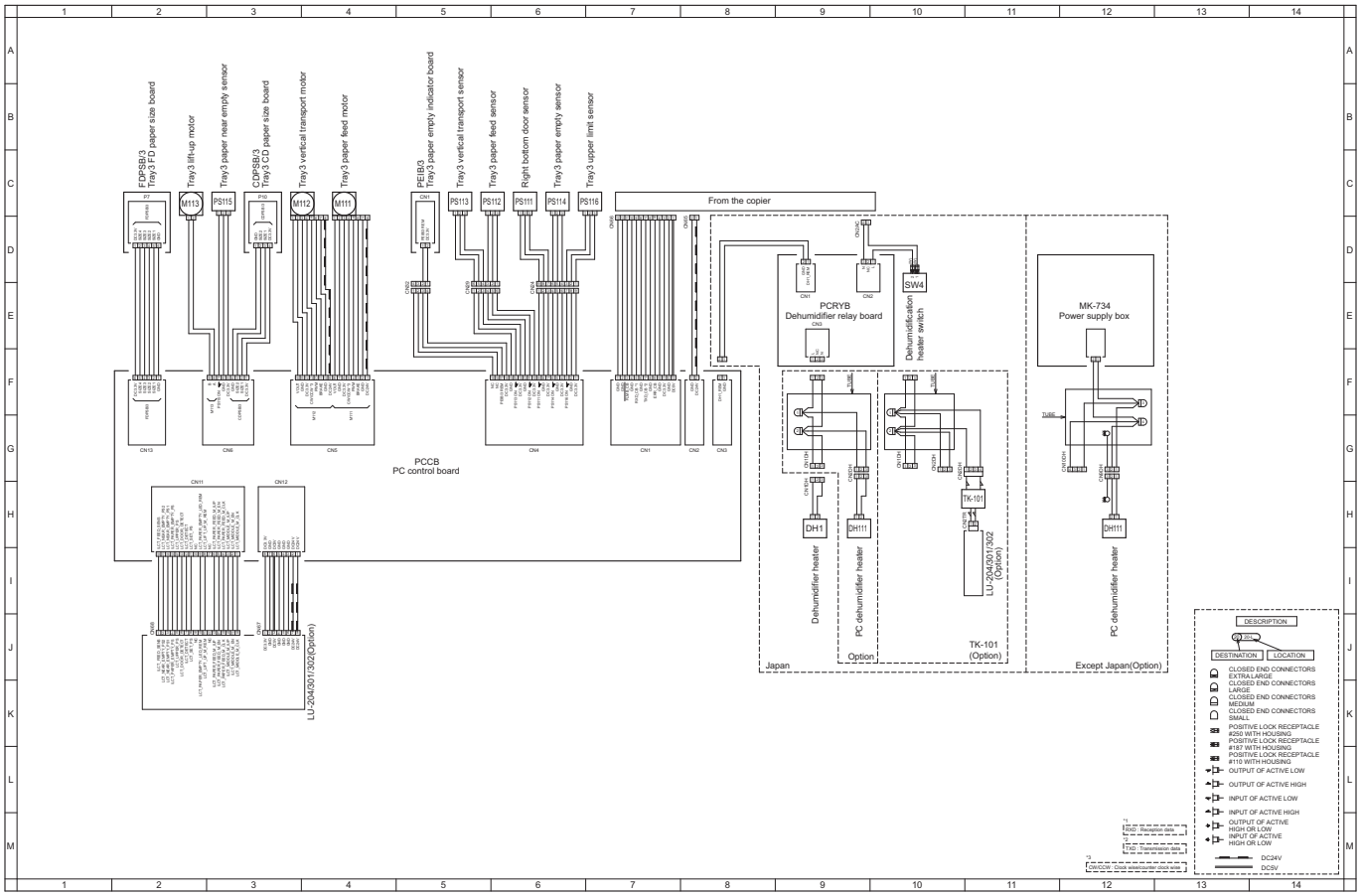
a3cem0nc820da
May 2015

- DF-704 Wiring diagram (a3cem0nc820da.pdf 1.1 MB)

4.3 PC-110

4.3.1 PC-110

PC-110 Overall wiring diagram



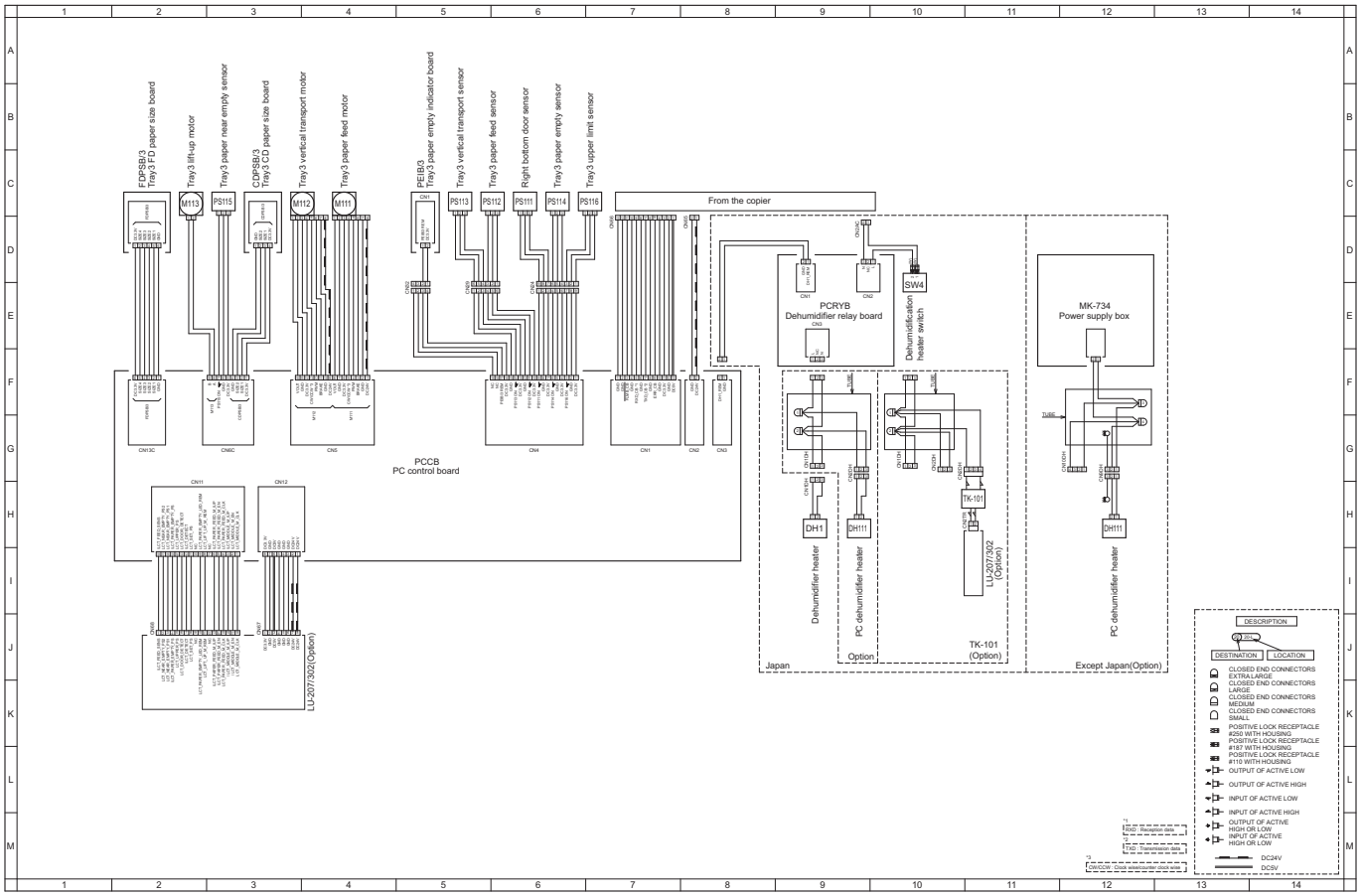
a2xmm0nc810db
May 2015

- PC-110 Wiring diagram (a2xmm0nc810db.pdf 0.7 MB)

4.4 PC-115

4.4.1 PC-115

PC-115 Overall wiring diagram



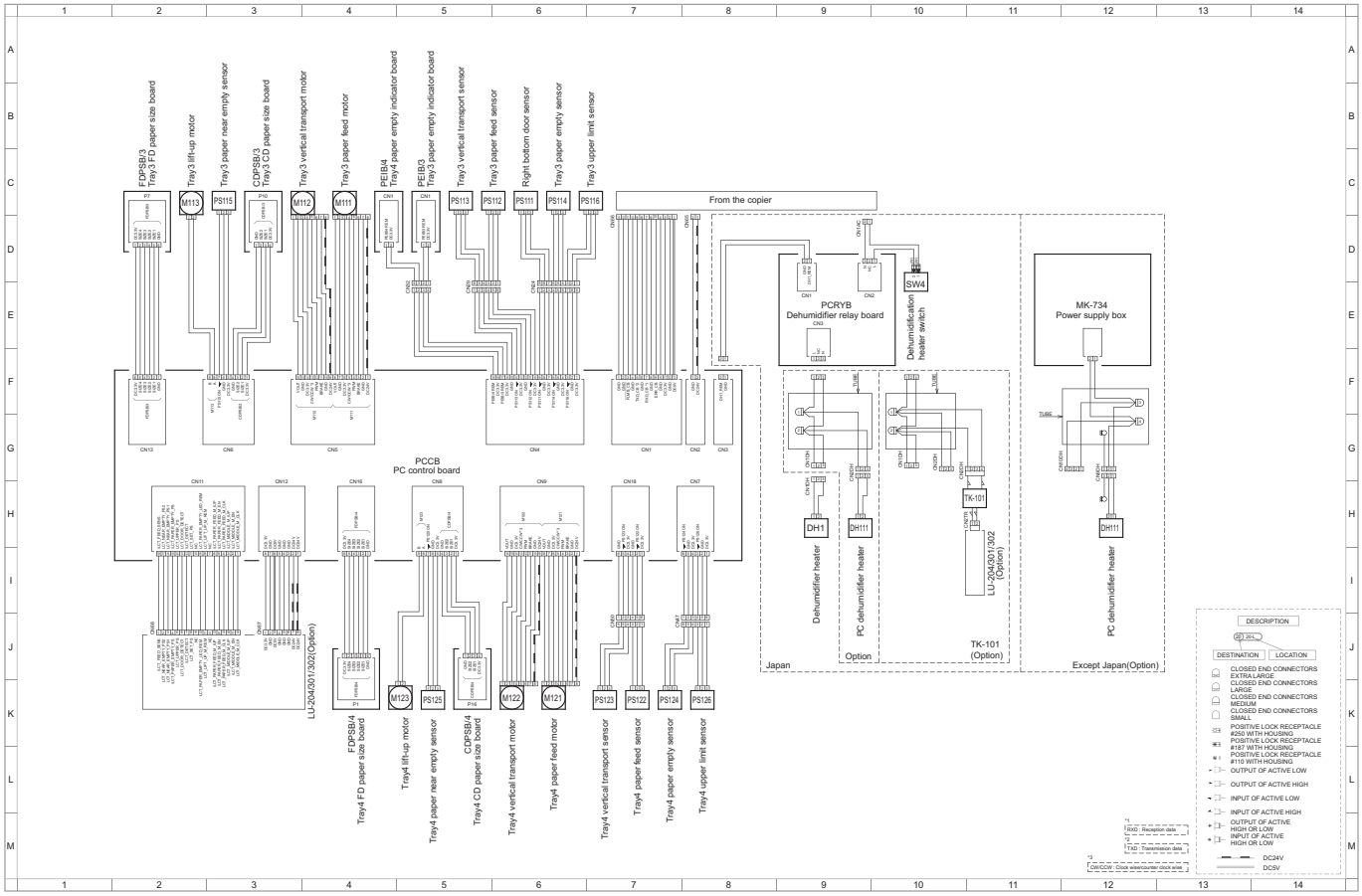
a9hfm0nc801da
May 2016

- PC-115 Wiring diagram (a9hfm0nc801da.pdf 0.5 MB)

4.5 PC-210

4.5.1 PC-210

PC-210 Overall wiring diagram



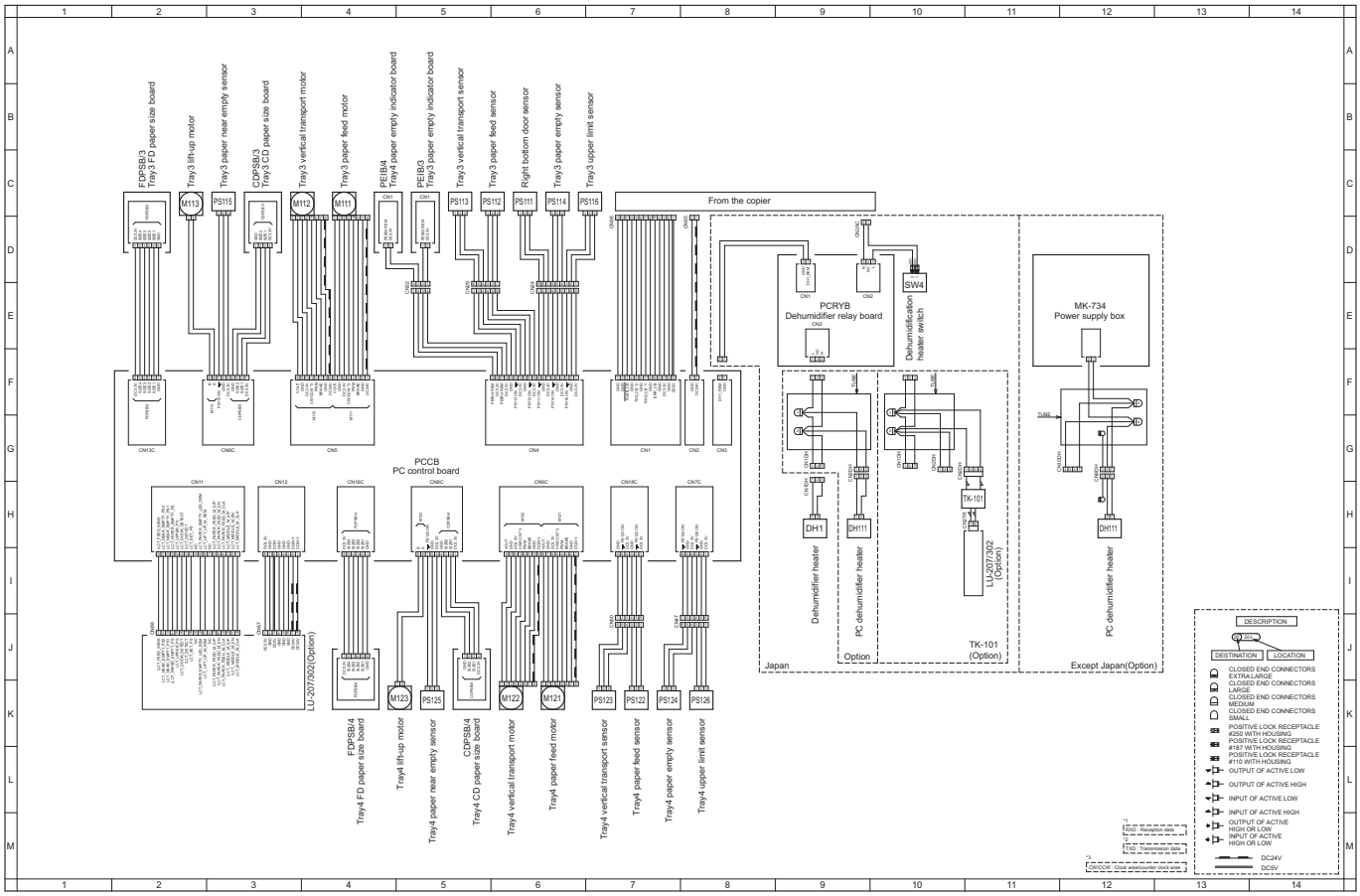
a2xmm0nc820db
May 2015

- PC-210 Wiring diagram (a2xmm0nc820db.pdf 1.5 MB)

4.6 PC-215

4.6.1 PC-215

PC-215 Overall wiring diagram



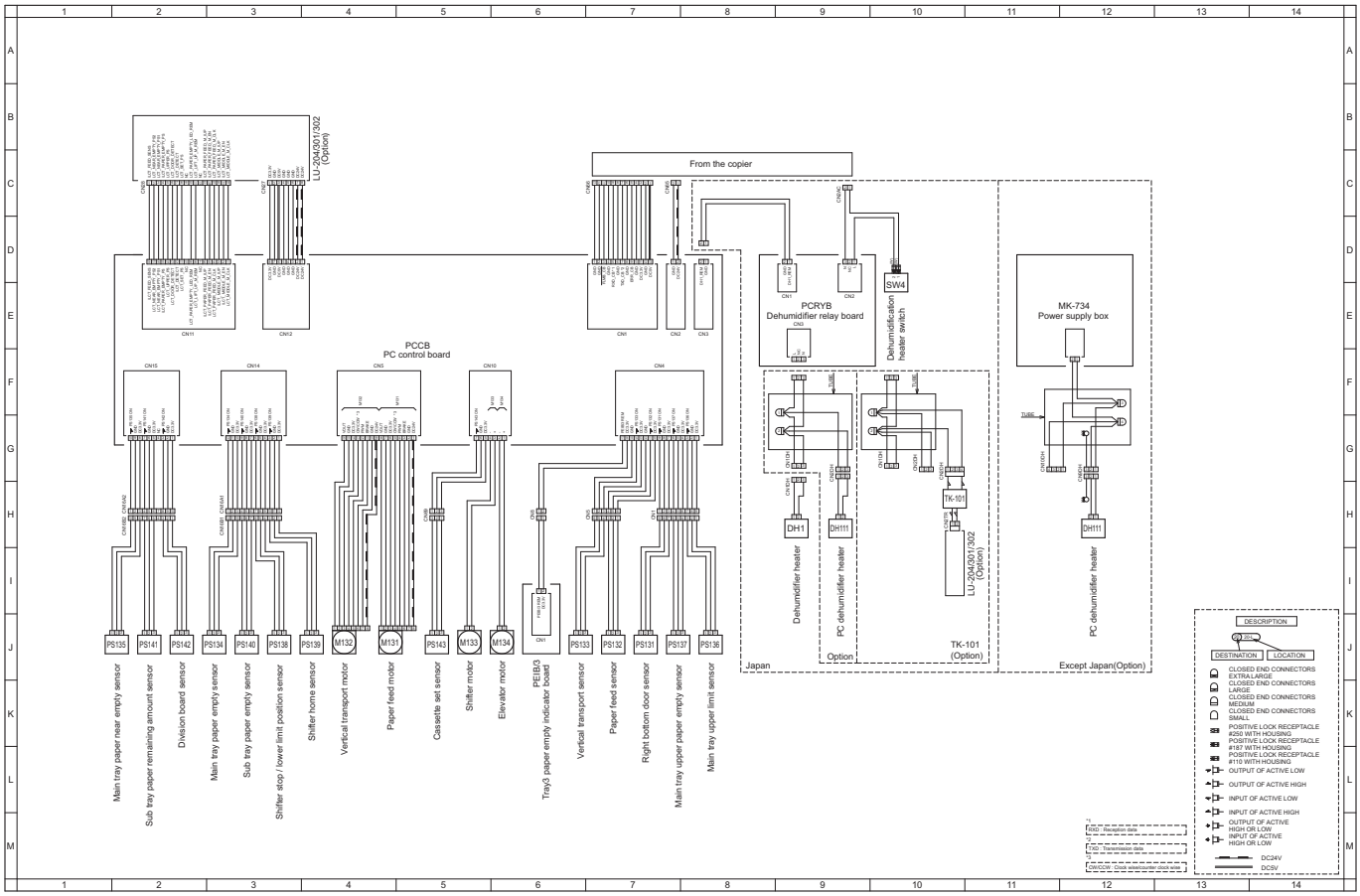
a9hfm0nc802da
May 2016

- PC-215 Wiring diagram (a9hfm0nc802da.pdf 0.5 MB)

4.7 PC-410

4.7.1 PC-410

PC-410 Overall wiring diagram



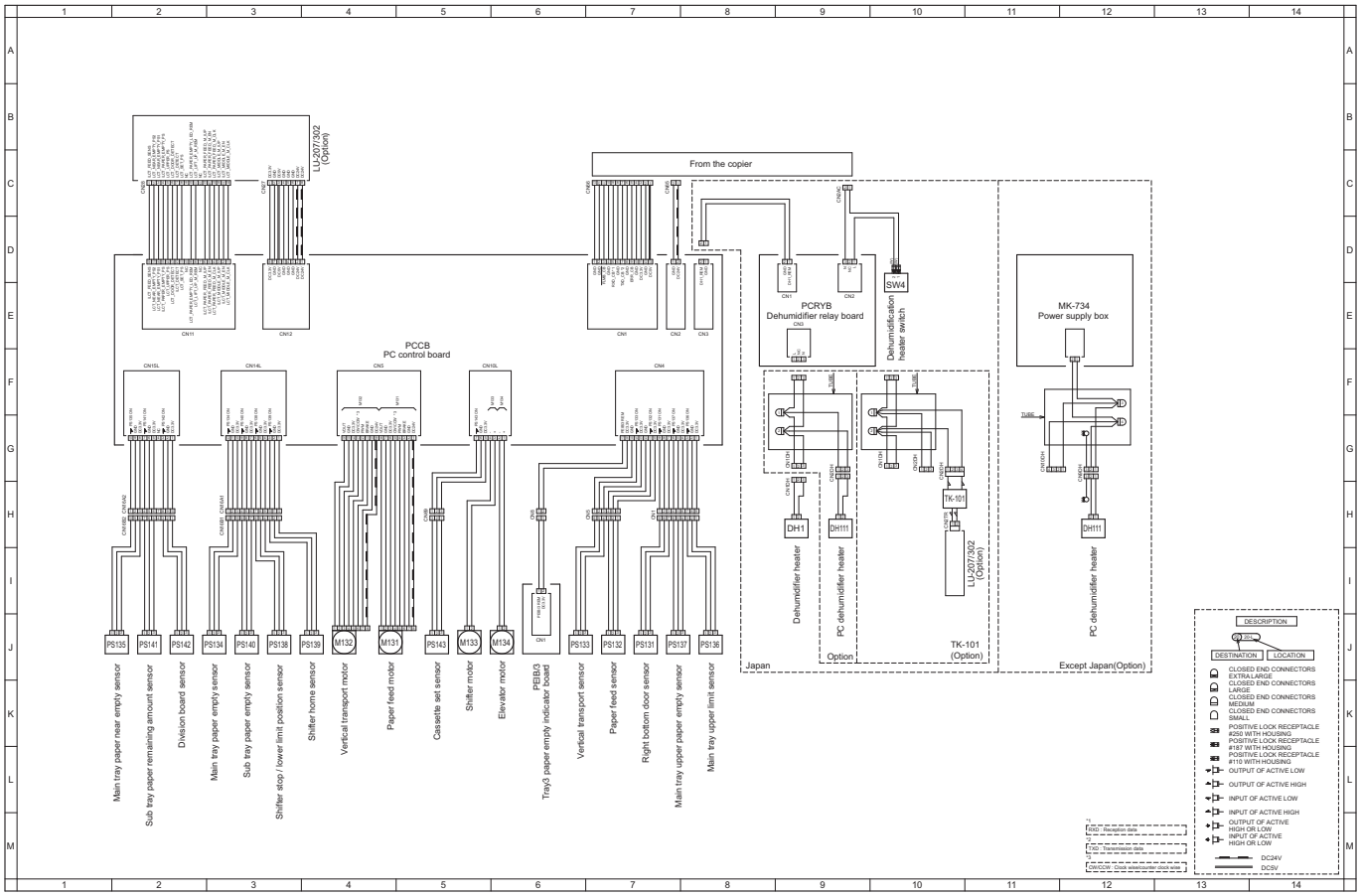
a2xmm0nc830db
May 2015

- PC-410 Wiring diagram (a2xmm0nc830db.pdf 1.3 MB)

4.8 PC-415

4.8.1 PC-415

PC-415 Overall wiring diagram

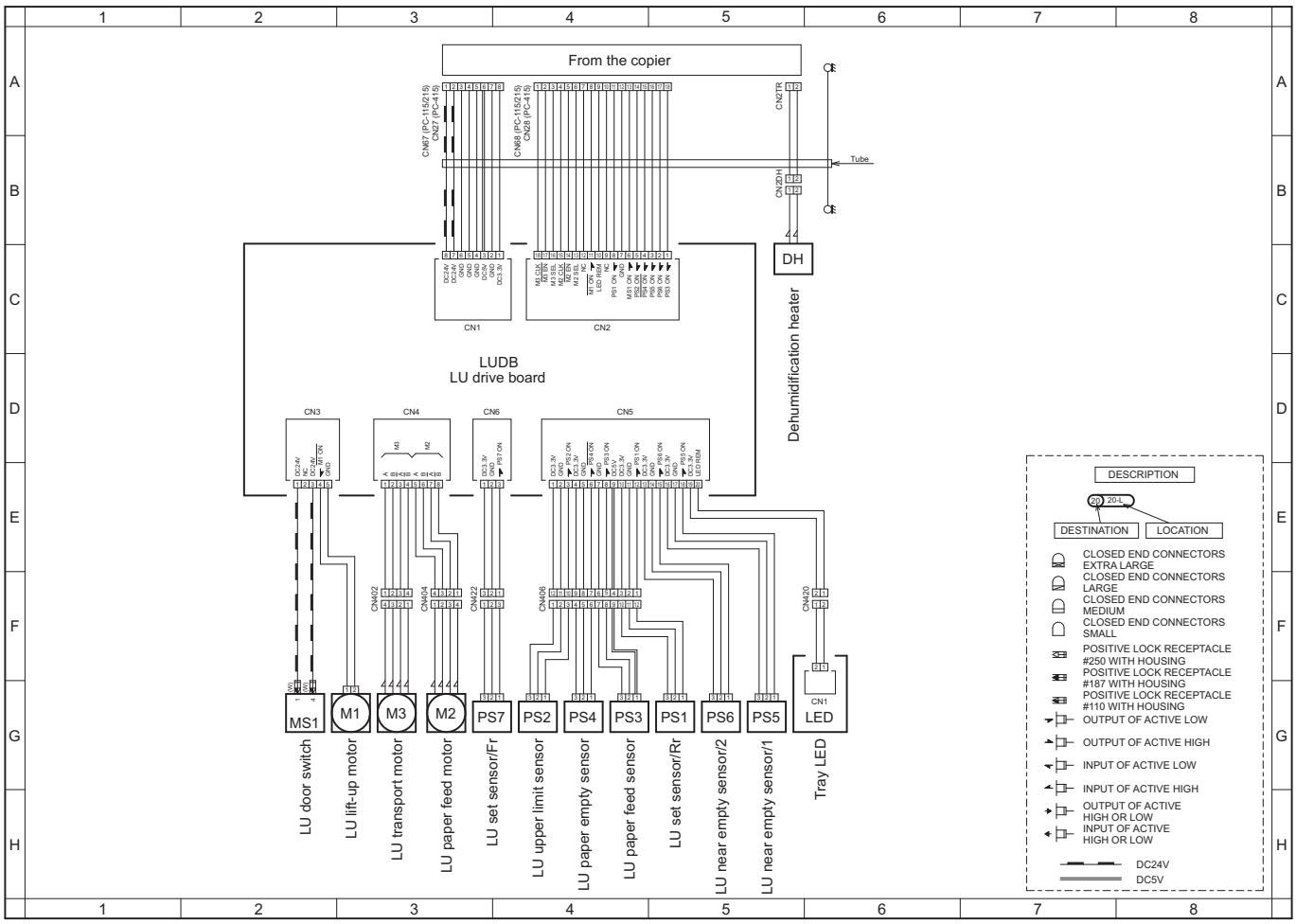


a9hfm0nc803da
May 2016

- PC-415 Wiring diagram (a9hfm0nc803da.pdf 0.5 MB)

4.9 LU-207

LU-207 Overall wiring diagram



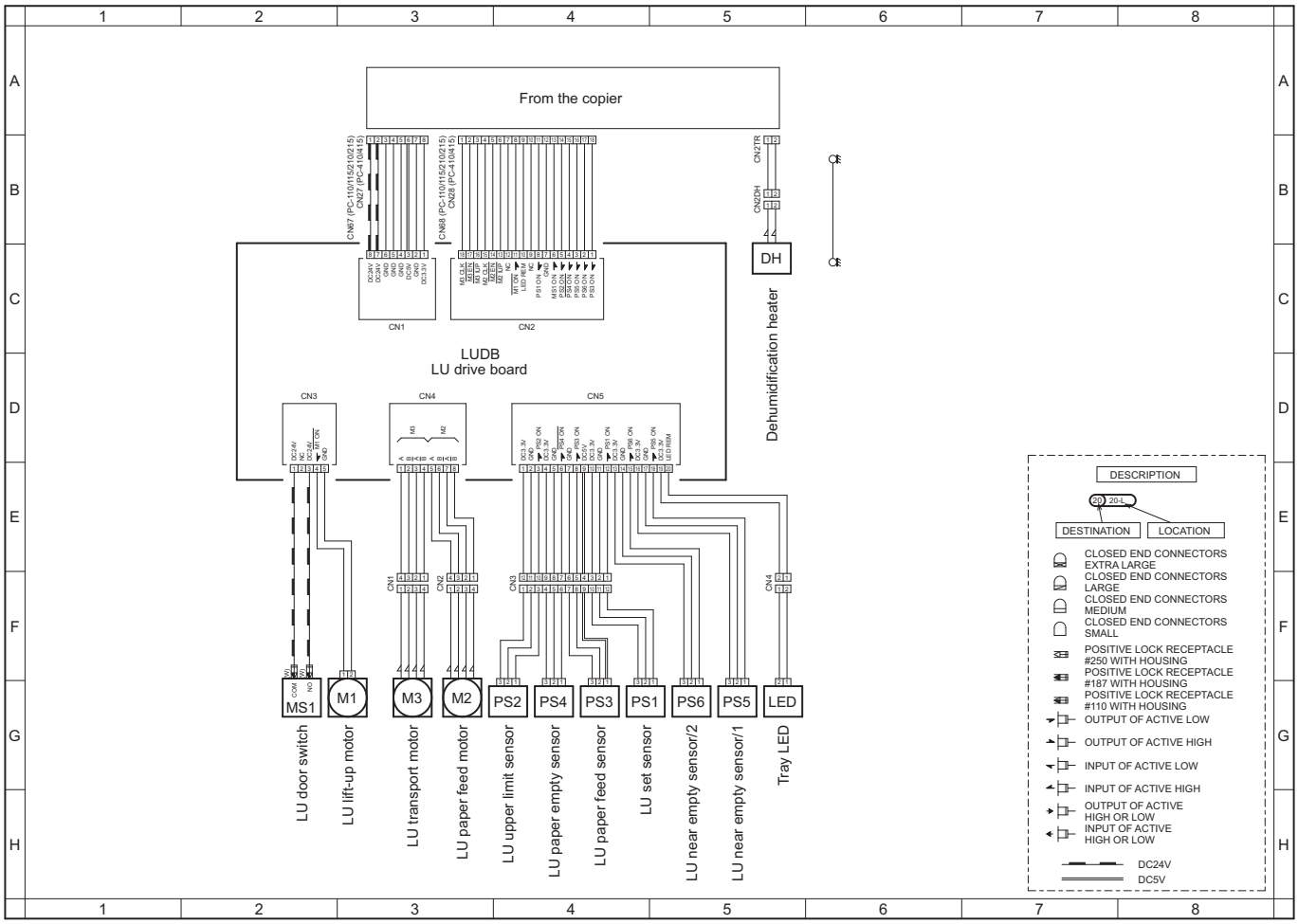
a9efm0nc801da
May 2016

- LU-207 Wiring diagram (a9efm0nc801da.pdf 0.5 MB)

4.10 LU-302

4.10.1 LU-302

LU-302 Overall wiring diagram



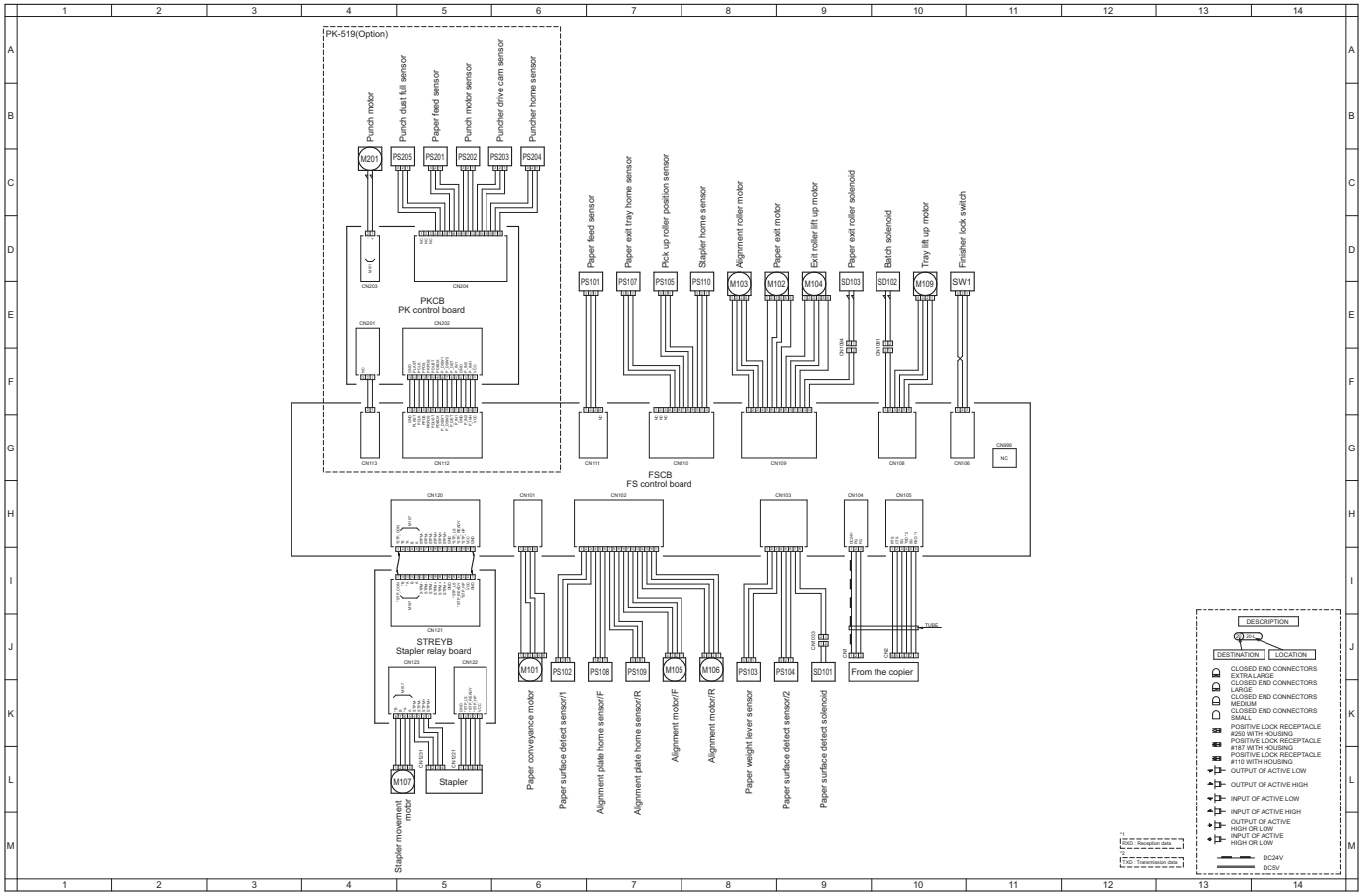
a87vm0nc810db
May 2016

- LU-302 Wiring diagram (a87vm0nc810db.pdf 0.5MB)

4.11 FS-533

4.11.1 FS-533

FS-533 Overall wiring diagram

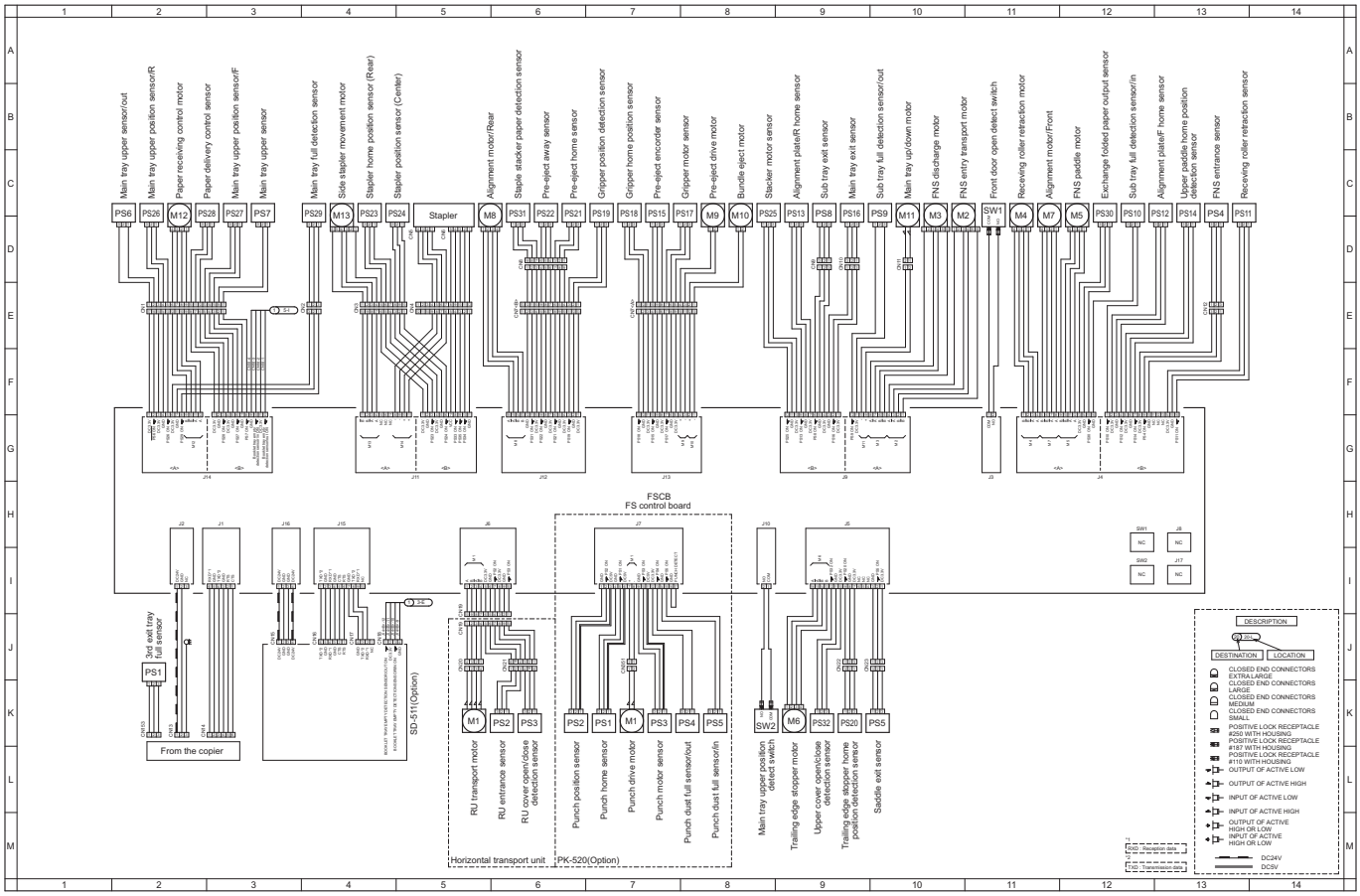


a2yum0nc810da
Apr.2012

- FS-533 Wiring diagram (a2yum0nc810da.pdf 1.3 MB)

4.12 FS-534

FS-534 Overall wiring diagram

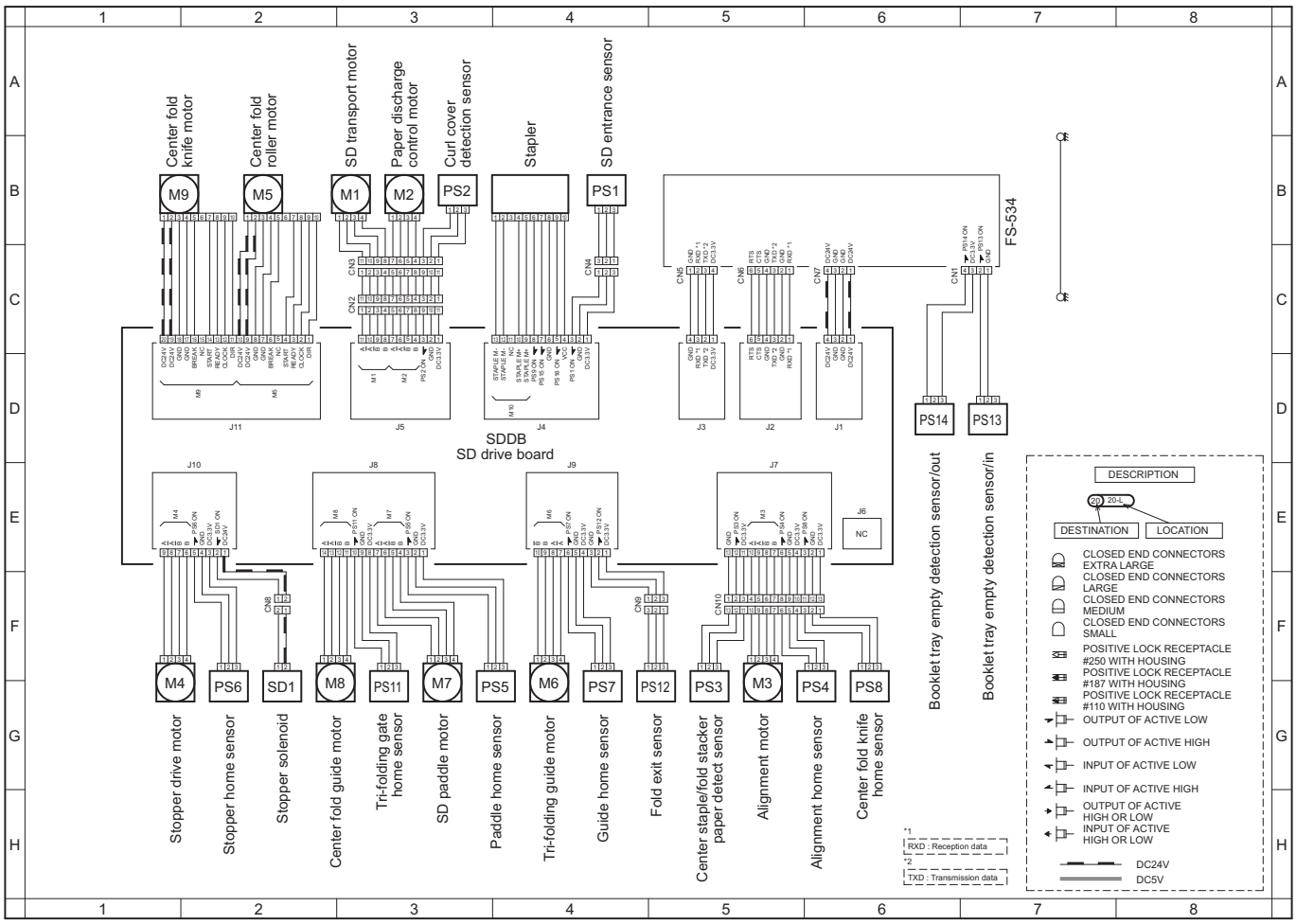


a3epm0nc810da
Apr.2012

- FS-534 Wiring diagram (a3epm0nc810da.pdf 2.0 MB)

4.13 FS-534SD

SD-511 Overall wiring diagram



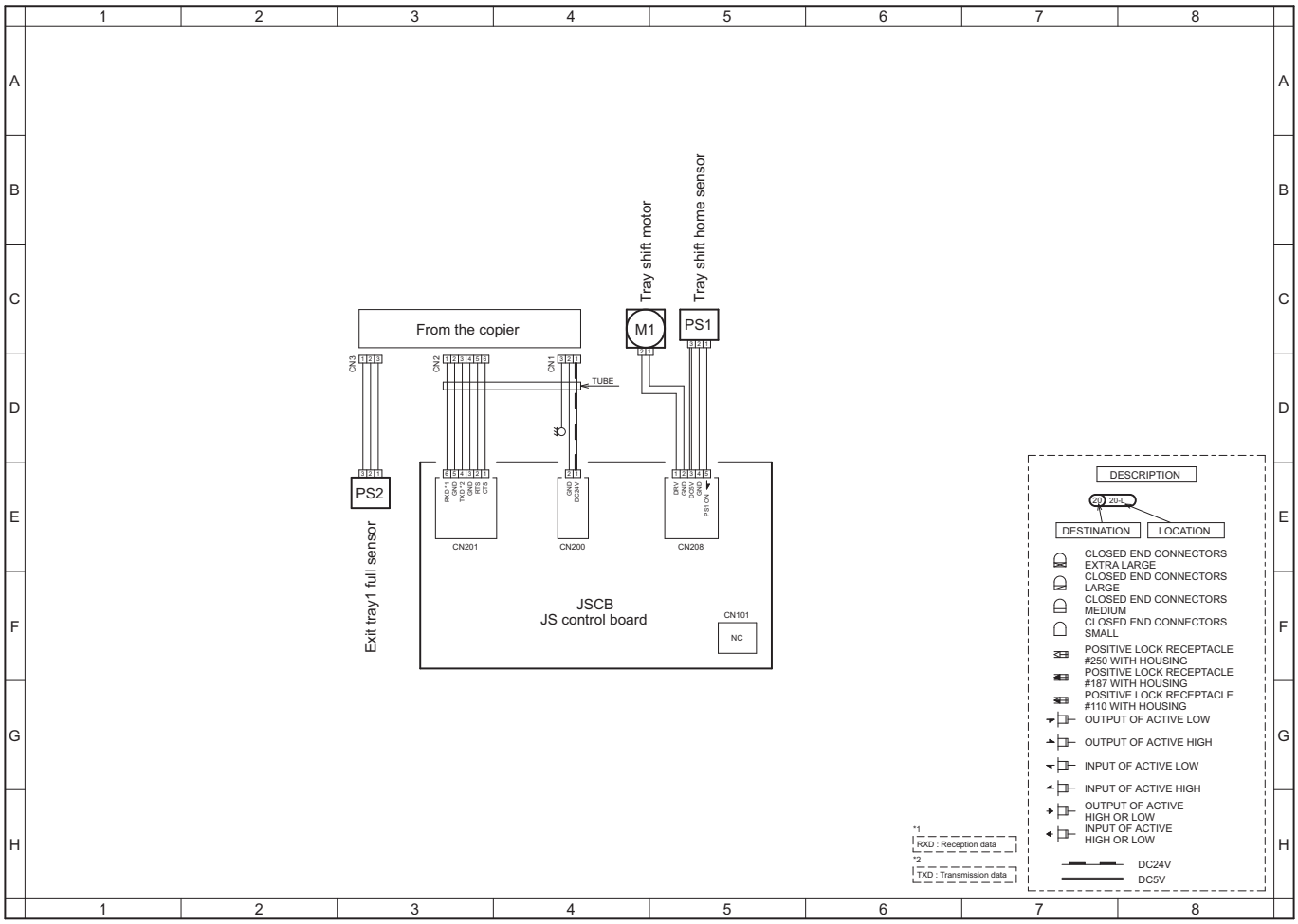
A3ER-B001-0A
Dec.2011

- SD-511 Wiring diagram (a3erm0nc801da.pdf 1.2 MB)

4.14 JS-506

4.14.1 JS-506

JS-506 Overall wiring diagram

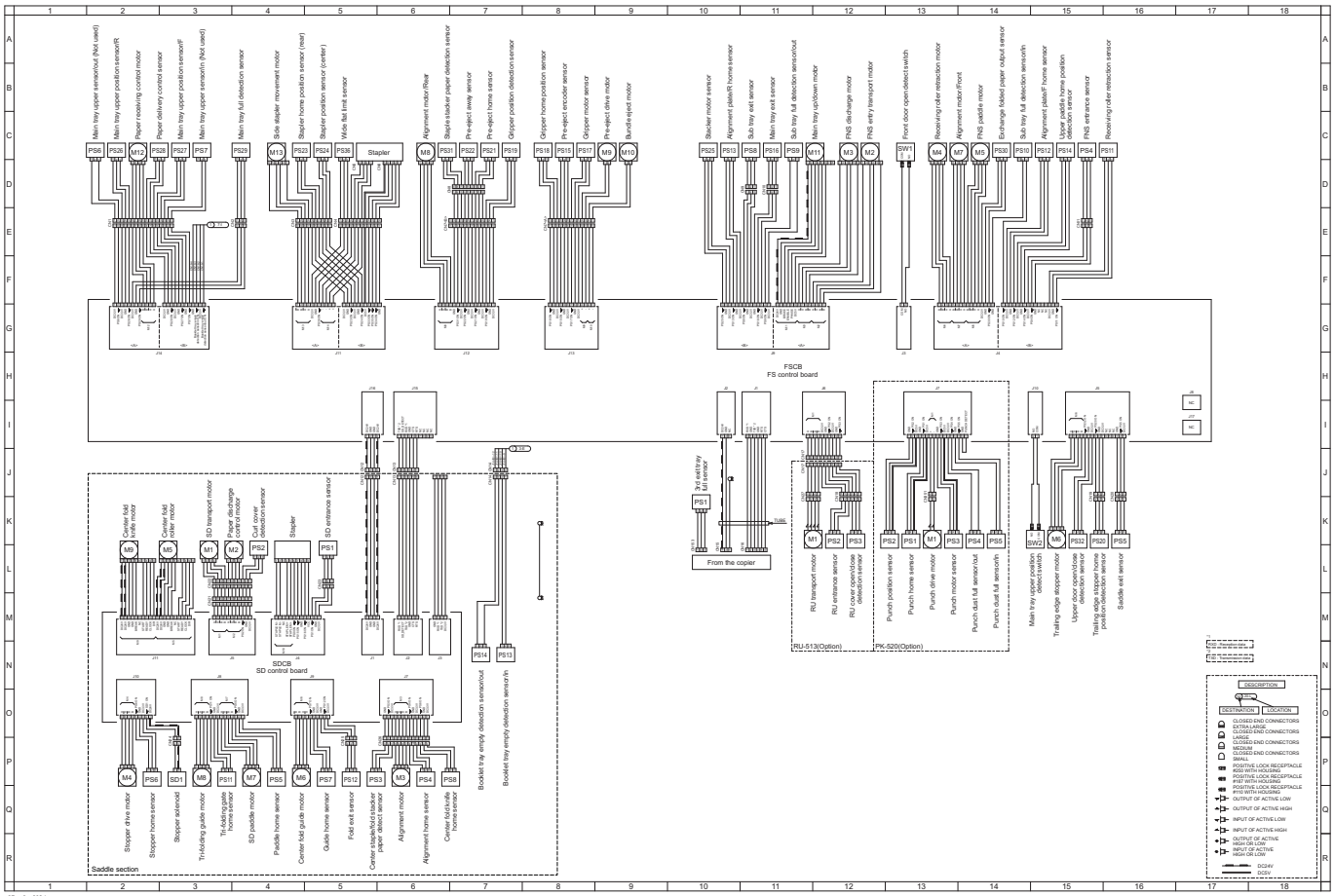


a2yvm0nc810da
Apr.2012

- JS-506 Wiring diagram (a2yvm0nc810da.pdf 0.7 MB)

4.15 FS-536/FS-536SD

FS-536/FS-536SD Overall wiring diagram

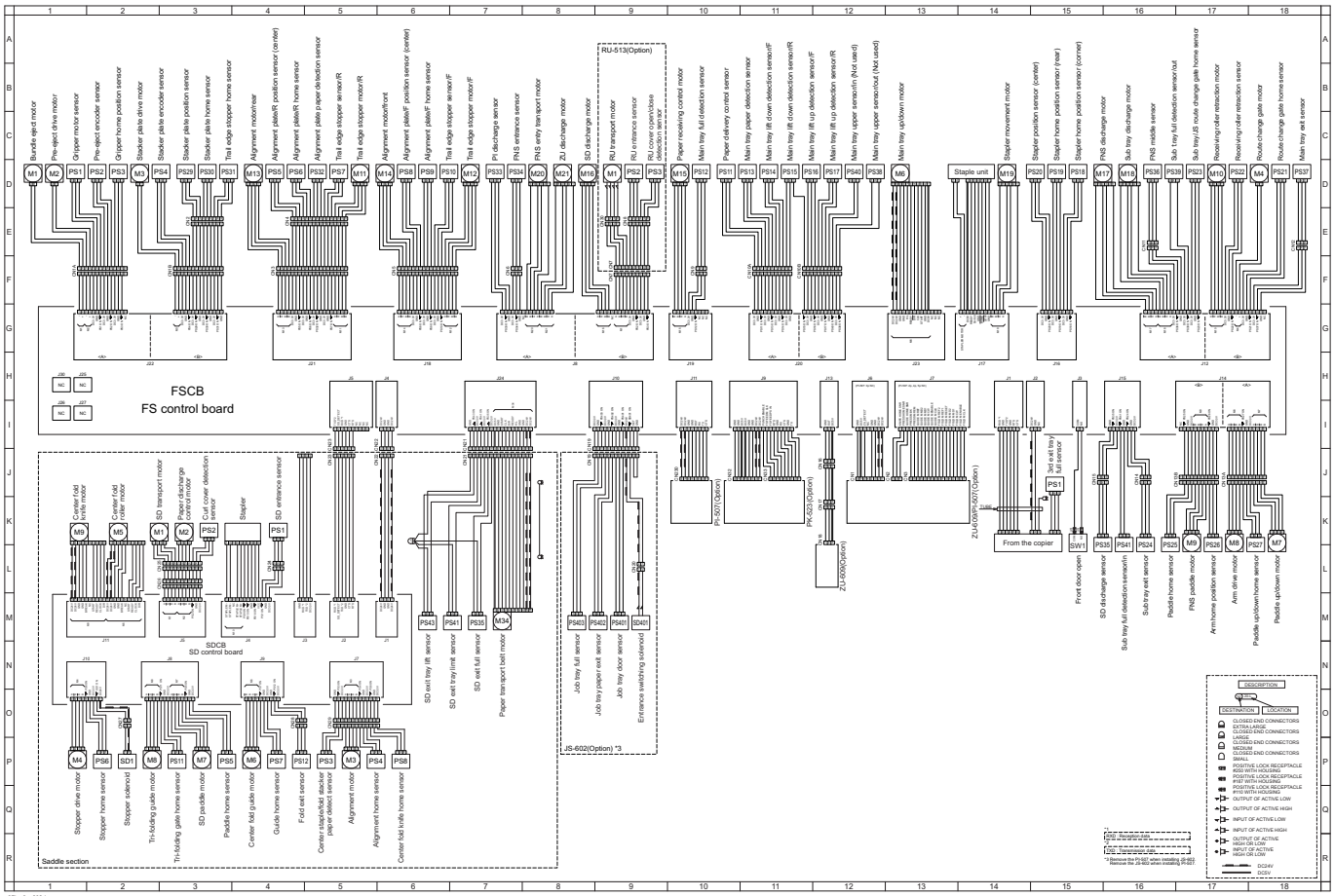


a87gm0nc802da
May 2016

- FS-536/FS-536SD Wiring diagram (a87gm0nc802da.pdf 0.6 MB)
- FS-536/FS-536SD Wiring diagram A3 size (1/2) (a87gm0nc912da.pdf 0.5 MB)
- FS-536/FS-536SD Wiring diagram A3 size (2/2) (a87gm0nc922da.pdf 0.7 MB)

4.16 FS-537/FS-537SD

FS-537/FS-537SD Overall wiring diagram

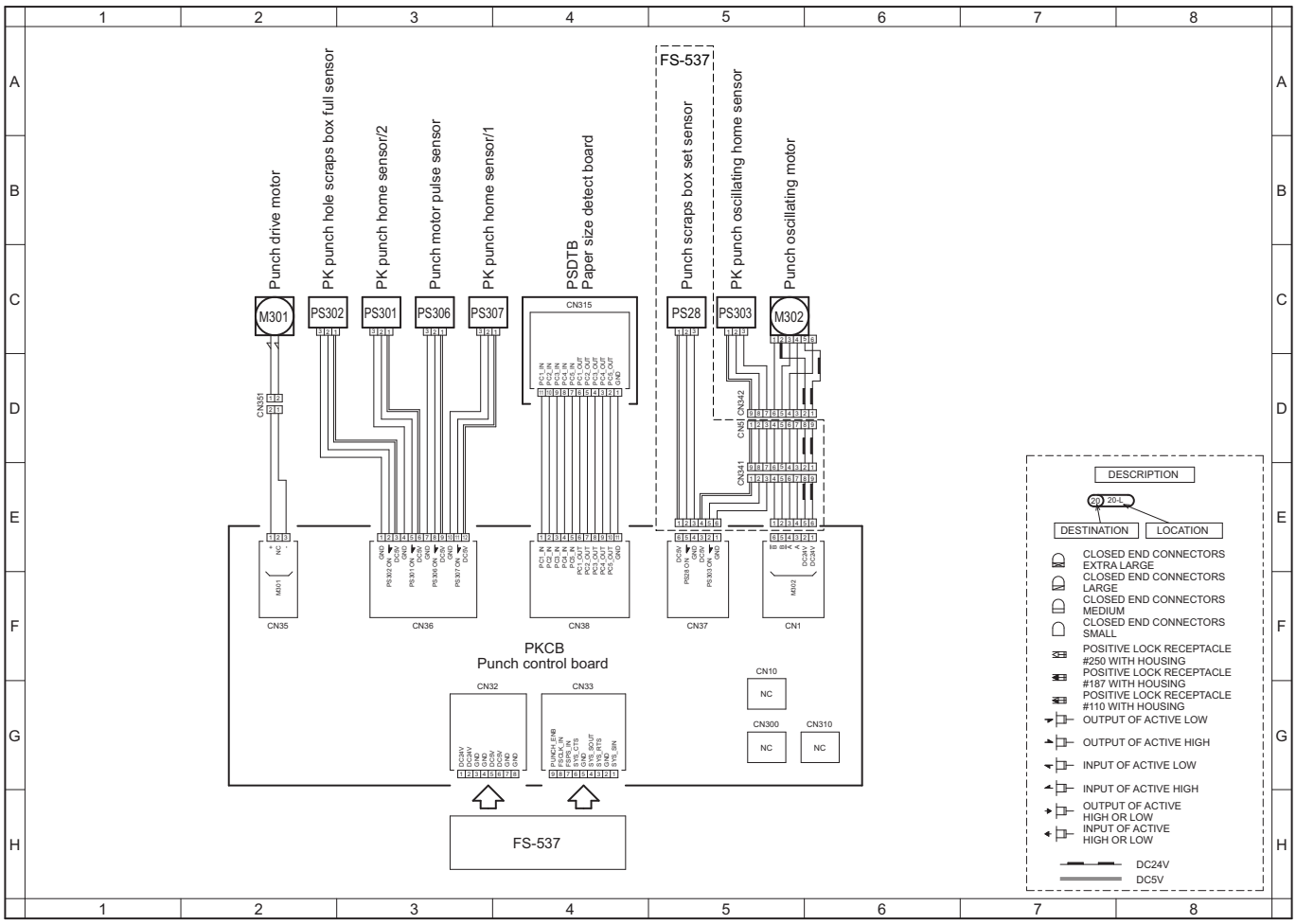


a87hm0nc802da
May 2016

- FS-537/FS-537SD Wiring diagram (a87hm0nc802da.pdf 0.6 MB)
- FS-537/FS-537SD Wiring diagram A3 size (1/2) (a87hm0nc912da.pdf 0.6 MB)
- FS-537/FS-537SD Wiring diagram A3 size (2/2) (a87hm0nc922da.pdf 0.6 MB)

4.17 PK-523

PK-523 Overall wiring diagram

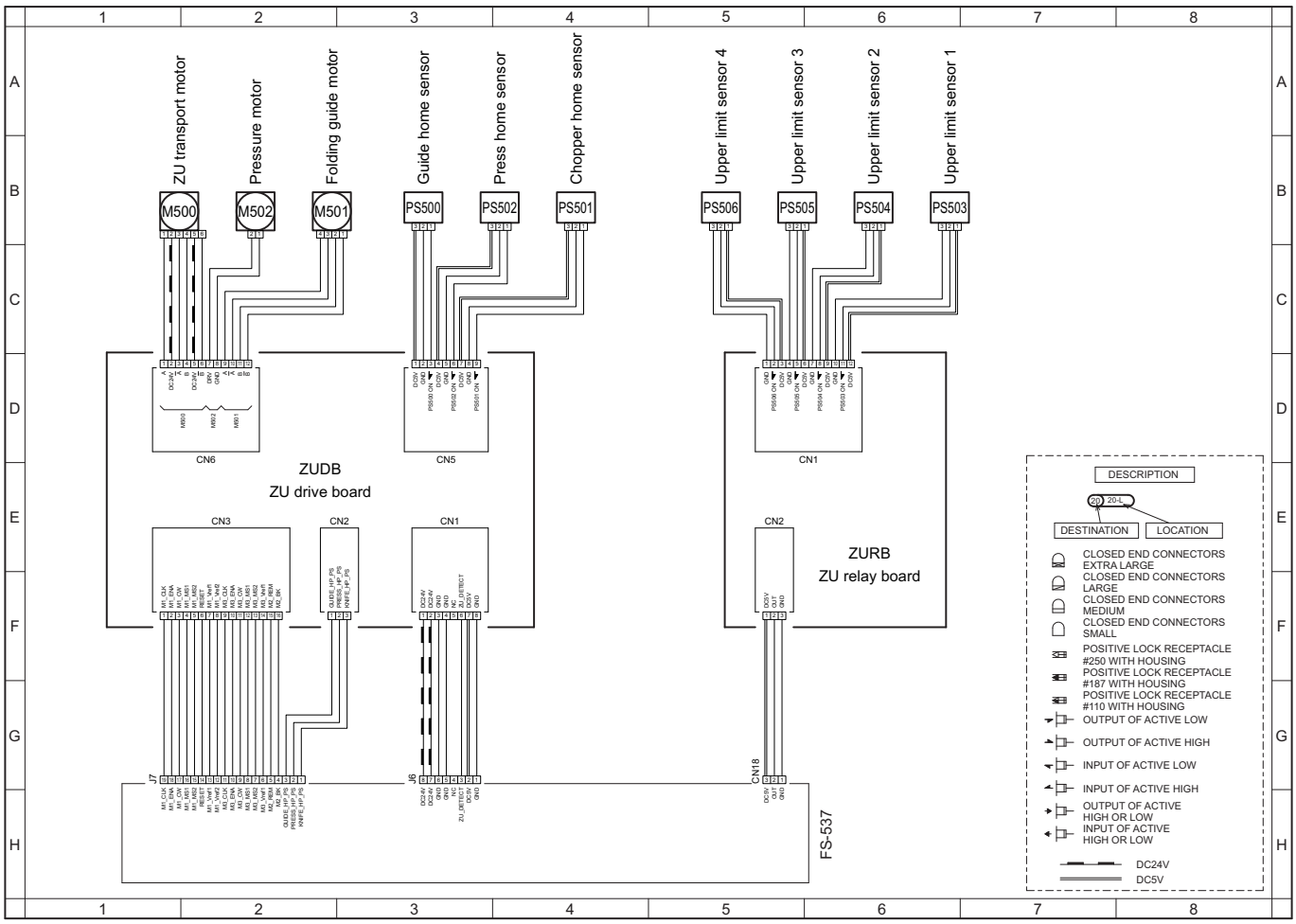


a99km0nc801db
May 2016

- PK-523 Wiring diagram (a99km0nc801db.pdf 0.5 MB)

4.18 ZU-609

ZU-609 Overall wiring diagram

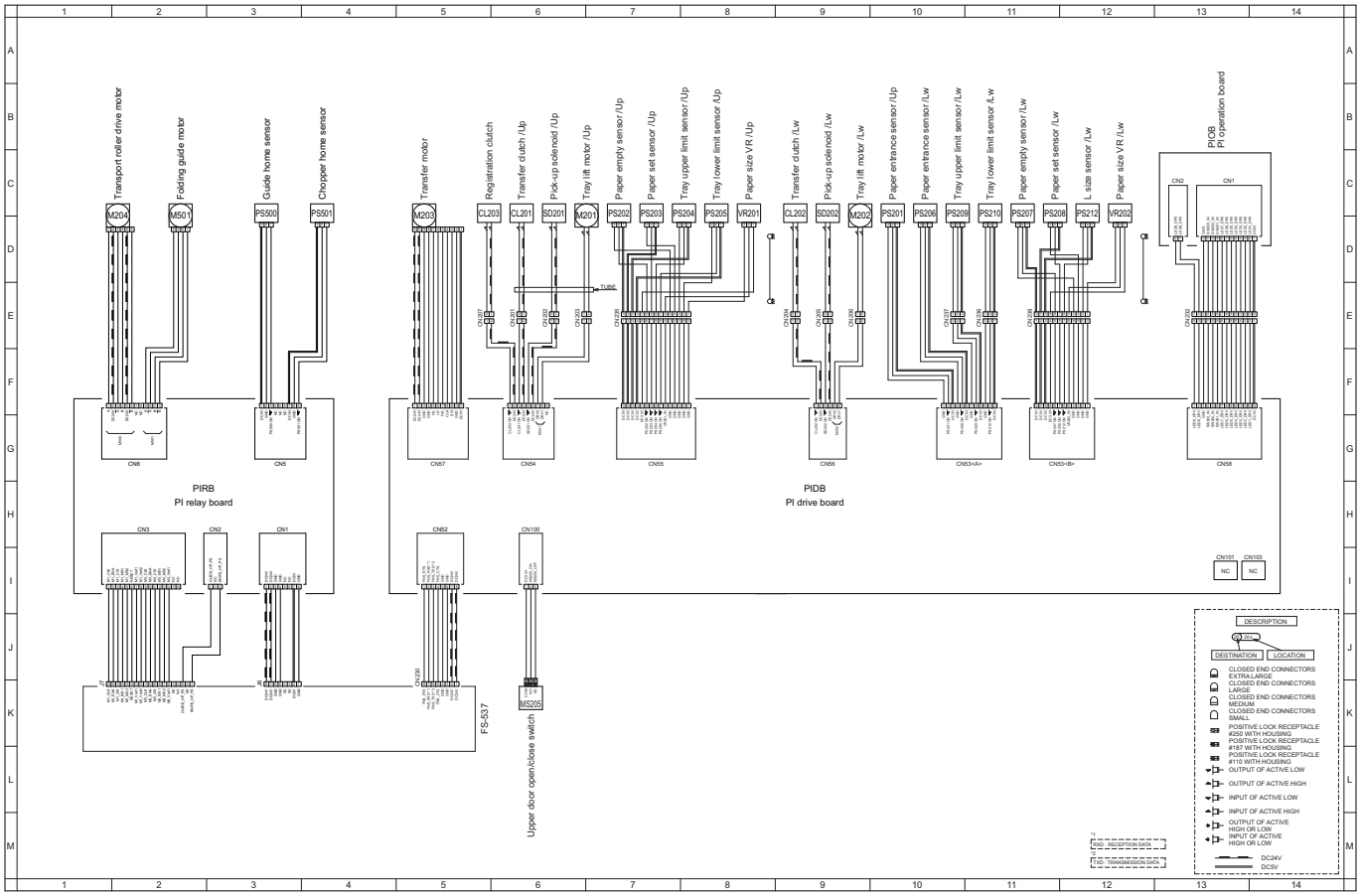


a63gm0nc801da
Mar.2016

- ZU-609 Wiring diagram (a63gm0nc801da.pdf 0.5 MB)

4.19 PI-507

PI-507 Overall wiring diagram



a8c6m0nc801da
Mar.2016

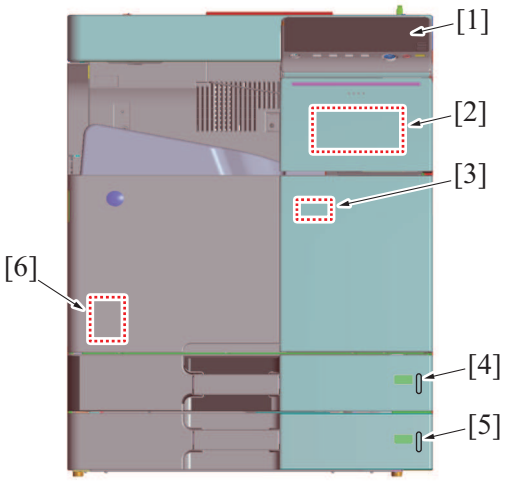
- PI-507 Wiring diagram (a8c6m0nc801da.pdf 0.5 MB)

O THEORY OF OPERATION bizhub C658/C558/C458/C368/C308/C258

1. INTERFACE SECTION

1.1 Configuration (bizhub C368/C308/C258)

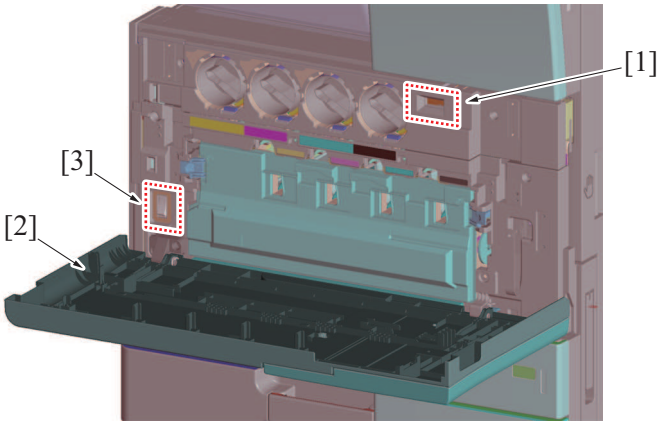
1.1.1 Front side



[1]	Control panel	[2]	IC card reading position *2
[3]	Total counter *1	[4]	Tray 1 paper remaining level display (Blinking: near empty, Lit up: empty)
[5]	Tray 2 paper remaining level display (Blinking: near empty, Lit up: empty)	[6]	Main power switch (SW1)

- *1: Japan model only
- *2: When an MFP main body is equipped with optional authentication unit AU-201 and MK-735.

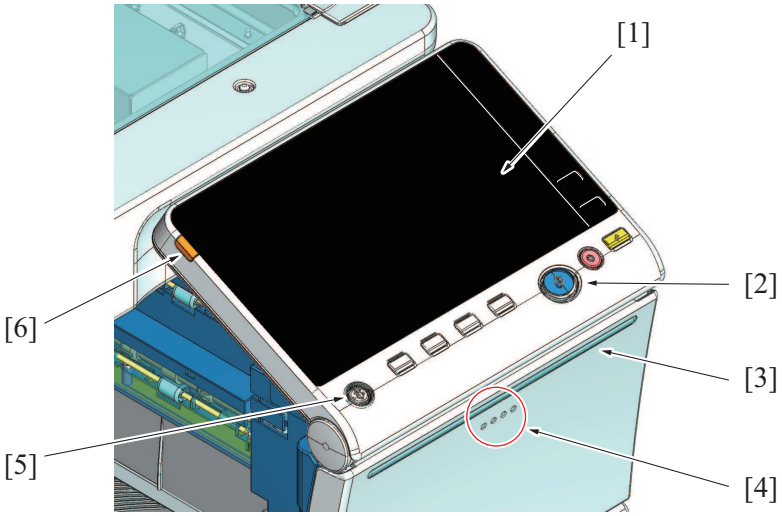
(1) Front door inside



[1]	Total counter *	[2]	Front door (open position)
[3]	Main power switch (SW1)	-	-

- *: Japan model only

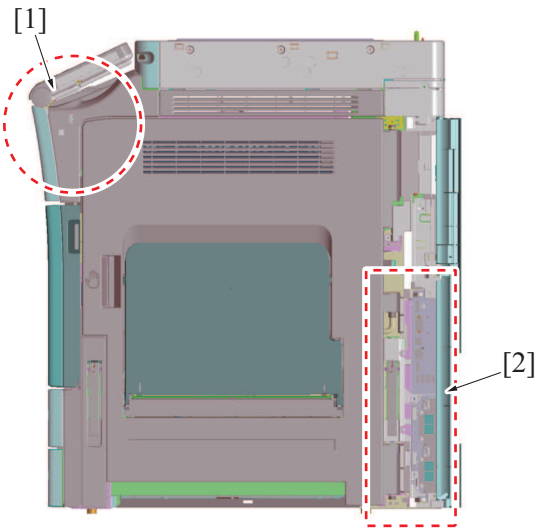
(2) Control panel section



[1]	Touch panel (9 inches)	[2]	Start key *1
[3]	Operation status indicator section *1	[4]	Data indicator *1
[5]	Power key *1	[6]	Warning status indicator section *1

*1: For details of the control state of lighting and blinking, refer to O THEORY OF OPERATION 22. INDICATOR FUNCTION.

1.1.2 Right side

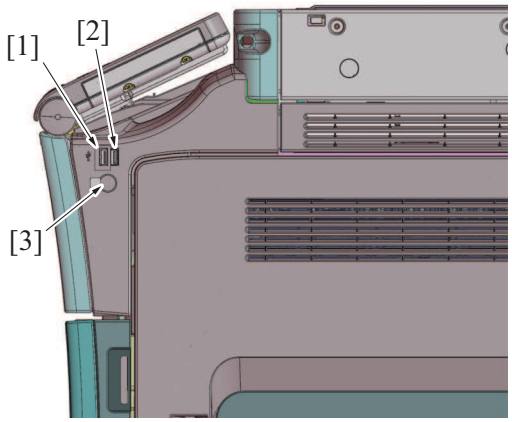


[1]	Front side	[2]	Rear lower side

(1) Front side

NOTE

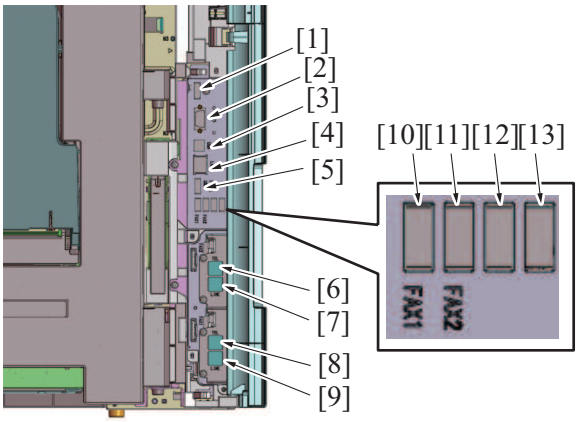
- **USB port [2] is extended from the rear lower side USB port by the USB cable. If the USB cable extended from the rear lower side USB port is unplugged, the front side USB port is no longer operational.**



[1]	USB port (Type A, optional) *1	[2]	USB port (Type A, standard) *2
[3]	Voice guidance output terminal *1	-	-

- ***1: When local interface kit EK-608/EK-609 is mounted.**
- ***2: Do not use this port for connecting to an optional authentication unit; use the rear lower USB port.**

(2) Rear lower side



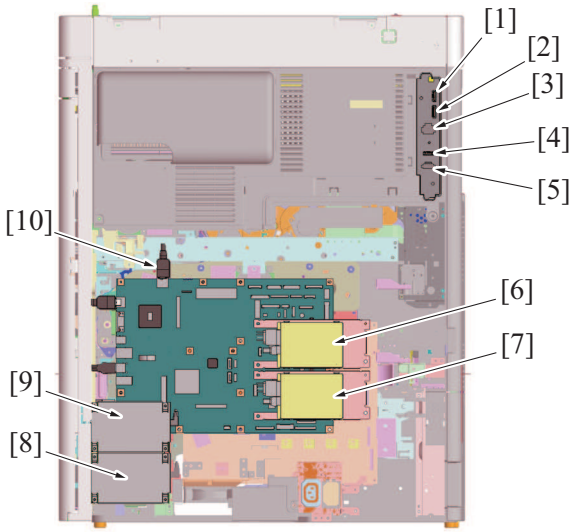
[1]	Control panel connection connector	[2]	Serial port (for CS remote care modem connection)
[3]	USB port (Type B) USB2.0/1.1	[4]	Network port (1000Base-T/100Base-TX/10Base-T)
[5]	USB extension port (USB extension cable to the USB board at the front side)	[6]	LINE port 2 (for telephone line 2) *2
[7]	TEL port 2 (not used)	[8]	LINE port 1 (for telephone main line) *1
[9]	TEL port 1 (for external telephone main line) *1	[10]	USB port (Type A, FK-514: Fax1, FK-515: Fax3/4) *2
[11]	USB port (Type A, FK-514: Fax2) *2	[12]	USB port (Type A: for Authentication Unit or Upgrade Kit) USB2.0/1.1
[13]	USB port (Type A: for Authentication Unit or Upgrade Kit) USB2.0/1.1	-	-

- *1: When only one optional FK-514 unit is mounted
- *2: When two optional FK-514 units are mounted

NOTE

- **If only one optional FK-514 is mounted, always mount it to the main line position (lower side).**

1.1.3 Rear side



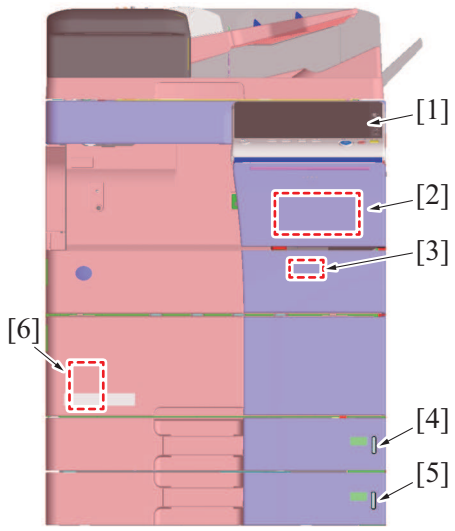
[1]	Document feeder connection connector (for DF-704)	[2]	Document feeder connection connector (for DF-629/ DF-704)
[3]	Document feeder connection connector (for DF-629/ DF-704)	[4]	Finisher connection connector
[5]	Finisher connection connector	[6]	HDD (A)
[7]	HDD (B) *	[8]	FAX Kit FK-514 (for main line) *

[9]	FAX Kit FK-514 (for line 2) *	[10]	Scanner connection connector (image signal)

- *: Optional Hard Disk HD-524

1.2 Configuration (bizhub C658/C558/C458)

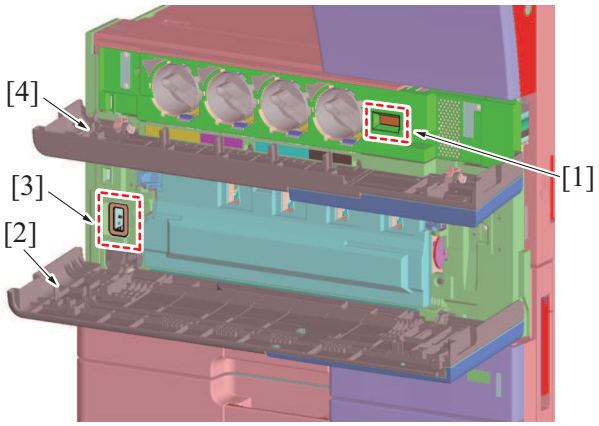
1.2.1 Front side



[1]	Control panel	[2]	IC card reading position *1
[3]	Total counter *2	[4]	Tray 1 paper remaining level display (Blinking: near empty, Lit up: empty)
[5]	Tray 2 paper remaining level display (Blinking: near empty, Lit up: empty)	[6]	Main power switch (SW1)

- *1: When an MFP main body is equipped with optional authentication unit AU-201/AU-201S and MK-735.
- *2: Japan model only

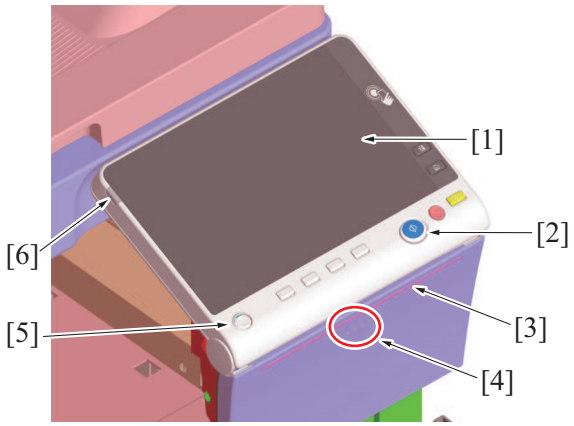
(1) Front door inside



[1]	Total counter *	[2]	Lower front door (open position)
[3]	Main power switch (SW1)	[4]	Upper front door (open position)

- *: Japan model only

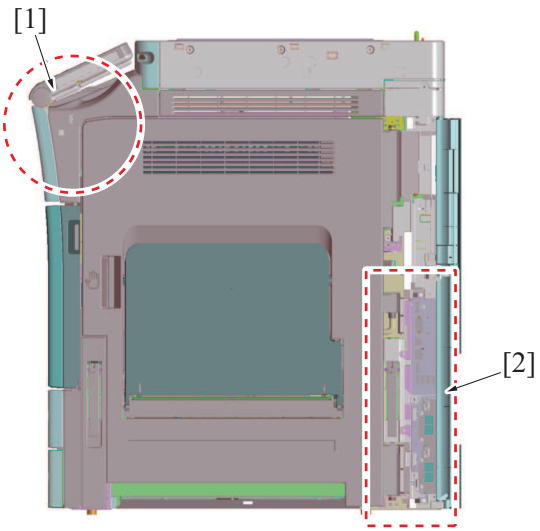
(2) Control panel section



[1]	Touch panel (10.1 inches)	[2]	Start key *
[3]	Operation status indicator section *	[4]	Data indicator *
[5]	Power key *	[6]	Warning status indicator section *

*: For details of the control state of lighting and blinking, refer to O THEORY OF OPERATION 23. INDICATOR FUNCTION.

1.2.2 Right side

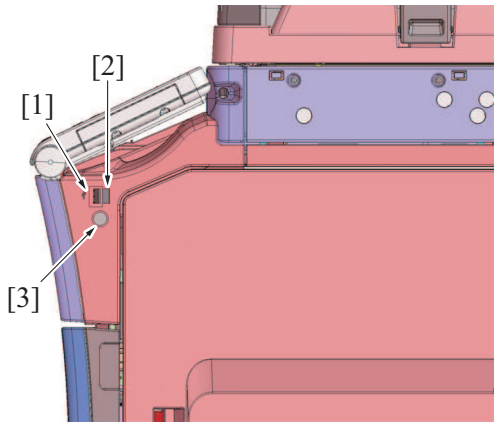


[1]	Front side	[2]	Rear lower side

(1) Front side

NOTE

- **USB port [2] is extended from the rear lower side USB port by the USB cable. If the USB cable extended from the rear lower side USB port is unplugged, the front side USB port is no longer operational.**

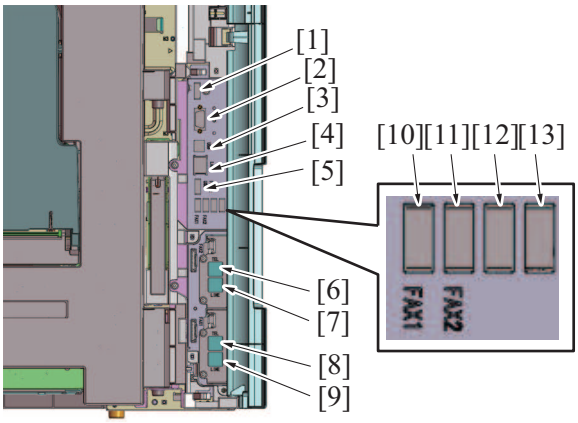


[1]	USB port (Type A, optional) *1	[2]	USB port (Type A, standard) *2

[3]	Voice guidance output terminal *1	-	-

- ***1: When local interface kit EK-608/EK-609 is mounted.**
- ***2: Do not use this port for connecting to an optional authentication unit; use the rear lower USB port.**

(2) Rear lower side



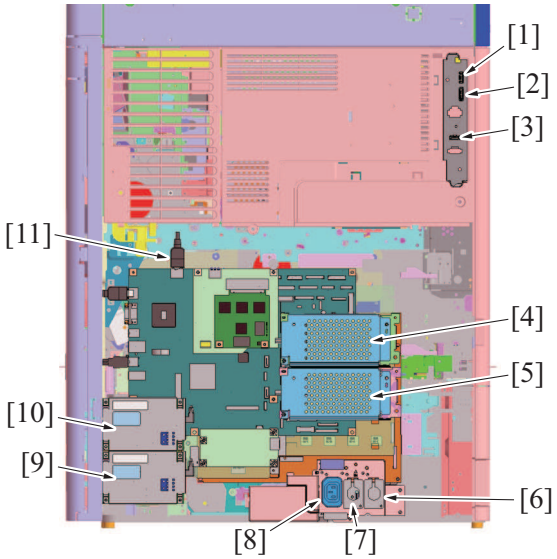
[1]	Control panel connection connector	[2]	Serial port (for CS remote care modem connection)
[3]	USB port (Type B) USB2.0/1.1	[4]	Network port (1000Base-T/100Base-TX/10Base-T)
[5]	USB extension port (USB extension cable to the USB board at the front side)	[6]	LINE port 2 (for telephone line 2) *2
[7]	TEL port 2 (not used)	[8]	LINE port 1 (for telephone main line) *1
[9]	TEL port 1 (for external telephone main line) *1	[10]	USB port (Type A, FK-514: Fax1, FK-515: Fax3/4) *1
[11]	USB port (Type A, FK-514: Fax2) *2	[12]	USB port (Type A: for Authentication Unit or Upgrade Kit) USB2.0/1.1
[13]	USB port (Type A: for Authentication Unit or Upgrade Kit) USB2.0/1.1	-	-

- *1: When only one optional FK-514 unit is mounted
- *2: When two optional FK-514 units are mounted

NOTE

- **If only one optional FK-514 is mounted, always mount it to the main line position (lower side).**

1.2.3 Rear side

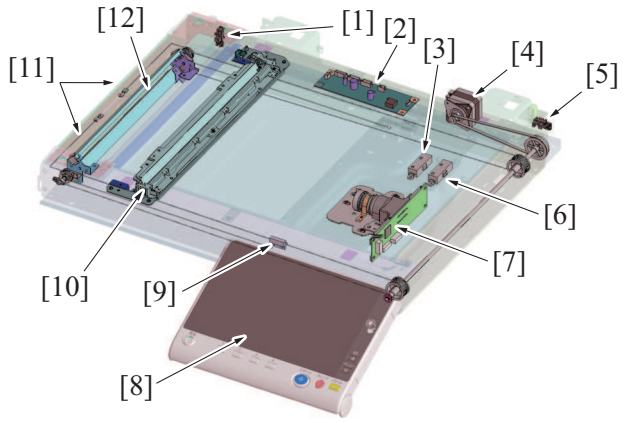


[1]	Dual scan document feeder connection connector	[2]	Dual scan document feeder connection connector
[3]	Finisher connection connector	[4]	HDD (A)
[5]	HDD (B) *1	[6]	Dehumidification heater outlet
[7]	Power outlet (Japan/Taiwan/North America: Directly mounted type, Europe: Inlet type)	[8]	Power outlet (Japan/Taiwan: Directly mounted type, North America/Europe: Not applicable)
[9]	Fax Kit FK-514 (for main line) *2	[10]	Fax Kit FK-514 (for line 2) *2
[11]	Scanner connection connector (image signal)	-	-

- *1: Optional Hard Disk HD-524
- *2: Optional Fax Kit

2. SCANNER SECTION

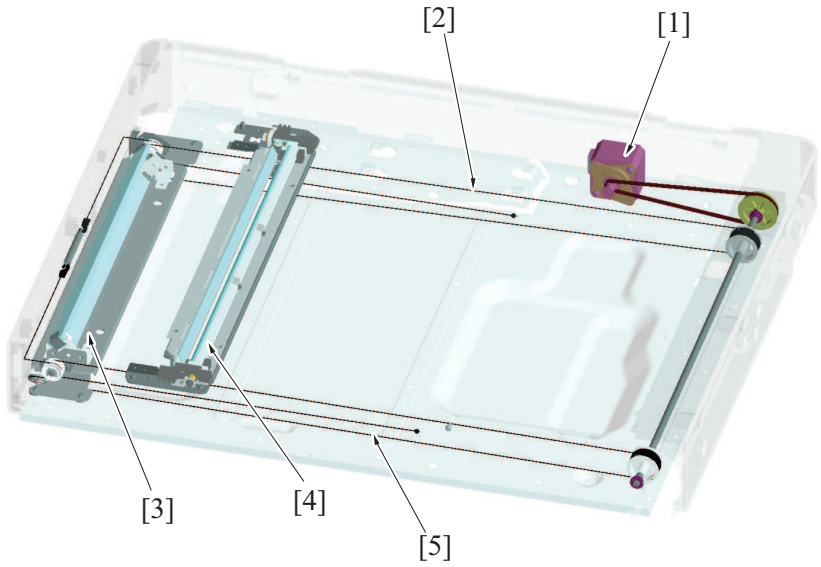
2.1 Configuration



[1]	Scanner home sensor (PS201)	[2]	Scanner drive board (SCDB)
[3]	Original size sensor1 (PS204)	[4]	Scanner motor (M201)
[5]	Angle sensor (PS202)	[6]	Original size sensor2 (PS205) *
[7]	CCD board (CCDB)	[8]	Control panel (capacitive touch panel)
[9]	Original cover sensor (RS201)	[10]	LED exposure unit (LU201)
[11]	Scanner cable	[12]	Mirror unit

*: Option

2.2 Drive



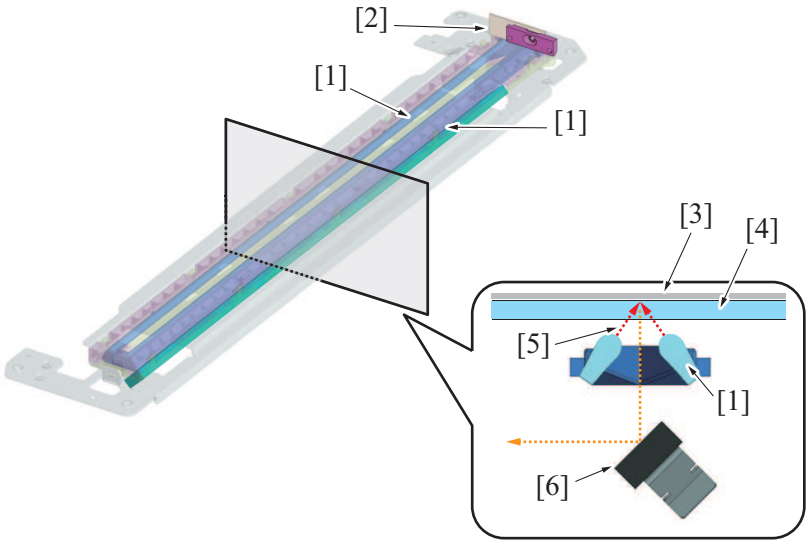
[1]	Scanner motor (M201)	[2]	Scanner drive cable/R
[3]	Mirror unit	[4]	LED exposure unit (LU201)
[5]	Scanner drive cable/F	-	-

2.3 Operation

2.3.1 LED exposure unit

(1) bizhub C368/C308/C258

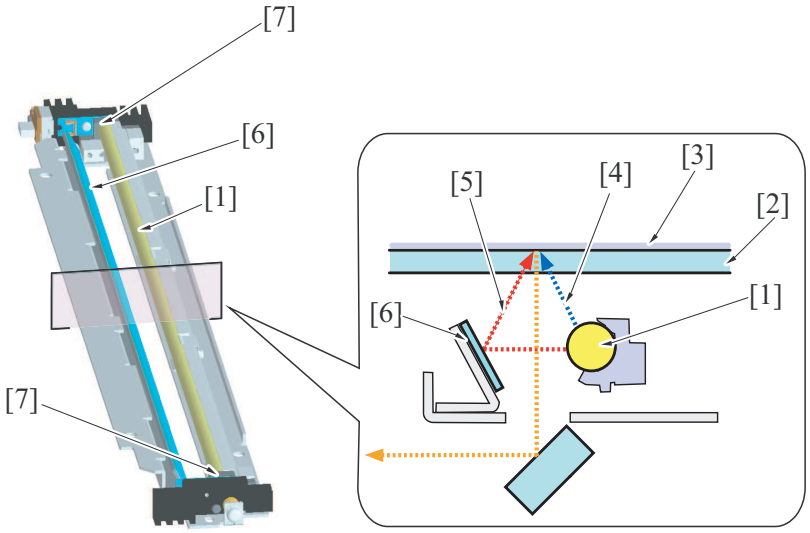
- LEDs (Light Emitting Diodes) are used for the light source of the scanner section for power saving.
- LEDs mounted on the LED board on one side (rear side) of the LED exposure unit emit light.
- Light emitted from the LED travels along the light guide.
- The original is exposed to uniform, stable light by direct light that is emitted from both light guides.



[1]	Light guide	[2]	LED board
[3]	Original	[4]	Original glass
[5]	Direct light	[6]	Reflective mirror

(2) bizhub C658/C558/C458

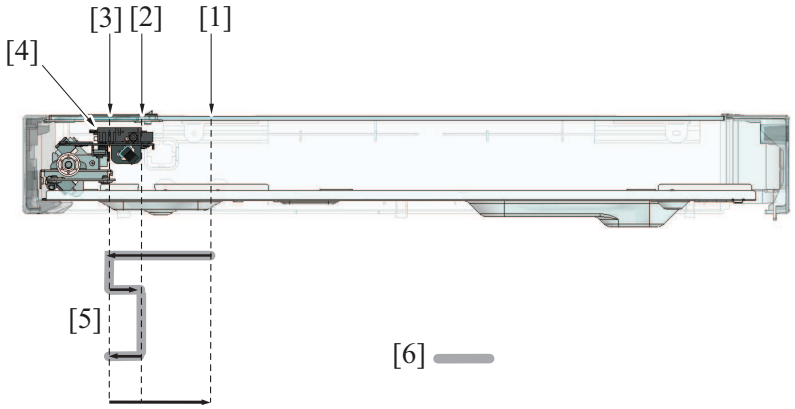
- LEDs (Light Emitting Diodes) are used for the light source of the scanner section for power saving.
- Each LED board on either side has one LED, so that two LEDs illuminate.
- Light emitted from the LED travels along the light guide.
- The original is irradiated with direct light that has traveled along the light guide and indirect light reflected from the reflector, which ensures that the original is exposed to steady, uniform light.



[1]	Light guide	[2]	Original glass
[3]	Original	[4]	Direct light
[5]	Indirect light	[6]	Reflector
[7]	LED board	-	-

2.3.2 When the power is ON

1. When the power is turned ON, the LED lights up.
2. The LED exposure unit moves to the home position.
3. The LED exposure unit moves from the home position to the shading position (under the shading correction sheet).
4. The gain value of the CCD sensor output voltage to R, G, and B is adjusted.
5. After adjusting the gain value, a shading correction is performed.
6. The LED exposure unit moves in the return direction and stops at the home position.
7. When the DF is raised for placement of the original, the LED exposure unit moves to the original size detection position.



[1]	Original size detection position	[2]	Shading position
[3]	Home position	[4]	LED exposure unit (LU201)
[5]	Shading correction	[6]	The LED turns ON

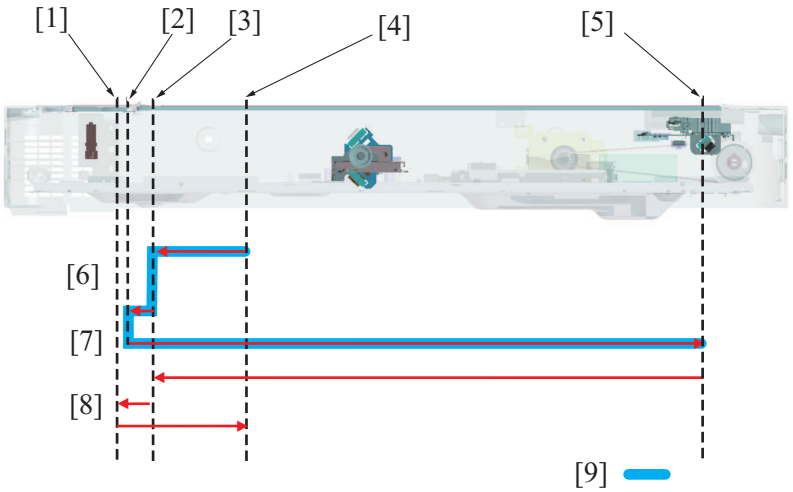
2.3.3 Control when the Start key is pressed

(1) Original scanning mode

- Original scanning mode has two types: Original cover mode and DF mode.

(a) Original cover mode

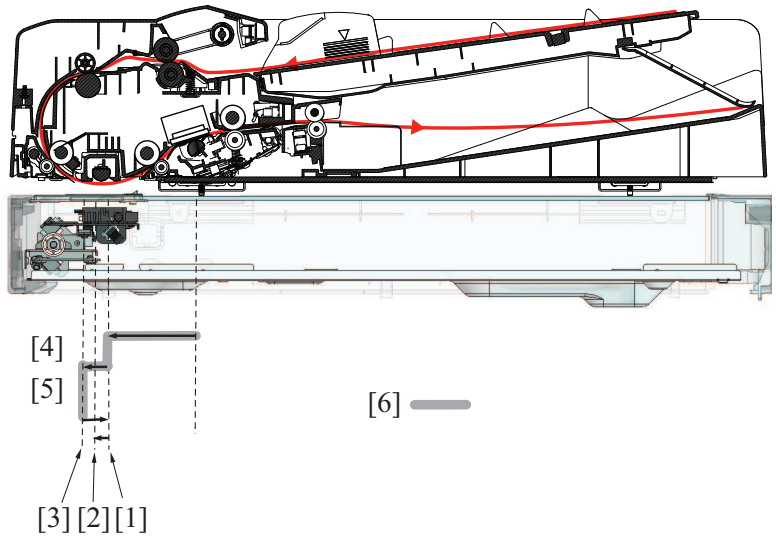
1. Turning the Start key ON will turn the LED ON.
2. The LED exposure unit moves in the return direction and stops at the shading position. At the shading position, the gain adjustment is made.
3. The LED exposure unit moves in the return direction and stops at the scan start position.
4. To start a scan, the LED exposure unit moves from the scan start position to the leading edge of an original while performing shading correction.
   The exposure unit will start reading the original image from the leading edge.
   The unit will finish reading the image at the trailing edge of the original.
5. The LED will turn OFF when the reading is complete.
6. The LED exposure unit returns from the position of the trailing edge of the original. At the shading position, it is determined that the LED is turned OFF.
   Then the LED exposure unit moves to the home position, and next moves to the original size detection position.
   It scans only once even for the color-copies, since R, G, and B data will all be memorized in one scanning.



[1]	Home position	[2]	Scan start position
[3]	Shading position	[4]	Original size detection position
[5]	Trailing edge of the image	[6]	Gain adjustment
[7]	Read original	[8]	Return
[9]	The LED turns ON	-	-

(b) DF mode (DF-629: 1st side/2nd side, Dual scan document feeder/DF-704: 1 side)

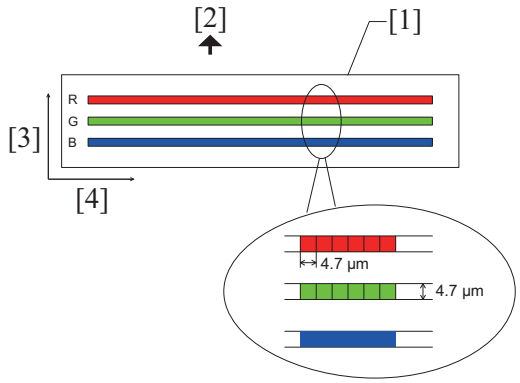
- The original fed by the document feeder will be read at the DF original glass for. The LED exposure unit will move to the reading position and stops. The original will be read as the paper is transferred.



[1]	Shading position	[2]	Home position
[3]	Original reading position	[4]	Shading correction
[5]	Read original	[6]	The LED turns ON

(2) Original scanning control

- The light reflected off the exposed original reaches the CCD sensor via the lens.
- The CCD sensor outputs an electric signal (analog) that varies according to the intensity of the light.
- One CCD sensor has a photo receiver that individually responds to each of the three primary colors of R, G, and B.
- The electric signal is converted to digital data for each of R, G, and B by the CCD board (CCDB), becoming individual digital signals.
- Analog-to-digital conversion is made according to an instruction given by the MFP board (MFPB).



[1]	CCD sensor	[2]	Scanning direction
[3]	Sub scanning direction	[4]	Main scanning direction

(a) Calibration

The following adjustment and correction (calibration) are made before the original is scanned, so that the image of the original can be adequately read. For details, see “ O.18.1 Scanner section image processing block diagram”.

- Gain adjustment
- Shading correction

2.3.4 Original scanning area

- Original scanning areas vary depending on a scanning mode.

(1) Original cover mode

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)
- Sub scanning direction: Max. 431.8 mm (17 inches)

(2) DF mode

(a) Scanning at 400 dpi or less

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)

- Sub scanning direction: Max. 1,000.0 mm (39 3/8 inches) (FAX mode only)

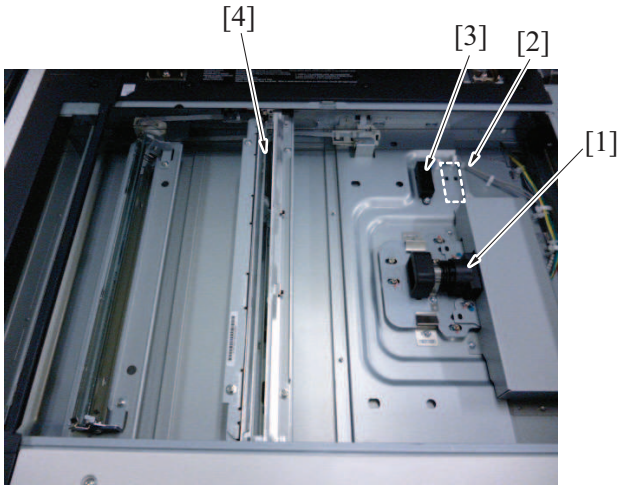
(b) Scanning at 600 dpi

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)
- Sub scanning direction: Max. 432.0 mm (17 inches)

2.3.5 Original size detection control

(1) Detection method

- For the sub scanning (length) direction, the fixed reflective original size sensor (one beam) is used.
- For the main scanning (width) direction, the CCD is used.
- A standard original size is determined by the state of the original size sensor, either the activated or deactivated state, and the width detected by the CCD.
- For a custom size, the control sets a smallest possible standard size that is larger than the custom size in question to thereby prevent void image.



[1]	CCD unit	[2]	Original size sensor2 (PS205) *
[3]	Original size sensor1 (PS204)	[4]	LED exposure unit (LU201)

- *: Option

(2) Original size judgment

NOTE

- **Table 1 or 2 can be selected in the service mode.**

(a) Criterion (Japan)

Table1

Original size sensor1 (PS204)	Main scanning width (mm)					
	0 to 130.0	Up to 153.0	Up to 187.0	Up to 215.0	Up to 262.0	262.1 or over
OFF	No original	A5S	B5S	A4S	B5	A4
ON	A3	B4	B4	B4	B4	A3

Table2

Original size sensor1 (PS204)	Main scanning width (mm)								
	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 213.0	Up to 220.9	Up to 262.0	Up to 284.4	284.5 or over
OFF	No original	$5^1/_2$×$8^1/_2$S	A5S	B5S	A4S	$8^1/_2$×11S	B5	$8^1/_2$×11	A4
ON	A3	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	B4	11×17	A3

(b) Criterion (for China and countries using the metric)

Table1

Original size sensor		Main scanning width (mm)								
1 (PS204)	2 (PS205)	0 to 130.0	Up to 153.0	Up to 187.0	Up to 200.0	Up to 215.0	Up to 225.0	Up to 261.5	Up to 275.0	275.1 or over
OFF	-	No original	A5S	B5S	16K S	A4S	B5	B5	16K	A4
ON	-	A3	FLS	FLS	FLS	FLS	FLS	B4	8K	A3

Table2

Original size sensor		Main scanning width (mm)											
1 (PS204)	2 (PS205)	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 200.0	Up to 213.0	Up to 220.9	Up to 225.0	Up to 261.5	Up to 274.7	Up to 284.4	284.5 or over
OFF	OFF	No original	$5^1/_2$×$8^1/_2$ S	A5S	B5S	16K S	A4S	$8^1/_2$×11S	B5	B5	16K	$8^1/_2$×11	A4
ON	OFF	A3	FLS	FLS	FLS	FLS	FLS	FLS	FLS	B4	8K	11×17	A3
OFF	ON	A3	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	B4	B4	8K	11×17	A3
ON	ON	A3	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	B4	B4	8K	11×17	A3

(c) Criterion (for countries using inch)

Table1

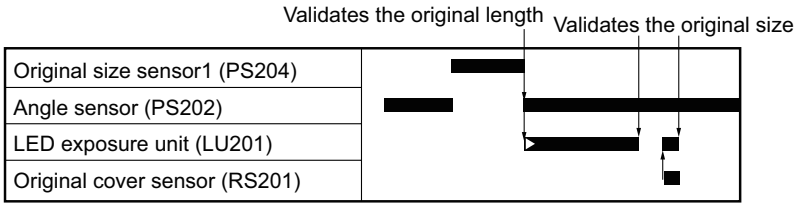
Original size sensor		Main scanning width (mm)			
1 (PS204)	2 (PS205)	0 to 130.0	Up to 144.7	Up to 220.9	221.0 or over
OFF	-	No original	$5^1/_2$×$8^1/_2$S	$8^1/_2$×11S	$8^1/_2$×11
ON	-	11×17	$8^1/_2$×14	$8^1/_2$×14	11×17

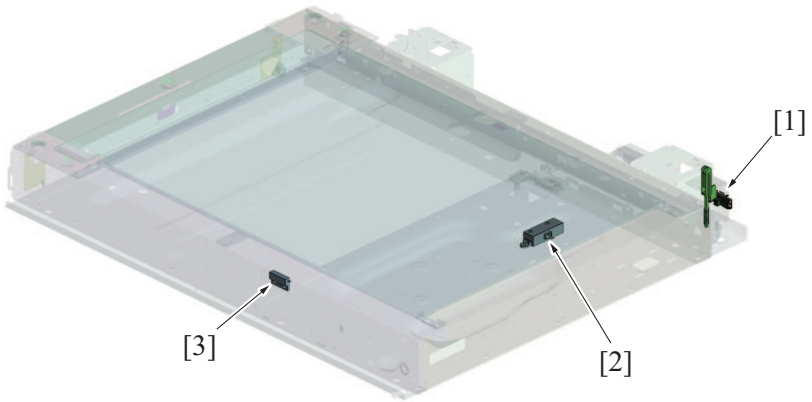
Table2

Original size sensor		Main scanning width (mm)									
1 (PS204)	2 (PS205)	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 213.0	Up to 220.9	Up to 225.0	Up to 262.0	Up to 284.4	284.5 or over
OFF	OFF	No original	$5^1/_2$×$8^1/_2$S	A5S	B5S	A4S	$8^1/_2$×11S	B5	B5	$8^1/_2$×11	A4
ON	OFF	A3	FLS	FLS	FLS	FLS	FLS	FLS	B4	11×17	A3
OFF	ON	A3	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	B4	B4	11×17	A3
OFF	ON	A3	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	$8^1/_2$×14	B4	B4	11×17	A3

(3) Detection timing

- The size in the sub scanning (length) direction is determined by the states of the original size sensors when the angle sensor is activated from the deactivated state.
- Detection is made twice for the main scanning (width) direction, one when the angle sensor is activated and the other when the original cover sensor is activated.
- The original size is reset when the original cover sensor is deactivated from activated state as a result of the DF being raised.





[1]	Angle sensor (PS202)	[2]	Original size sensor1 (PS204)
[3]	Original cover sensor (RS201)	-	-

2.3.6 Image processing

The bizhub 367 series image processing has uses the following processes. For details, see " O.18.1 Scanner section image processing block diagram".

(1) Scanner section image processing block diagram

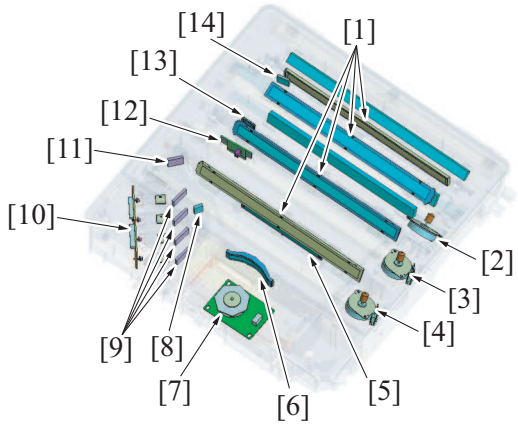
- Photoelectric conversion
- Analog-to-digital conversion

3. WRITE SECTION (PH SECTION)

3.1 Configuration (bizhub C368/C308/C258)

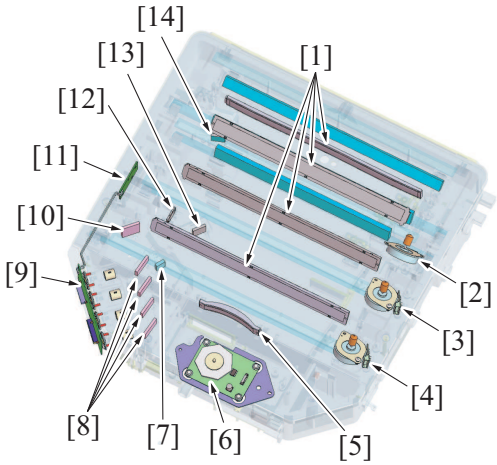
PH unit





[1]	G3 lens	[2]	Skew correction motor/C (M15)
[3]	Skew correction motor/M (M16)	[4]	Skew correction motor/Y (M17)
[5]	G2 lens	[6]	G1 lens
[7]	Polygon motor (M14)	[8]	Cylindrical lens
[9]	Synthetic mirror/ Y,M,C,K	[10]	Laser drive board (LDDB)
[11]	Return mirror (light source)	[12]	Index board (INDEXB)
[13]	Index lens	[14]	Index mirror

3.2 Configuration (bizhub C658/C558/C458)



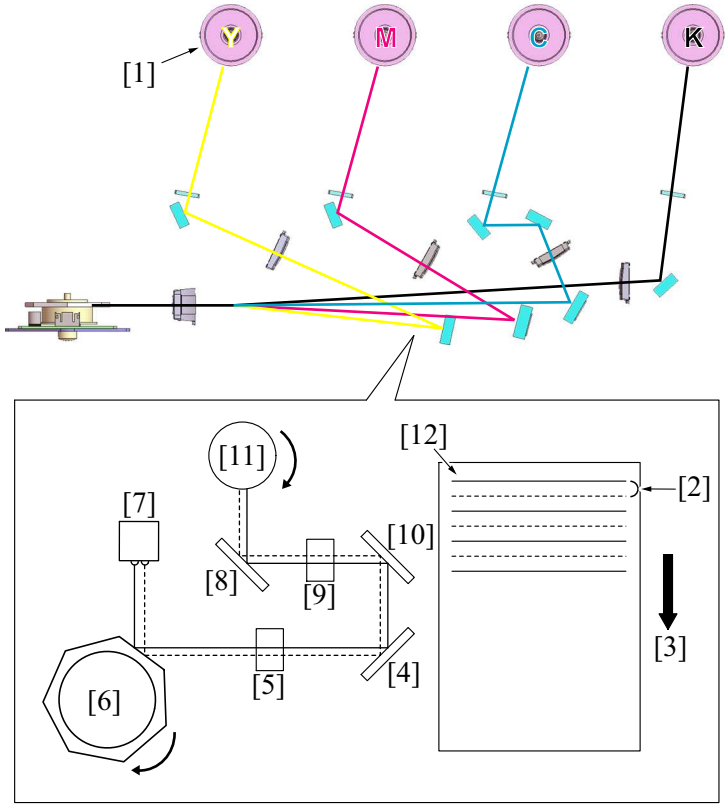
[1]	G2 lens	[2]	Skew correction motor/C (M15)
[3]	Skew correction motor/M (M16)	[4]	Skew correction motor/Y (M17)
[5]	G1 lens	[6]	Polygon motor (M14)
[7]	Cylindrical lens	[8]	Synthetic mirror/ Y,M,C,K
[9]	Laser drive board (LDDB)	[10]	Return mirror (light source)
[11]	Index board (INDEXB)	[12]	Index lens
[13]	Return mirror (Index)	[14]	Index mirror

3.3 Operation

3.3.1 Overview

- The surface of the photo conductor is irradiated with a laser light and an electrostatic latent image is thereby formed.
- The PH unit has a four color exposure unit single-piece configuration. A semiconductor laser is provided for each of four different colors. A single polygon motor is used to make a scan.
- The polygon mirror has seven faces.
- A rotating polygon mirror is irradiated with a laser light emitted from the laser diode on the laser drive board to let the laser light scan.
- bizhub C658/C558 models are equipped with a 2-beam-array laser diode. With two laser beams emitted from these two elements arranged vertically, two lines are scanned through a single face of the polygon mirror.
- bizhub C458/C368/C308/C258 models are equipped with a single-beam-array laser diode. Single line is scanned through a single face of the polygon mirror.

2-beam laser image view

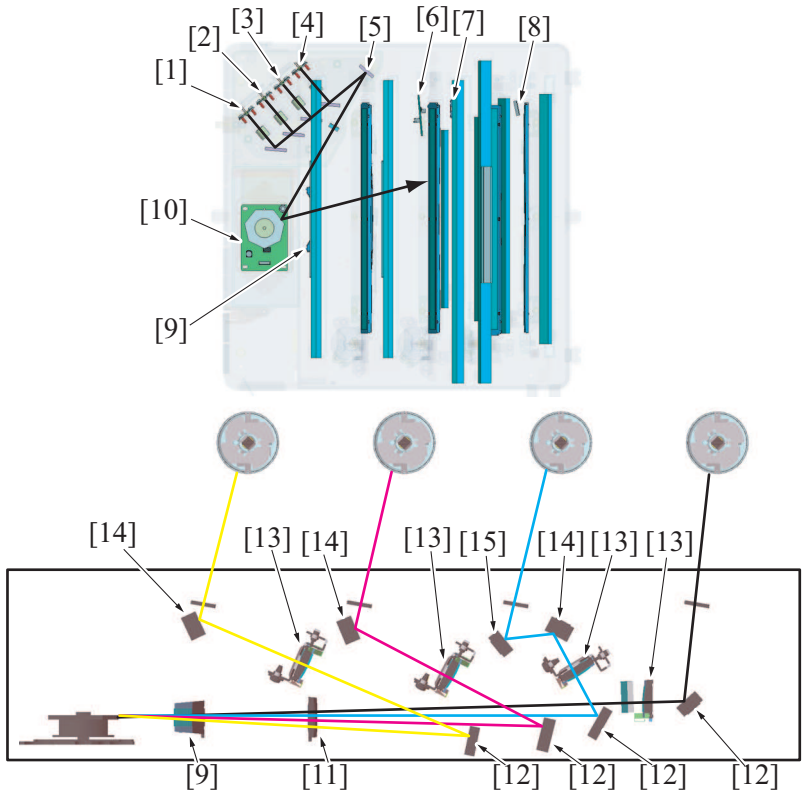


[1]	Photo conductor Y	[2]	One line, two scan
[3]	Photo conductor rotation direction	[4]	Return mirror1
[5]	G1 lens	[6]	Polygon mirror
[7]	Laser diode	[8]	Return mirror3
[9]	G2 lens	[10]	Return mirror2
[11]	Photo conductor	[12]	Beam

3.3.2 Laser exposure process

(1) bizhub C368/C308/C258

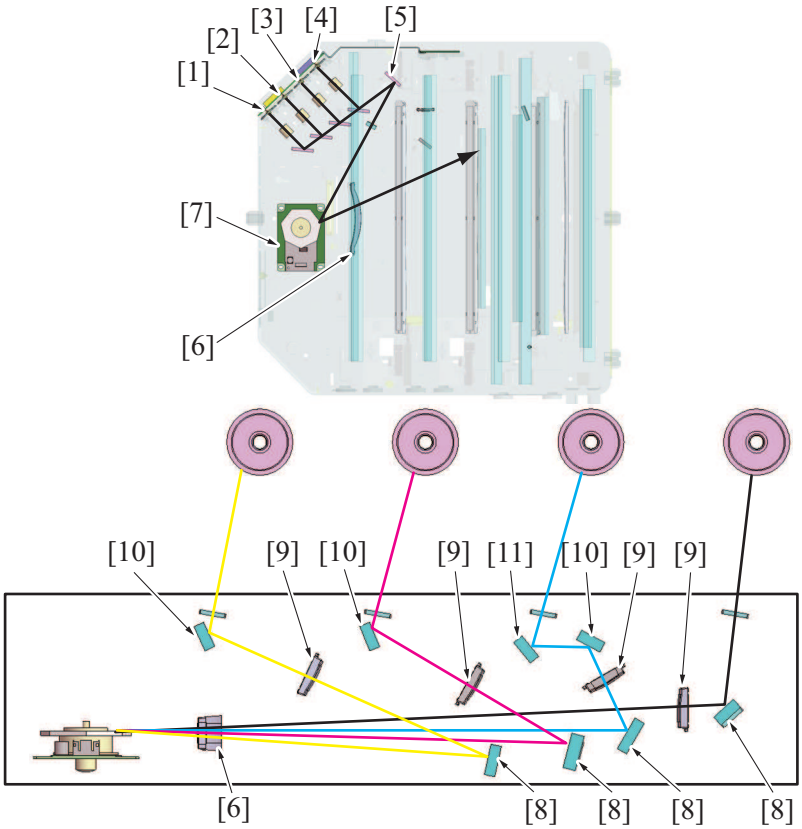
1. The laser light of each color enters the cylindrical lens via the synthetic mirror and return mirror (light source).
2. At the cylindrical lens, each laser light is condensed in the vicinity of the polygon mirror.
3. Since the angle of incidence for each color of laser light varies, the laser light reflected by the polygon mirror is reflected in a different angle for each color.
4. The condensing angle of each color of laser light is corrected by the G1 and G2 lenses and then reaches each return mirror.
5. The K laser light is condensed on the photo conductor surface via the G3 lens and return mirror1. The Y laser light is condensed on the photo conductor surface via the return mirror1, G3 lens, and return mirror2. The M laser light is condensed on the photo conductor surface via the return mirror1, G3 lens, and return mirror2. The C laser light is condensed on the photo conductor surface via the return mirror1, G3 lens, return mirror2, and return mirror3.



[1]	Laser diode/K (LD/K)	[2]	Laser diode/C (LD/C)
[3]	Laser diode/M (LD/M)	[4]	Laser diode/Y (LD/Y)
[5]	Return mirror (light source)	[6]	Index board (INDEXB)
[7]	Index lens	[8]	Index mirror
[9]	G1 lens	[10]	Polygon motor (M14)
[11]	G2 lens	[12]	Return mirror/1
[13]	G3 lens	[14]	Return mirror/2
[15]	Return mirror/3	-	-

(2) bizhub C658/C558/C458

1. The laser light of each color enters the cylindrical lens via the synthetic mirror and return mirror (light source).
2. At the cylindrical lens, each laser light is condensed in the vicinity of the polygon mirror.
3. Since the angle of incidence for each color of laser light varies, the laser light reflected by the polygon mirror is reflected in a different angle for each color.
4. The condensing angle of each color of laser light is corrected by the G1 lens and then reaches each return mirror.
5. The K laser light is condensed on the photo conductor surface via the G2 lens and return mirror1. The Y laser light is condensed on the photo conductor surface via the return mirror1, G2 lens, and return mirror2. The M laser light is condensed on the photo conductor surface via the return mirror1, G2 lens, and return mirror2. The C laser light is condensed on the photo conductor surface via the return mirror1, G2 lens, return mirror2, and return mirror3.

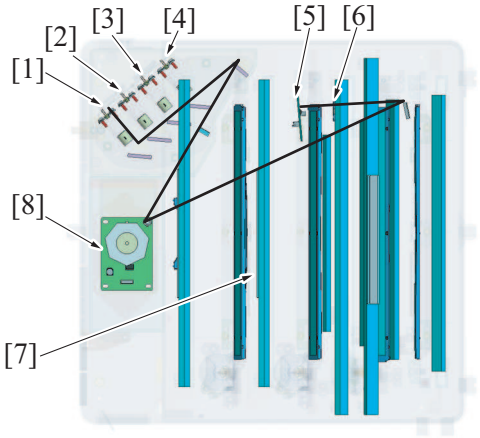


[1]	Laser diode/K (LD/K)	[2]	Laser diode/C (LD/C)
[3]	Laser diode/M (LD/M)	[4]	Laser diode/Y (LD/Y)
[5]	Return mirror (light source)	[6]	G1 lens
[7]	Polygon motor (M14)	[8]	Return mirror1
[9]	G2 lens	[10]	Return mirror2
[11]	Return mirror3	-	-

3.3.3 Laser emission timing

(1) bizhub C368/C308/C258

- After a print cycle has been started, when the stable rotation signals of photo conductor and polygon motor are detected, a laser ON signal is output from the MFP board.
- The laser ON signal causes each laser diode to turn ON and emit a laser beam.
- The K laser light that is irradiated to the index board after it passes through the return mirror (light source), cylindrical lens, polygon mirror, G1 lens, G2 lens, index mirror, and index lens generates an index signal.
- This index signal has a function of keeping the same laser light emission timing per every one line in the main scanning direction.
- The index signal is generated with the K laser light only. The laser light emission timing for other colors is determined with reference to K.
- If the index signal is not detected within a predetermined period of time, the machine determines that it is a laser emission fault, displaying “trouble code: C4501 laser malfunction”.
- The machine continuously monitors the index signal. If the index signal cannot be detected at regular intervals, the machine determines that it is a laser emission fault, displaying “trouble code: C4501 laser malfunction”.

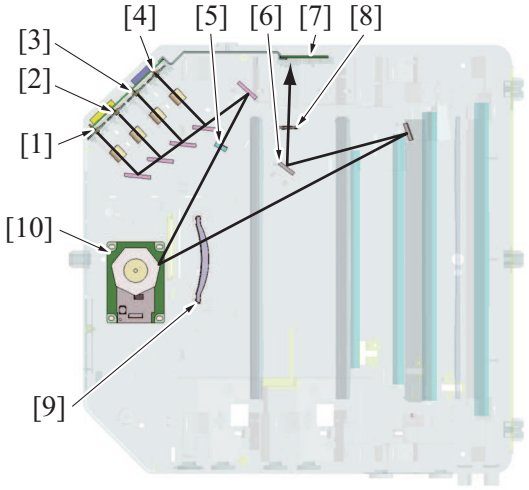


[1]	Laser diode/K (LD/K)	[2]	Laser diode/C (LD/C)
[3]	Laser diode/M (LD/M)	[4]	Laser diode/Y (LD/Y)

[5]	Index board (INDEXB)	[6]	Index lens
[7]	G2 lens	[8]	Polygon motor (M14)

(2) bizhub C658/C558/C458

- After a print cycle has been started, when the stable rotation signals of photo conductor and polygon motor are detected, a laser ON signal is output from the MFP board.
- The laser ON signal causes each laser diode to turn ON and emit a laser beam.
- The K laser light that is irradiated to the index board after it passes through the return mirror (light source), cylindrical lens, polygon mirror, G1 lens, index mirror, return mirror (index), and index lens generates an index signal.
- This index signal has a function of keeping the same laser light emission timing per every one line in the main scanning direction.
- The index signal is generated with the K laser light only. The laser light emission timing for other colors is determined with reference to K.
- If the index signal is not detected within a predetermined period of time, the machine determines that it is a laser emission fault, displaying “trouble code: C4501 laser malfunction”.
- The machine continuously monitors the index signal. If the index signal cannot be detected at regular intervals, the machine determines that it is a laser emission fault, displaying “trouble code: C4501 laser malfunction”.



[1]	Laser diode/K (LD/K)	[2]	Laser diode/C (LD/C)
[3]	Laser diode/M (LD/M)	[4]	Laser diode/Y (LD/Y)
[5]	Cylindrical lens	[6]	Return mirror (Index)
[7]	Index board (INDEXB)	[8]	Index lens
[9]	G1 lens	[10]	Polygon motor (M14)

3.3.4 Laser emission stop

Emission of the laser beam is stopped if any of the following conditions is encountered during printing:

- End of a print job
- Laser emission of Y, M, and C is stopped if the print mode is changed from color to black during printing.
- The front door or any other door is opened.
- A misfeed occurs.
- A malfunction occurs.

3.3.5 Laser emission area

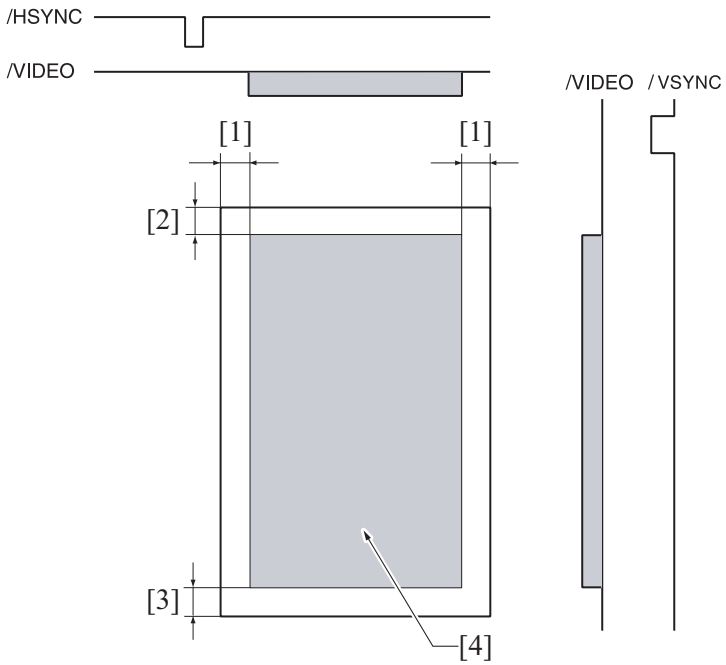
(1) Main scanning direction

- The print start position in the main scanning direction is determined with the main scanning print start signal (HSYNC) that is output from the printer control board, and with the width of the paper.
- The laser emission area is determined by the paper size. However, the void image area is defined as both edges of the paper.

(2) Sub scanning direction

- The print start position in the sub scanning direction is determined with the image write signal (VSYNC) that is output from the MFP board. Also, it is determined with the system speed.
- The laser emission area is determined by the paper size. However, the void image area is defined as both edges of the paper.

Modes	Void image area	
	Main scanning direction	Sub scanning direction
Copy	3 mm (1/8 inches) from the edge of the paper	4.2 mm (3/16 inches) from the leading edge of the paper
	3 mm (1/8 inches) from the edge of the paper	3 mm (1/8 inches) from the trailing edge of the paper
PC Print	4.2 mm (3/16 inches) from the edge of the paper	4.2 mm (3/16 inches) from the leading edge of the paper
	4.2 mm (3/16 inches) from the edge of the paper	4.2 mm (3/16 inches) from the trailing edge of the paper

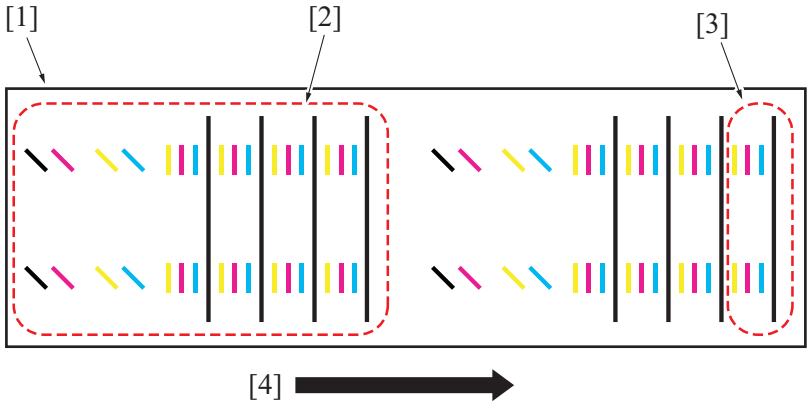


[1]	Void image area at edge of paper	[2]	Void image area at leading edge of paper
[3]	Void image area at trailing edge of paper	[4]	Laser emission area

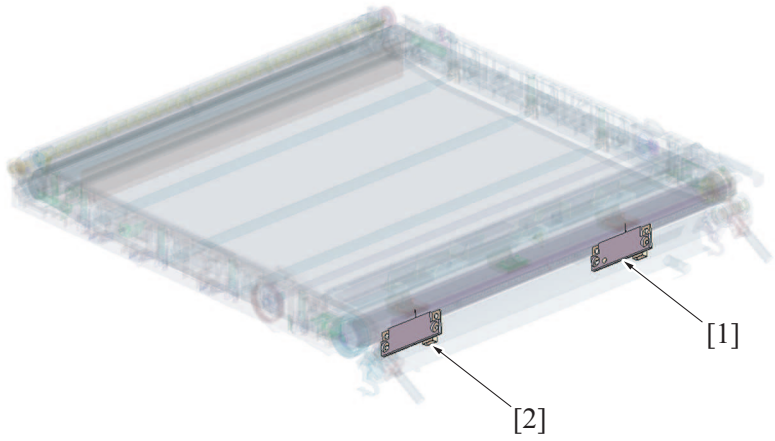
3.3.6 Color registration control (color shift correction) system

(1) Overview of the registration control

- In a tandem engine, each four different color has an independent image reproduction process. Color shift may occur because of variations in part accuracy. The color registration control system automatically detects color shift and correct color shift in the main and sub scanning directions.
- The color shift detection sequence proceeds as follows. A pattern each is produced at the front and rear on the transfer belt. Each of IDC sensors at the front and rear reads the corresponding pattern. The amount of color shift in each of the sub scanning and main scanning directions is then calculated and stored in memory.
- The amount of color shift in the sub scanning direction is read from the pattern falling within the sub scanning detection range. The amount of color shift in the main scanning direction is read from the pattern falling within the main scanning detection range.
- From data readings, the machine calculates how much the position of each of the different colors should be corrected. Based on the calculated data, the machine controls each dot during image output, thereby correcting the color shift amount.



[1]	Transfer belt	[2]	Detection area for main scanning direction
[3]	Detection area for sub scanning direction	[4]	Movement direction of the transfer belt



[1]	IDC sensor/Rr (IDCS/Rr)	[2]	IDC sensor/Fr (IDCS/Fr)

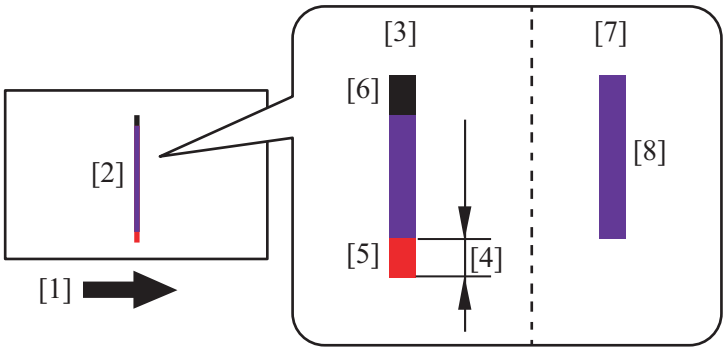
(2) Types of color shift

- Color shift is misalignment of the images of three different colors, yellow (Y), magenta (M), and cyan (C), with respect to the image of black (K).
- Four different types of color shift can occur: color shift in the main scan direction, color shift due to overall scaling error in the main scan direction, color shift in the sub scan direction, and image skew.

(3) Correction of color shift in the main scan direction

- If the image of each color (Y, M, C) is misaligned with respect to the image of black (K) in the main scan direction, changing the write start timing in the main scan direction can correct the color shift. Color shift correction needs to be performed separately for the respective colors (Y, M, C).
- Color shift correction control is activated when the image stabilization sequence is started.

* When the image of magenta is misaligned with respect to the image of black (K) in the sub scan direction

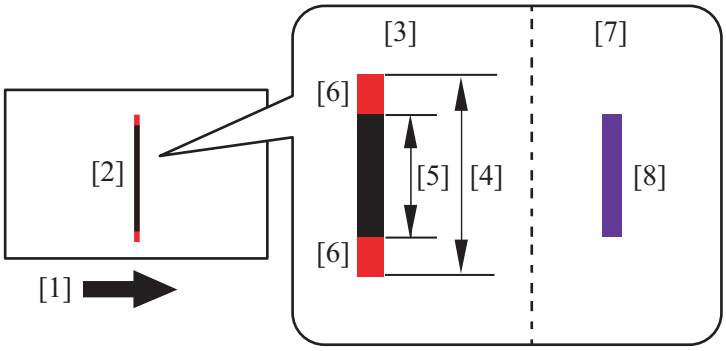


[1]	Rotational direction of the transfer belt	[2]	Transfer belt
[3]	Before correction	[4]	Color shift
[5]	Magenta (M)	[6]	Black (K)
[7]	After correction	[8]	No color shift

Correction of color shift due to overall scaling error in the main scan direction

- If the image of each color (Y, M, C) and the image of black (K) vary in length in the main scan direction, changing the clock frequency of the laser diode can correct the length difference in the main scan direction. Color shift correction needs to be performed separately for the respective colors (Y, M, C).
- Color shift correction control is activated when the image stabilization sequence is started.

* When the image of magenta is longer than the image of black (K)

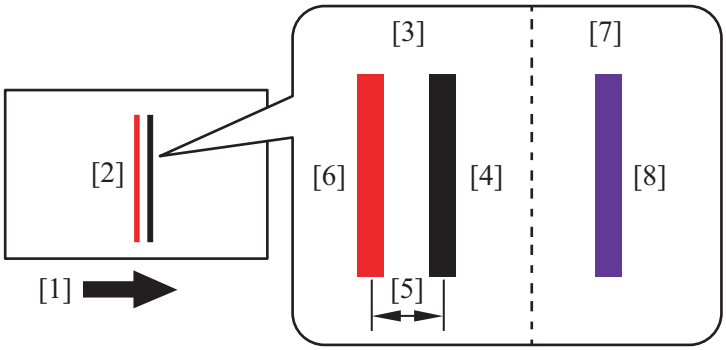


[1]	Rotational direction of the transfer belt	[2]	Transfer belt
[3]	Before correction	[4]	Magenta (M)
[5]	Black (K)	[6]	Color shift
[7]	After correction	[8]	No color shift

(5) Correction of color shift in the sub scan direction

- If the image of each color (Y, M, C) is misaligned with respect to the image of black (K) in the sub scan direction, changing the write start timing in the sub scan direction can correct the color shift. Color shift correction needs to be performed separately for the respective colors (Y, M, C).
- Color shift correction control is activated when the image stabilization sequence is started.

* When the image of magenta is misaligned with respect to the image of black (K) in the sub scan direction

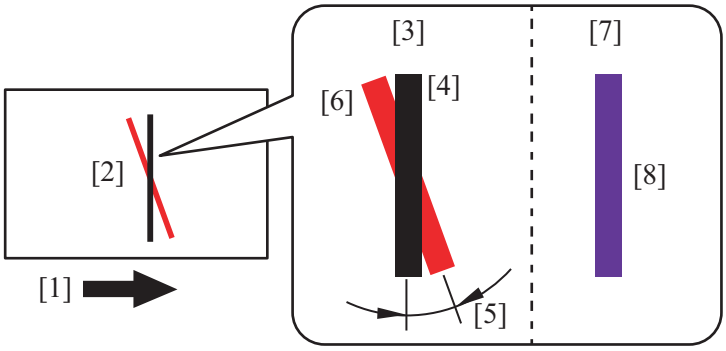


[1]	Rotational direction of the transfer belt	[2]	Transfer belt
[3]	Before correction	[4]	Black (K)
[5]	Color shift	[6]	Magenta (M)
[7]	After correction	[8]	No color shift

(6) Skew (image skew)

- If the image of each color (Y, M, C) is tilted against the image of black (K) in the sub scanning direction, the image skew can be corrected by tilting the G3 lens of the print head unit. Image skew correction needs to be performed separately for the respective colors (Y, M, C).
- Image skew is adjusted at timing when the image stabilization sequence is started.

* When the image of magenta is tilted against the image of black (K)



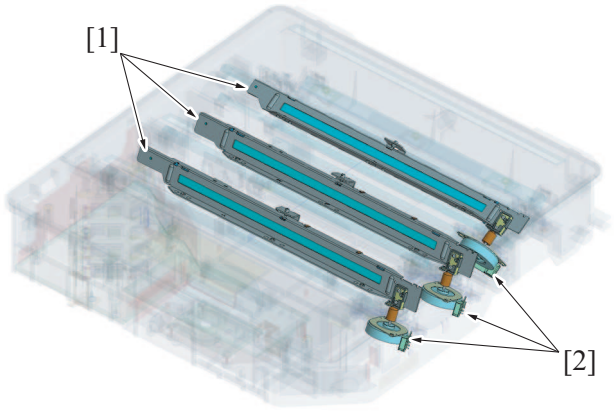
[1]	Rotational direction of the transfer belt	[2]	Transfer belt
[3]	Before correction	[4]	Black (K)

[5]	Color shift	[6]	Magenta (M)
[7]	After correction	[8]	No color shift

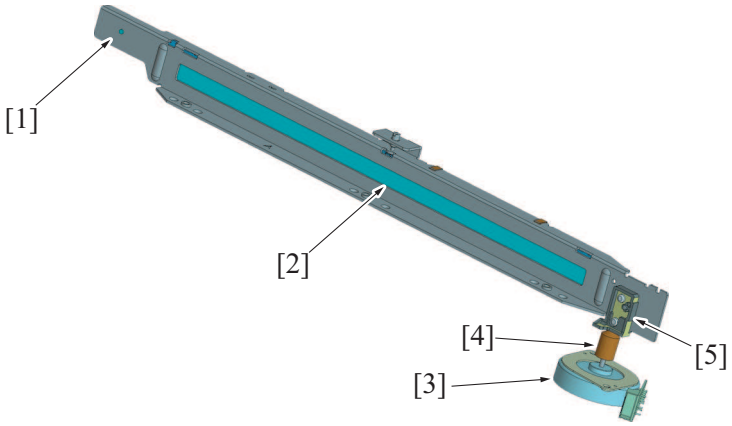
3.3.7 Color skew correction control

(1) bizhub C368/C308/C258

- Temperature may change inside the print head unit and the components can change over time. These phenomena may cause color skew problems. To prevent the problems, individual G3 lenses that correspond to Y, M, and C respectively have a color skew auto adjustment mechanism.
- When the skew correction motor runs, the G3 lenses move up and down to perform an automatic color skew correction.



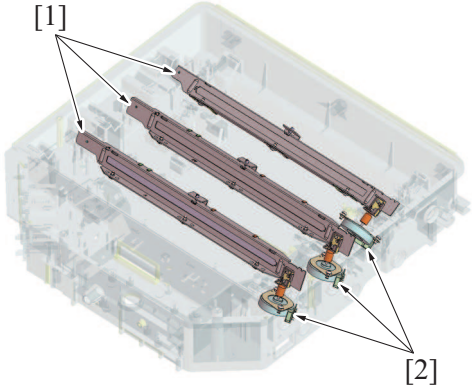
[1]	G3 lens	[2]	Skew correction motor



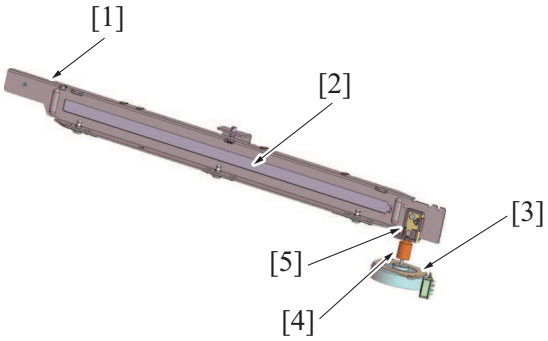
[1]	G3 lens tilting shaft	[2]	G3 lens: The lens is tilted to correct color skew.
[3]	Skew correction motor	[4]	Drive gear
[5]	G3 lens drive cam	-	-

(2) bizhub C658/C558/C458

- Temperature may change inside the PH unit and the components can change over time. These phenomena may cause color skew problems. To prevent the problems, individual G2 lenses that correspond to Y, M, and C respectively have a color skew auto adjustment mechanism.
- When the skew correction motor runs, the G2 lenses move up and down to perform an automatic color skew correction.



[1]	G2 lens	[2]	Skew correction motor

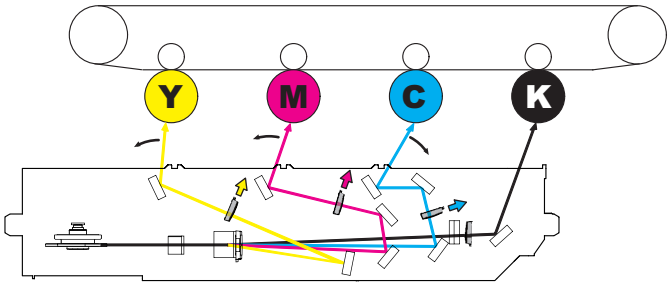


[1]	G2 lens tilting shaft	[2]	G2 lens: The lens is tilted to correct color skew.
[3]	Skew correction motor	[4]	Drive gear
[5]	G2 lens drive cam	-	-

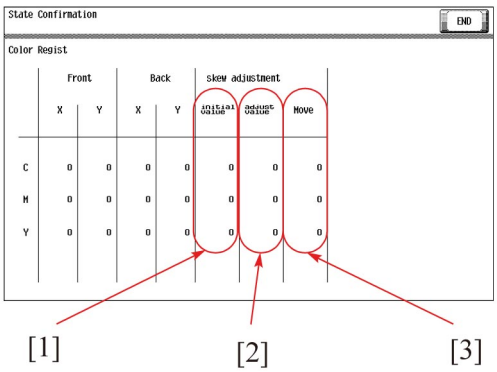
(3) Skew adjustment method

- The following describe the direction in which the beam moves by the skew correction motors.
- When the skew correction motors rotates, the G3 lens moves in the direction of the arrow that is illustrated below, so that the beam moves.
- Only cyan uses a greater number of turnover mirrors, one more than yellow or magenta does, which results in the direction in which the beam moves being different from that of yellow and magenta.

Skew adjustment direction: Direction in which the beam moves when the skew correction motor/Y, M, C rotates clockwise



(4) Skew correction motor adjustment value panel display



[1]	Select [Service Mode] -> [Machine] -> [Print Head Skew Adj.] and call [Adjust Value] (default adjustment value unique to the print head) to the screen, in steps.	[2]	Shows the skew correction value after the image stabilization process, in steps.
[3]	Shows the skew correction value after the image stabilization process relative to that of the last image stabilization process, in steps.	-	-

(5) Operation timing

- The color registration control (color shift correction) and the color skew correction control operate at one time.
- The adjustment is performed based on the skew amount values for each color that are calculated from the detected sub scanning registration pattern according to the previous correction value.

3.3.8 Skew adjustment/skew adjustment reset

- There are cases where the “color skew correction control” cannot be executed for some reason. The machine provides functions that allow you to reset the “skew adjustment data” against these situations.
- For details of the Service Mode, see “ I.5.4.9 Print Head Skew Adj.”.

(1) Possible conditions and causes

- The PH unit has been replaced with a new one.
- The alarm code “P-14: skew correction trouble” is displayed.
- A door is opened or the main power switch is turned OFF during color skew correction control, causing the skew correction sequence to be halted; as a result, the current position of the skew correction motor is unknown.
- The backup position information of the skew adjustment motor settings in the machine is lost operations such as replacement of the eMMC board.

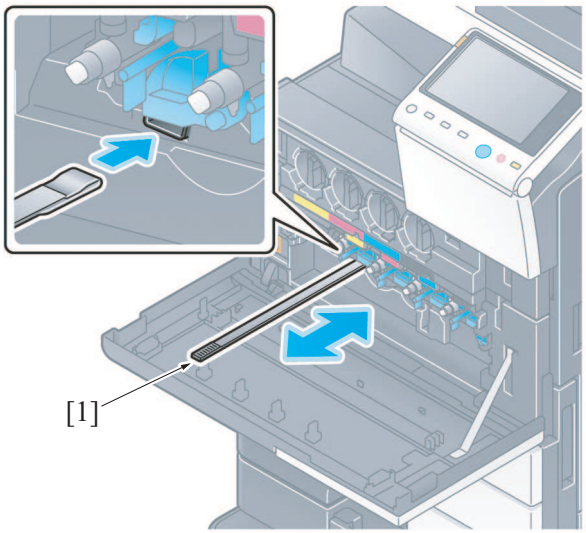
3.3.9 PH unit temperature detection control

- The temperature inside the PH unit is measured at intervals of 30 sec. by the PH temperature sensor mounted in the PH unit.
- The detected temperature data is recorded to form part of the environmental information data and used for controlling, for example, color registration, 1st transfer output determination, and transfer roller cleaning.

3.3.10 PH window cleaning

- The PH window, if contaminated, blocks the path of the laser beam and the surface of the photo conductor can no longer be exposed properly. This could result in image problems, including white bands or white lines on the print image.
- The PH window is provided with a cleaning guide that prevents any image problem caused by a dirty PH window from occurring.

The following illustration is for bizhub C368/C308/C258.



[1]	PH window cleaning tool	-	-

(1) PH window cleaning procedures

- Slowly pull to the front the PH window cleaning tool and push it back into the original position. This allows the cleaning material mounted on the PH window cleaning tool to remove any foreign matter from the surface of the PH window.
- The machine is not equipped with any mechanism that automatically cleans the PH window. This makes it necessary to clean the PH window manually at regular intervals.

(2) PH window cleaning timing

- Clean the PH window of each color when the drum unit/K is replaced with a new one.

3.3.11 Image processing

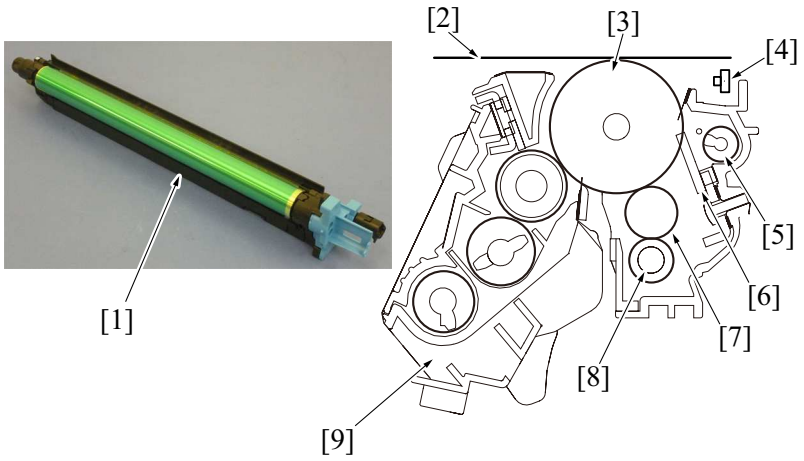
The following image processing procedures relating to the write section are available. For details, see “ O.18.2 Write section image processing block diagram”.

(1) Write section image processing block diagram

- Resolution conversion processing in the main scanning direction/movement processing
- Resolution conversion processing in the sub scanning direction
- Main scanning position correction Speed conversion Modulation

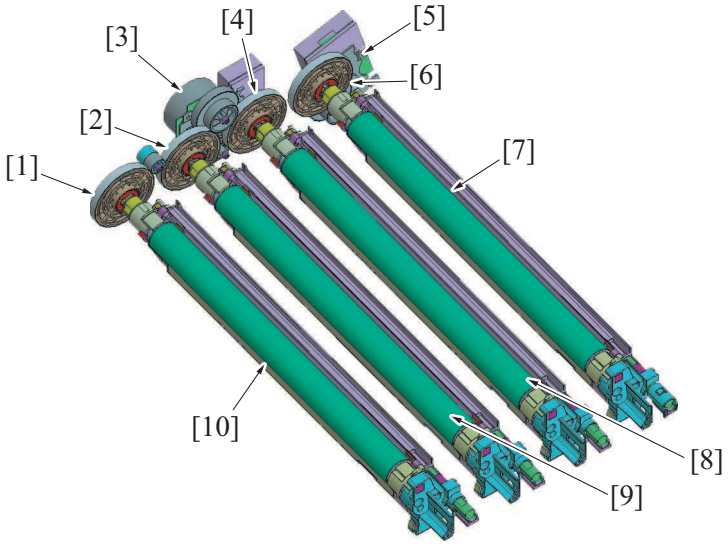
4. PHOTO CONDUCTOR SECTION

4.1 Configuration



[1]	Drum unit	[2]	Transfer belt
[3]	Photo conductor	[4]	Erase LED
[5]	Toner collecting screw	[6]	Cleaning blade
[7]	Charging roller	[8]	Cleaning roller
[9]	Developing unit	-	-

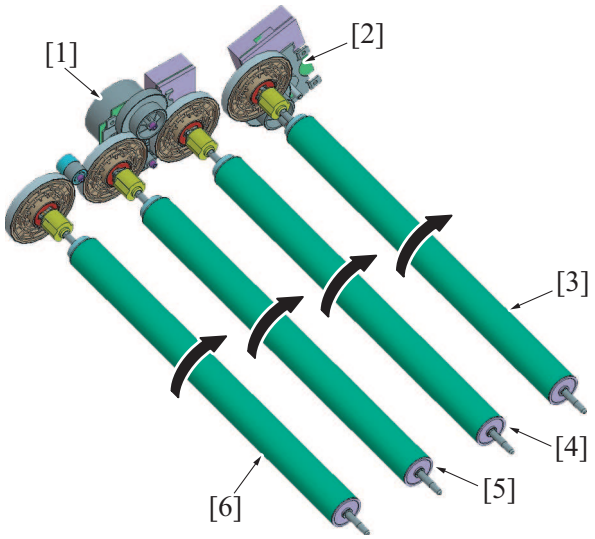
The following illustration is for bizhub C368/C308/C258.



[1]	Color PC drive gear/Y	[2]	Color PC drive gear/M
[3]	PC motor (M2)	[4]	Color PC drive gear/C
[5]	Transport motor (M1)	[6]	PC drive gear/K
[7]	Drum unit/K	[8]	Drum unit/C
[9]	Drum unit/M	[10]	Drum unit/Y

4.2 Drive

The following illustration is for bizhub C368/C308/C258.



[1]	PC motor (M2)	[2]	Transport motor (M1)
[3]	Photo conductor/K	[4]	Photo conductor/C
[5]	Photo conductor/M	[6]	Photo conductor/Y

4.3 Operation

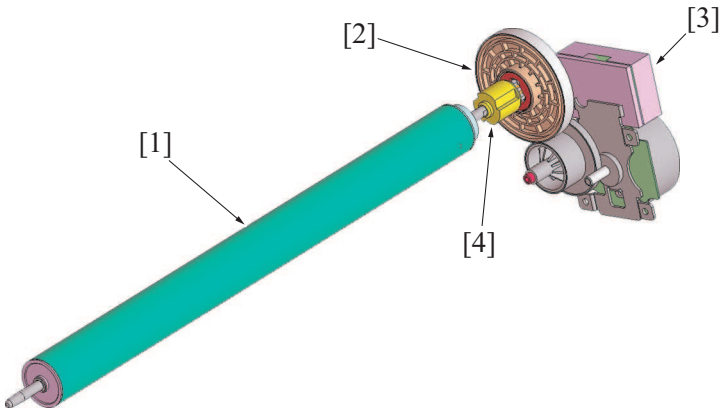
4.3.1 Photo conductor drive mechanism

- Two independent photo conductor motors (for color and black) are used for the drive mechanism to suppress incorrect color registration and uneven pitch.

(1) Photo conductor/K drive mechanism

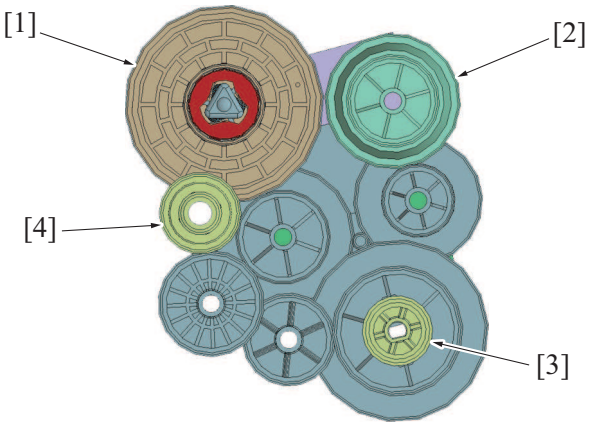
- The transport motor drives the photo conductor/K.
- The transport motor is the common source that provides drive to manual bypass feed, tray feed, registration roller, transfer belt, and others.
- Drive is transmitted to the photo conductor when the triangular-prism-shaped shaft is engaged with the mating coupling part.

The following illustration is for bizhub C368/C308/C258.



[1]	Photo conductor/K	[2]	Photo conductor drive gear/K
[3]	Transport motor (M1)	[4]	Coupling

The following illustration is for bizhub C368/C308/C258.

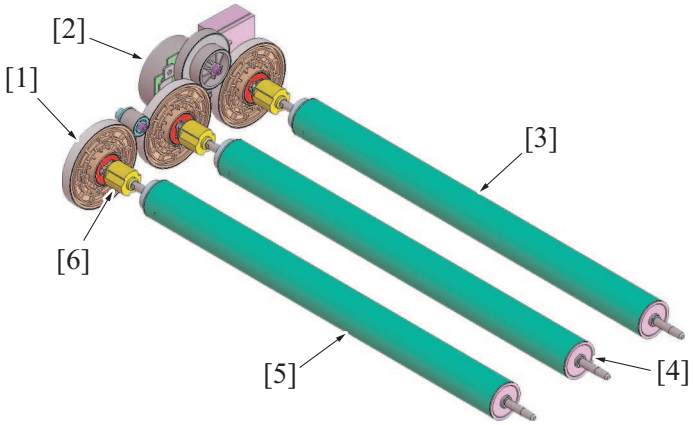


[1]	Photo conductor drive gear/K	[2]	Transfer belt drive gear
[3]	Registration roller drive gear	[4]	Developing unit drive gear

(2) Photo conductor/Y, M, C drive mechanism

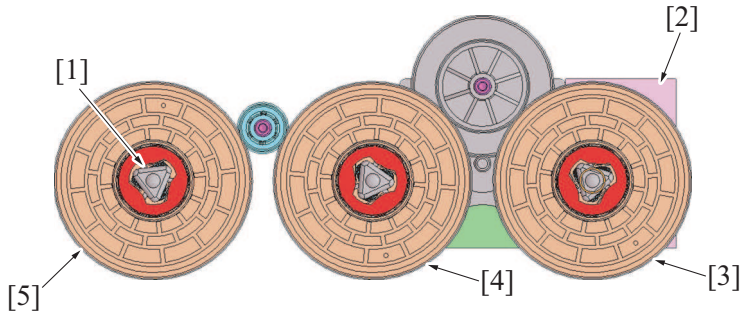
- The photo conductors/Y, M, C are driven by the PC motor.
- Drive is transmitted to each of the photo conductors when the triangular-prism-shaped shaft is engaged with the mating coupling part.

The following illustration is for bizhub C368/C308/C258.



[1]	Color photo conductor drive gear/Y	[2]	PC motor (M2)
[3]	Photo conductor/C	[4]	Photo conductor/M
[5]	Photo conductor/Y	[6]	Coupling

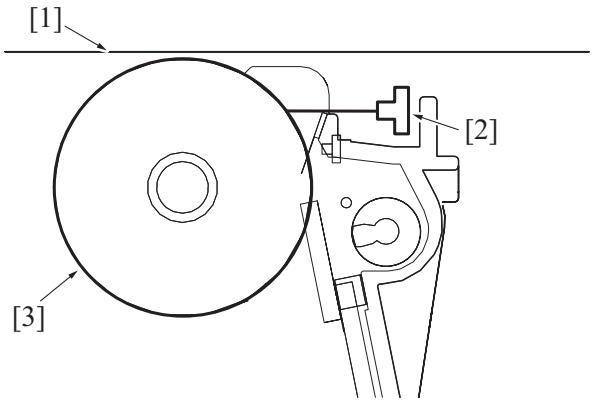
The following illustration is for bizhub C368/C308/C258.



[1]	Triangular-prism-shaped coupling part	[2]	PC motor (M2)
[3]	Color photo conductor drive gear/C	[4]	Color photo conductor drive gear/M
[5]	Color photo conductor drive gear/Y	-	-

4.3.2 Erase LED control

- The potential remaining in the photo conductor is removed when the erase LED turns on.
- The neutralization of any residual potential on the photo conductor helps improve cleaning performance of toner left on the surface of the photo conductor.



[1]	Transfer belt	[2]	Erase LED
[3]	Photo conductor	-	-

(1) Erase LED ON timing

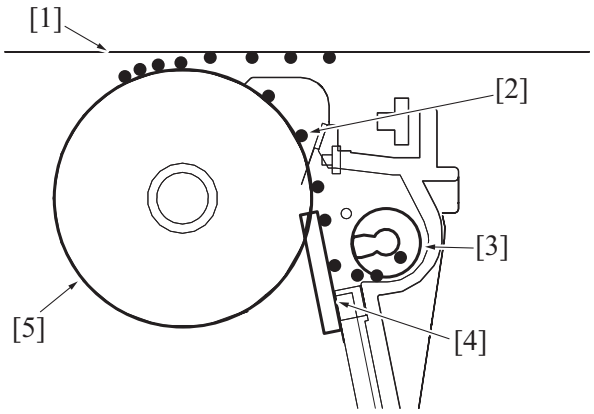
- The erase LED is turned ON when the photo conductor starts rotating.

(2) Erase LED OFF timing

- The erase LED is turned OFF after the lapse of a predetermined period of time after the corona charge output has been shut down. (That is, the erase lamp is turned OFF after all charge left on the surface of the photo conductor is neutralized.)

4.3.3 Photo conductor cleaning

- Part of the toner image that is not transferred is left on the surface of the photo conductor. The residual toner is scraped off by the cleaning blade.
- Toner, which has been scraped off the surface of the photo conductor, is conveyed by the toner collecting screw toward to the front of the machine. It is discharged in the waste toner box.



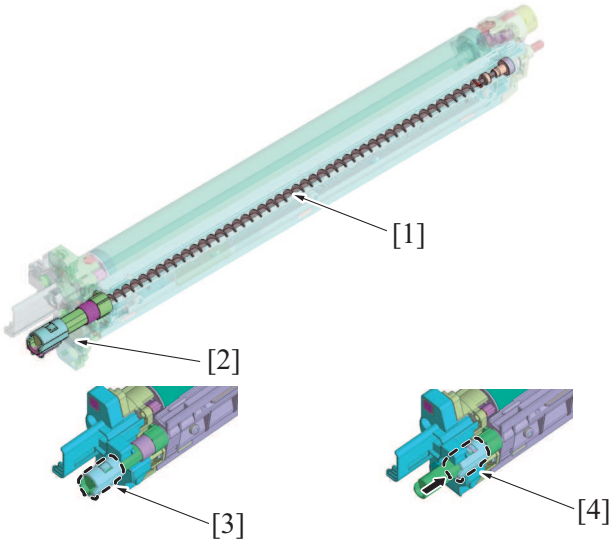
[1]	Transfer belt	[2]	Waste toner
[3]	Toner collecting screw	[4]	Cleaning blade
[5]	Photo conductor	-	-

(1) Cleaning blade

- The cleaning blade is pressed up against the surface of the photo conductor at all times. No cleaning blade retraction mechanism is provided.
- The cleaning blade scrapes residual toner off the surface of the photo conductor as the photo conductor is rotated.

(2) Toner conveyance/collection mechanism

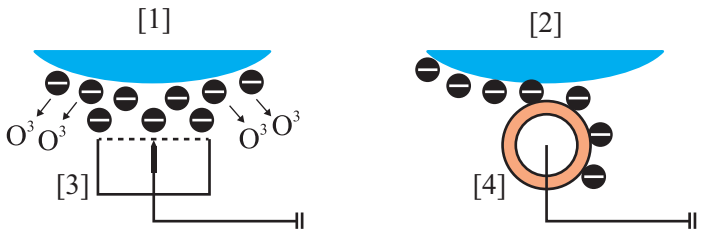
- The toner collecting screw is rotated by the driving force transmitted from the photo conductor. (The toner collecting screw rotates in time with the rotation of the photo conductor.)
- Rotation of the toner collecting screw conveys toner scraped off the surface of the photo conductor toward the front of the machine.
- The toner conveyed to the front of the machine is discharged via the toner collecting port into the waste toner box.
- The toner collecting port is provided with a shutter mechanism. Mounting the waste toner box pushes the shutter at the toner collecting port, opening the toner collecting port. The shutter is closed by the waste toner box removal and prevents the toner spilling from the toner collecting port.



[1]	Toner collecting screw	[2]	Shutter
[3]	Shutter close	[4]	Shutter open

4.3.4 Electrostatic charger control

- A charging roller is used in the electrostatic charger.
- The charging roller does not apply high voltages in comparison to a comb electrode and generates no ozone, so that no ozone filter is mounted.



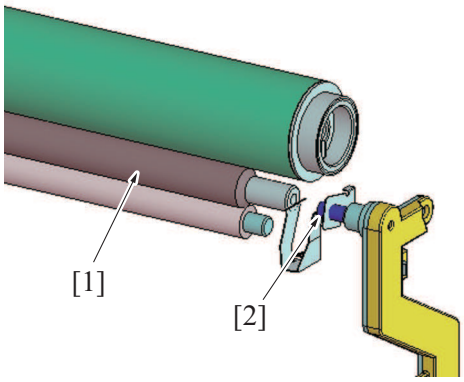
[1]	Comb electrode charge	[2]	Roller charging
[3]	Comb electrode	[4]	Charging roller

(1) Charge application start timing

- Charge is applied to the electrostatic charger application terminal when the photo conductor (transport motor and PC motor) drive motor starts rotating at a steady speed.

(2) Charge application end timing

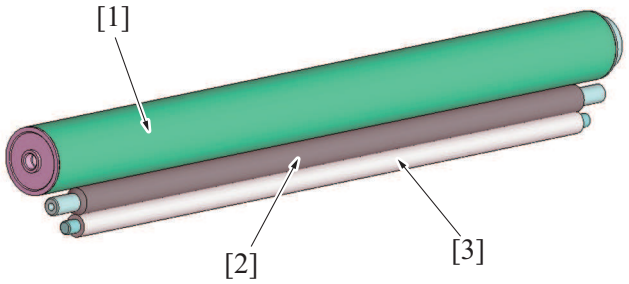
- Application of the charge to the electrostatic charger application terminal is terminated when the surface of the photo conductor which faces the transfer belt as the 1st transfer output is turned OFF moves past the charging position.



[1]	Charging roller	[2]	Electrostatic charger application terminal

4.3.5 Charging roller cleaning

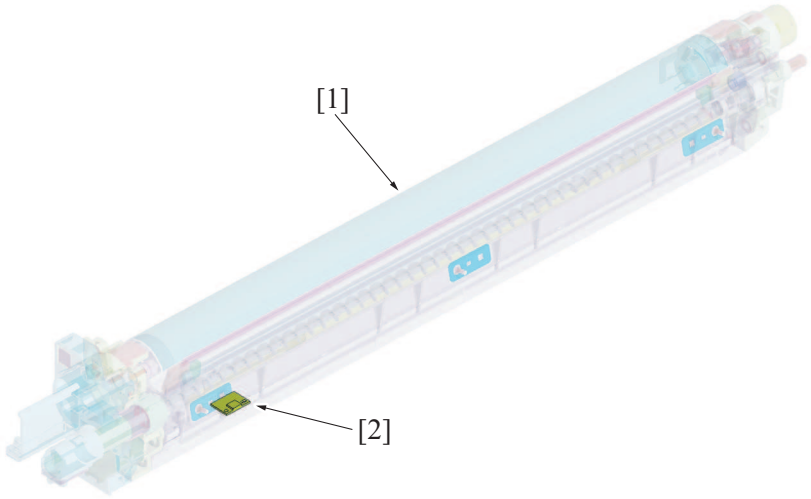
- If the charging roller becomes contaminated, the surface of the photo conductor can no longer be charged uniformly, so that uneven charge occurs. Uneven charge of the photo conductor results in irregular streaks or other print image defects.
- The cleaning roller rotates by following the rotation of the charging roller, continuously cleaning contamination from the charging roller surface.



[1]	Photo conductor	[2]	Charging roller
[3]	Cleaning roller	-	-

4.3.6 Drum unit detection

The drum unit of each color of toner is provided with a DC set board. The board detects set of the corresponding drum unit.



[1]	Drum unit	[2]	DC set board

NOTE

- **For the life of the unit, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

(1) Unit mounting detection

(a) Detection timing

- The unit mounting detection control is performed under any of the following conditions:
  “The power switch is turned ON (with the front door and right door are closed)”
  “The front door or right door is opened and closed with the power switch in ON position”

(b) Operation when it is detected that no units are mounted

- The message “Drum Unit Installation Error” appears on the control panel and the machine prohibits initiation of any new print cycle.
  The message “Drum Unit Installation Error” disappears as soon as a drum unit is mounted.

(2) New article detection

(a) Detection timing

- The new article detection control is performed if it is determined through the “unit mounting detection” control that the drum unit is correctly mounted in place.

(b) Operation when the drum unit is determined not to be new

- The new article detection control is terminated.

(c) Operation when the drum unit is determined to be new

- The life counter of the drum unit is reset to zero and the control proceeds to the life detection control.

- The result of the new article detection is recorded in the eMMC board of the main body.
- The life counter is available for the drum unit of each color. The counter value is recorded in the eMMC board of the main body.

(3) New release disable mode

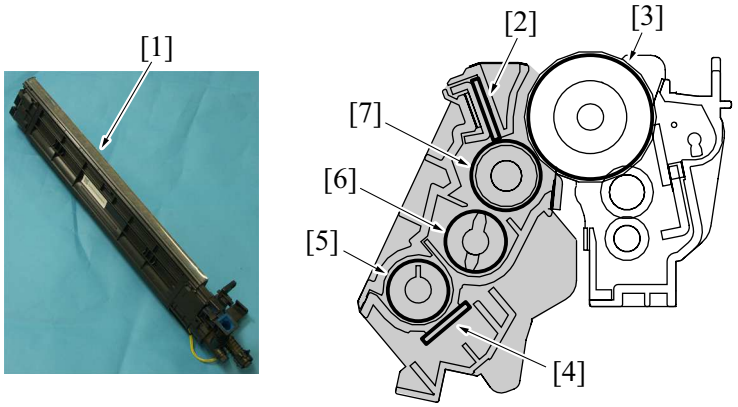
- No new article detection control is performed for the drum unit when the new article detection-disabled mode is used.
- The new article detection-disabled mode should be used only for troubleshooting purposes.

NOTE

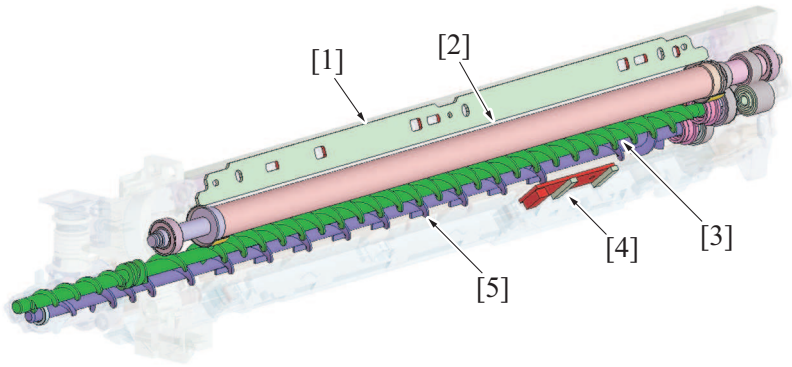
- **See " I.7.3.9 Engine FW DipSW" for more detailed operating precautions.**

5. DEVELOPING SECTION

5.1 Configuration



[1]	Developing unit	[2]	Doctor blade
[3]	Photo conductor	[4]	TCR sensor
[5]	Toner supply screw 1	[6]	Toner supply screw 2
[7]	Developing roller	-	-



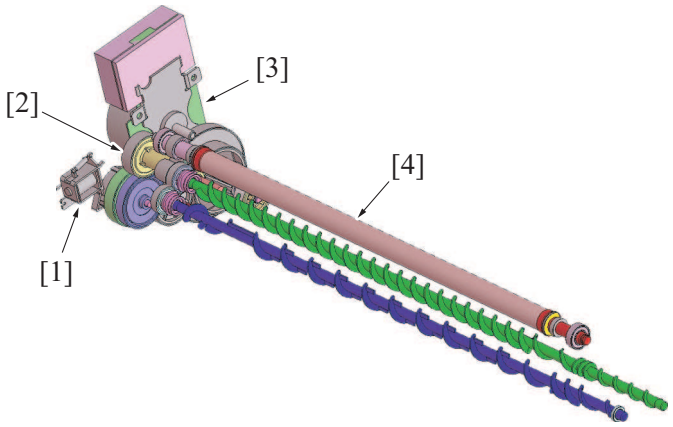
[1]	Doctor blade	[2]	Developing roller
[3]	Toner supply screw 2	[4]	TCR sensor
[5]	Toner supply screw 1	-	-

5.2 Drive

5.2.1 Developing section/K drive mechanism

- Drive force from the transport motor is transmitted to each gears so that the developing roller/K is driven.

The following illustration is for bizhub C368/C308/C258.



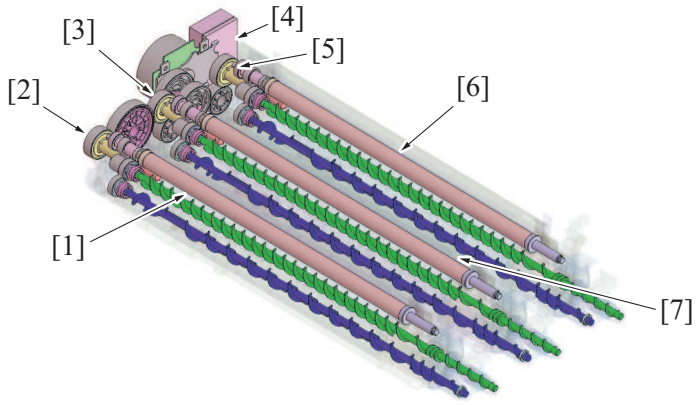
[1]	Developing solenoid (SD4)	[2]	Developing drive gear/K

[3]	Transport motor (M1)	[4]	Developing roller/K

5.2.2 Developing section/Y, M, C drive mechanism

- Rotation of the developing motor transmits drive to the developing drive gear Y, M, C, which drives each of the developing rollers.

The following illustration is for bizhub C368/C308/C258.

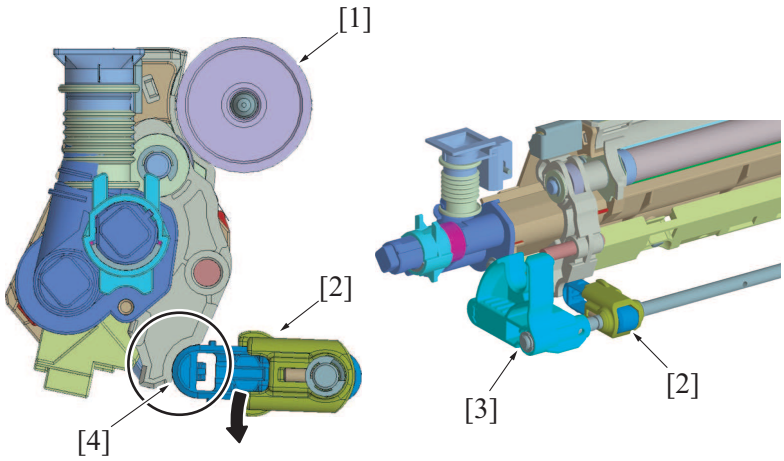


[1]	Developing roller/Y	[2]	Developing drive gear/Y
[3]	Developing drive gear/M	[4]	Developing motor (M21)
[5]	Developing drive gear/C	[6]	Developing roller/C
[7]	Developing roller/M	-	-

5.3 Operation

5.3.1 Developing unit pressure/releases mechanism

- A mechanism is provided that releases the developing unit from the PC drum to prevent the photo conductor from being damaged when the drum unit is to be removed.
- Rotating the release lever clockwise will cause the rib fixed to the lever to fit into the groove in the developing unit, so that the developing unit is pressed against the drum unit.
- Rotating the release lever counterclockwise will cause the rib fixed to the lever to leave the groove in the developing unit, so that the developing unit is released from the drum unit.



[1]	Photo conductor	[2]	Rib
[3]	Release lever	[4]	Groove

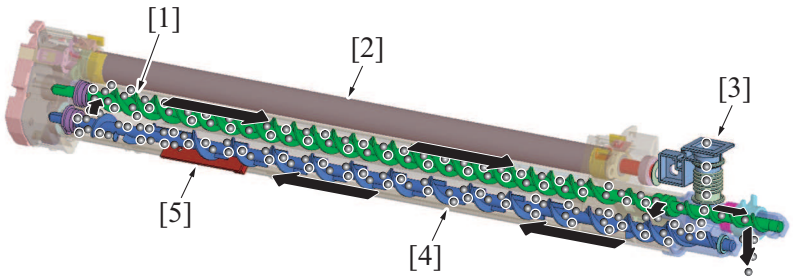
5.3.2 Developer flow

1. Toner replenished via the toner replenishing port located at the front side of the main body is fed to the toner supply screw 1.
2. The developer is conveyed toward the rear of the unit, while being agitated and electrically charged, by the toner supply screw 1.
3. The TCR sensor is equipped on the underside of the developing unit detects toner to carrier (T/C) ratio during this time. If the T/C ratio is lower than a predetermined value, toner is replenished.
4. The developer, fed to the rear of the developing unit, is conveyed further onto the toner supply screw 2.
5. The developer fed to the toner supply screw 2 is conveyed onto the developing roller because of the magnetic pole positioning of the developing roller.
6. The doctor blade then controls the height of the developer brush to ensure that the developer on the developing roller levels out.

7. Only the toner contained in the developer sticks to the electrostatic latent image on the surface of the photo conductor. The developer that is left on the developing roller is returned to the toner supply screw 2 by the magnetic pole positioning of the developing roller.
8. The part of the circulating developer is collected in the waste toner box through the toner collecting port located at the front side of the toner supply screw 2. The toner collecting port is provided with a shutter mechanism. Mounting the waste toner box pushes the shutter at the toner collecting port, opening the toner collecting port. Removing the waste toner box, on the other hand, closes the shutter and toner is thereby prevented from spilling from the toner collecting port. (For more details, see Auto refining developing system and Waste toner spillage prevention shutter.)

NOTE

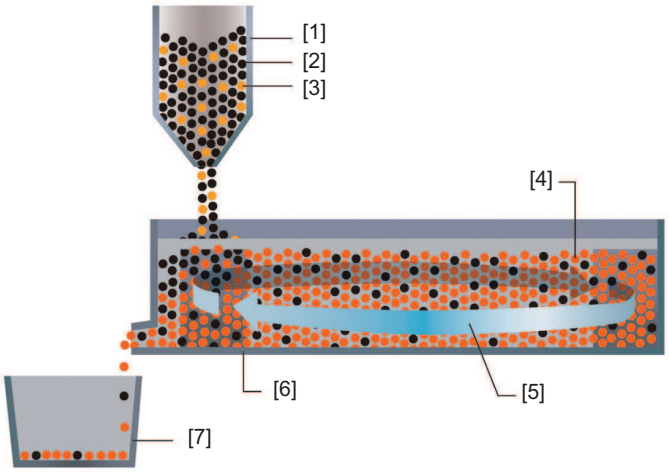
- **The toner replenishing port of the developing unit is not provided with a shutter mechanism. (The toner hopper section is equipped with a shutter.)**
- **When removing the developing unit, the developing unit must be held in a horizontal position with care not to allow toner to spill from the toner replenishing port.**



[1]	Toner supply screw 2	[2]	Developing roller
[3]	Toner replenishing port	[4]	Toner supply screw 1
[5]	TCR sensor	-	-

5.3.3 Auto refining developing system

- The developing unit/Y,M,C,K incorporates the auto refining developing system.
- The bottle of toner cartridge is packed with both toner and carrier and the developing unit is replenished with fresh carrier at the same time that it is replenished with toner.
- Excess carrier in the developing unit is discharged, thereby inhibiting carrier left in the developing unit from being deteriorated and maintaining stable image quality for an extended period of time.

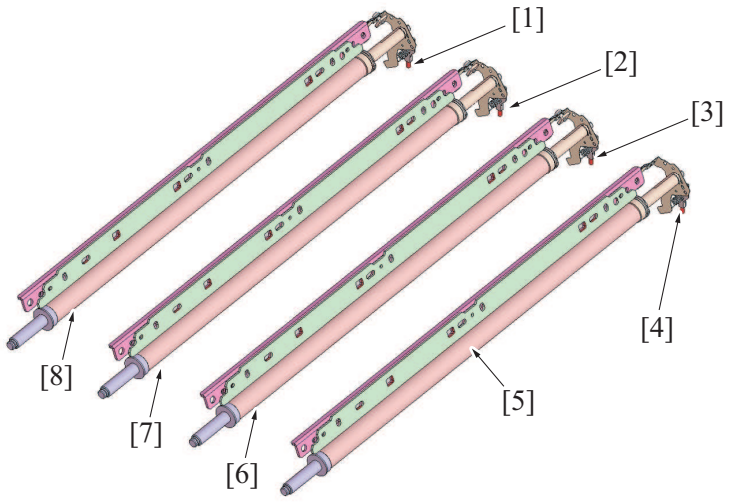


[1]	Toner bottle	[2]	Toner
[3]	New carrier	[4]	Low degree of deterioration of entire carrier
[5]	Circulation and agitation	[6]	Developing unit
[7]	Waste toner box	-	-

5.3.4 Developing bias

- The developing bias voltage (Vdc) is applied to the developing roller so that an adequate amount of toner is attracted onto the surface of the photo conductor.
- In addition to the negative DC component, AC voltage is applied during development to help toner to be attracted more easily to the surface of the photo conductor. This AC component is applied only while development is taking place. At any other timing, only the DC (-) Vdc is applied.
- The developing bias (Vdc) is supplied from high voltage unit.

- The developing bias voltage supplied from the high voltage unit is applied to the developing roller of each color of toner via the metal shaft of the developing drive gear.
- See "IMAGE FORMING CONTROL" for the timing to apply the bias voltage.

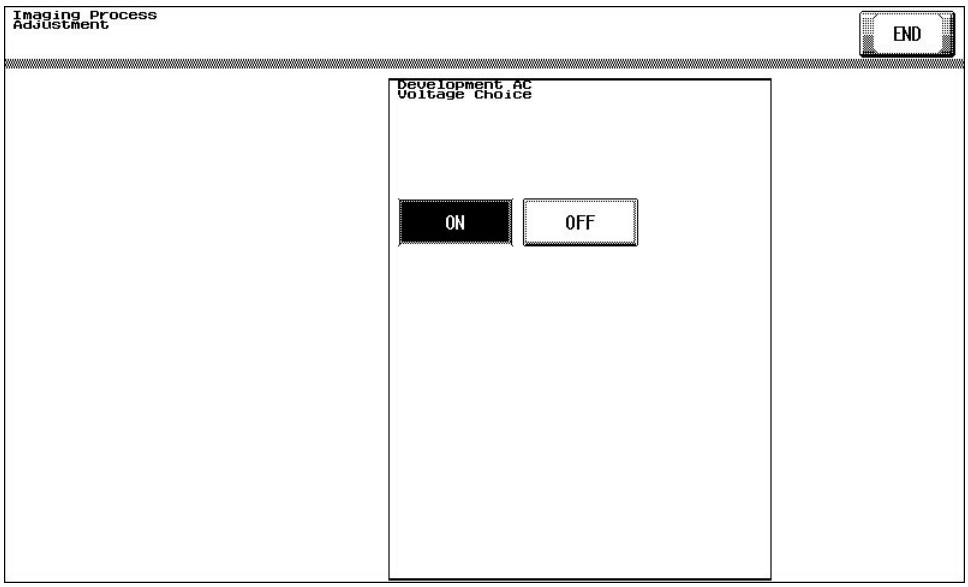


[1]	Developing bias voltage application terminal/Y	[2]	Developing bias voltage application terminal/M
[3]	Developing bias voltage application terminal/C	[4]	Developing bias voltage application terminal/K
[5]	Developing roller/K	[6]	Developing roller/C
[7]	Developing roller/M	[8]	Developing roller/Y

(1) Service Mode

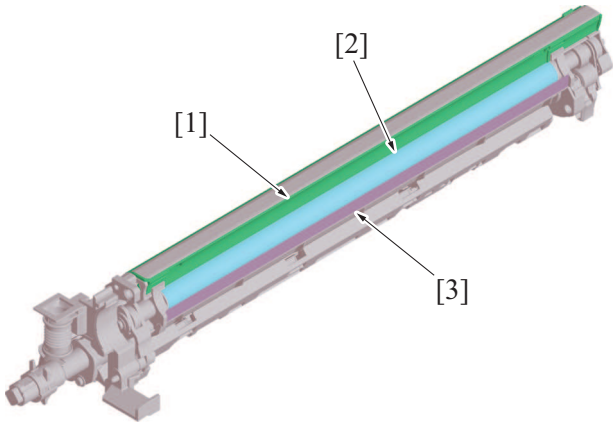
(a) Grad/Dev AC Bias V Selection

- The “Grad/Dev AC Bias V” can be changed by changing the setting of “Imaging Process Adjustment/ Grad/Dev AC Bias V Selection” of the Service Mode. This provides development performance that responds to various types of environment of the users.
- Turning ON the “Grad/Dev AC Bias V Selection” allows the “Grad/Dev AC Bias V” to be decreased down to a voltage value lower than the ordinary specified value.
- With the ordinary specified value set for the “Grad/Dev AC Bias V” in low atmospheric pressure environments, such as at high altitudes, leak could occur, resulting in white dots. Leak, and thus white dots on the image, can be prevented from occurring by lowering the “Grad/Dev AC Bias V”.
- For details of the Service Mode, see “ I.5.6.13 Grad/Dev AC Bias V Selection.”



5.3.5 Toner scattering prevention

- The toner scattering prevention plate and toner scattering prevention sheet are equipped in an area around the developing roller, functioning to prevent toner from scattering.



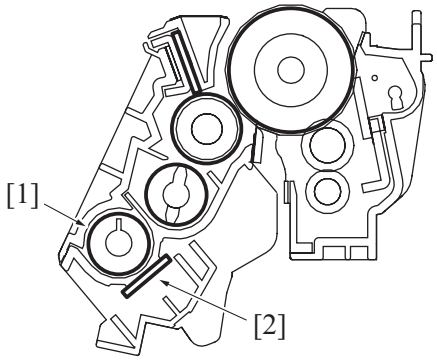
[1]	Toner scattering prevention plate	[2]	Developing roller
[3]	Toner scattering prevention sheet	-	-

5.3.6 Developing cooling

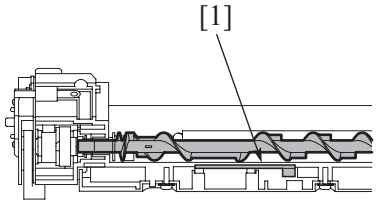
- The transfer belt cleaner cooling fan is provided to circulate air through the inside of the machine, so that the areas around the developing unit, drum unit, toner hopper, and the transfer belt unit can be cooled.
- See "FAN CONTROL" for air path and detailed information

5.3.7 Toner density control

- The TCR sensor is mounted on the underside of each of the developing sections. The TCR sensor for C, M, Y and K is a non-contact magnetic type. Each of these sensors detects toner-to-carrier ratio (TC) of the developer. The reading is used for determining the amount of toner supplied.
- Only when a new developing unit is installed in the machine, an automatic adjustment (calibration) is made of each of these TCR sensors. The automatic adjustment of TCR sensors cannot be done at your own discretion.
- The target TC ratio is 6.5 ± 1.5%.
- The magnetic permeability (powder density) of the carrier in the developer is measured to determine the TC ratio.
- The TCR sensor is integrated with the developing unit. When the TCR sensor is to be replaced with a new one, the entire developing unit must be replaced.
- For replenishment of toner to the developing unit, see “ O.6.4.4 Auxiliary toner replenishing control for toner hopper”.



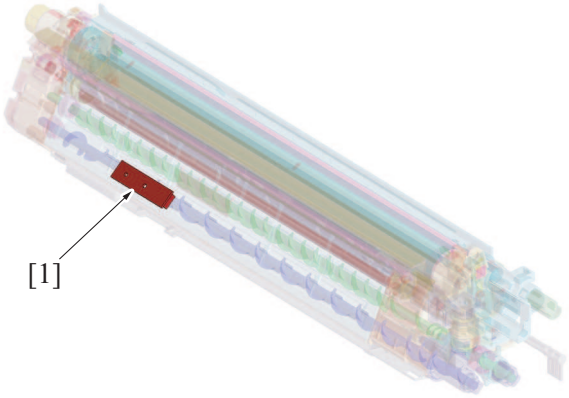
[1]	Toner supply screw 1	[2]	TCR sensor



[1]	TCR sensor	-	-

5.3.8 Developing unit detection

- The developing unit of each color of toner is provided with a TCR sensor. The sensor detects different states of the corresponding developing unit.



[1]	TCR sensor	-	-

NOTE

- **For the life of the unit, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

(1) Unit mounting detection

- The TCR sensor detects the mounting condition of the developing unit.
- When developing unit is detected in the mounted condition, control now proceeds to the “new article detection control”.

(a) Detection timing

- The unit mounting detection control is performed under any of the following conditions:
  “The power switch is turned ON (with the front door and right door are closed)”
  “The front door or right door is opened and closed with the power switch in ON position”

(b) Operation when it is detected that no units are mounted

- The message “Developing Unit Installation Error” appears on the control panel and the machine prohibits initiation of any new print cycle. The message “Developing Unit Installation Error” disappears as soon as a developing unit is mounted.

(2) New article detection

- The TCR sensor detects whether the developing unit is new or not.

(a) Detection timing

- The new article detection control is performed if it is determined through the “unit mounting detection” control that the developing unit is correctly mounted in place.

(b) Operation when the developing unit is determined not to be new

- The new article detection control is terminated.

(c) Operation when the developing unit is determined to be new

- The TCR sensor automatic adjustment control (calibration) is performed.
- The image stabilization control is performed.
- The life counter of the developing unit is reset to zero.
- After the above controls are performed, the operation proceeds to the life detection control.
- The result of the new article detection is recorded in the eMMC board of the main body.
- The life counter is available for the developing unit of each color. The counter value is recorded in the eMMC board of the main body.

(3) New release disable mode

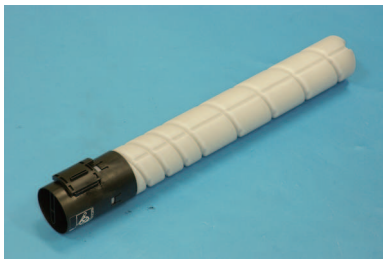
- The new article detection-disabled mode is used when a new developing unit is temporarily used for performing troubleshooting procedures of a machine.
- No new article detection control is performed for the developing unit when the new article detection-disabled mode is used.
- The new article detection-disabled mode should be used only for troubleshooting purposes.

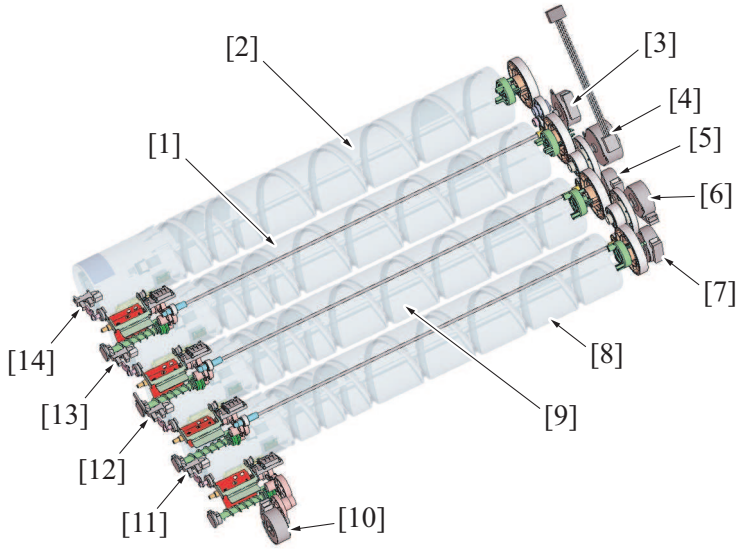
NOTE

- **See “ I.7.3.9 Engine FW DipSW” for more detailed operating precautions.**

6. TONER SUPPLY SECTION

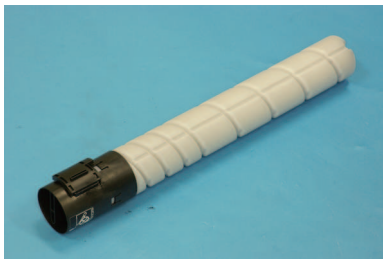
6.1 Configuration (bizhub C368/C308/C258)

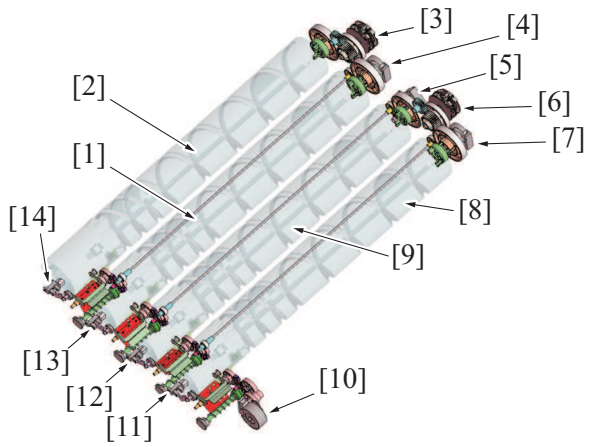




[1]	Toner cartridge/M	[2]	Toner cartridge/Y
[3]	Toner supply motor/Y (M9)	[4]	Toner cartridge motor/Y,M,C (M10)
[5]	Toner supply motor/M (M8)	[6]	Toner cartridge motor/K (M25)
[7]	Toner supply motor/C (M7)	[8]	Toner cartridge/K
[9]	Toner cartridge/C	[10]	Toner supply motor/K (M6)
[11]	Toner empty sensor/K (PS31)	[12]	Toner empty sensor/C (PS32)
[13]	Toner empty sensor/M (PS33)	[14]	Toner empty sensor/Y (PS34)

6.2 Configuration (bizhub C658/C558/C458)



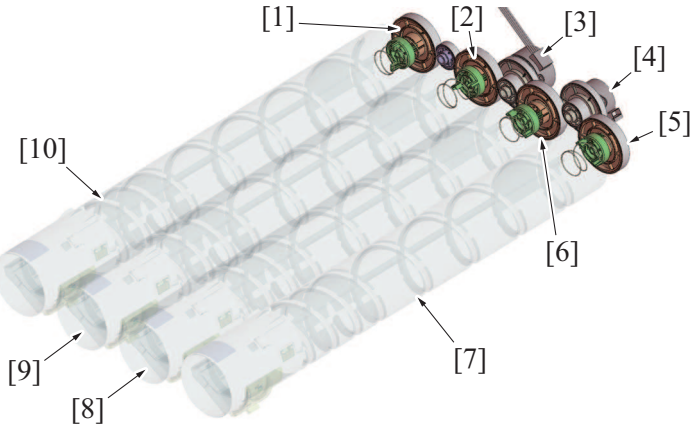


[1]	Toner cartridge/M	[2]	Toner cartridge/Y
[3]	Toner cartridge motor/Y,M (M10)	[4]	Toner supply motor/Y (M9)
[5]	Toner supply motor/M (M8)	[6]	Toner cartridge motor/C,K (M25)
[7]	Toner supply motor/C (M7)	[8]	Toner cartridge/K
[9]	Toner cartridge/C	[10]	Toner supply motor/K (M6)
[11]	Toner empty sensor/K (PS31)	[12]	Toner empty sensor/C (PS32)
[13]	Toner empty sensor/M (PS33)	[14]	Toner empty sensor/Y (PS34)

6.3 Drive

6.3.1 Toner cartridge drive (bizhub C368/C308/C258)

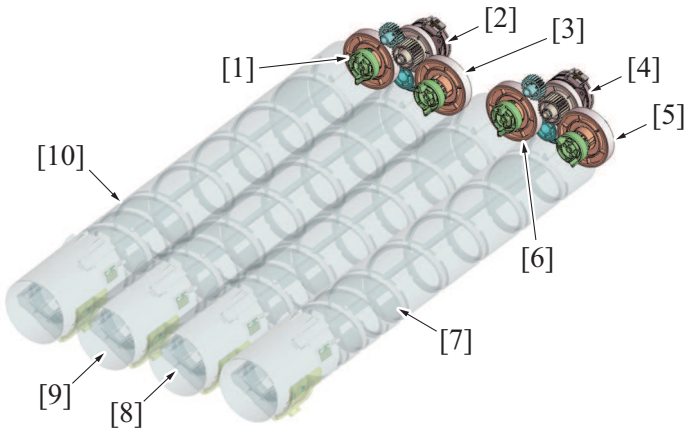
- The toner cartridge motor rotates to drive the toner cartridge. The interior of the toner cartridge is in spiral form. As the toner cartridge rotates, toner inside the toner cartridge is conveyed toward the toner replenishing port that is located at the front side. So that the toner hopper is replenished with the toner from the toner cartridge.
- The toner cartridge motor/Y,M,C drives the toner cartridge/Y,M,C; and the toner cartridge motor/K drives the toner cartridge/K. The toner cartridge drive is switched depending on the color and monochrome print applications.



[1]	Toner cartridge drive gear/Y	[2]	Toner cartridge drive gear/M
[3]	Toner cartridge motor/Y,M,C (M10)	[4]	Toner cartridge motor/K (M25)
[5]	Toner cartridge drive gear/K	[6]	Toner cartridge drive gear/C
[7]	Toner cartridge/K	[8]	Toner cartridge/C
[9]	Toner cartridge/M	[10]	Toner cartridge/Y

6.3.2 Toner cartridge drive (bizhub C658/C558/C458)

- The toner cartridge motor rotates to drive the toner cartridge. The interior of the toner cartridge is in spiral form. As the toner cartridge rotates, toner inside the toner cartridge is conveyed toward the toner replenishing port that is located at the front side. So that the toner hopper is replenished with the toner from the toner cartridge.
- The toner cartridge motor/Y,M drives the toner cartridge/Y,M; and the toner cartridge motor/C,K drives the toner cartridge/C,K. The toner cartridge drive is switched depending on the color and monochrome print applications.

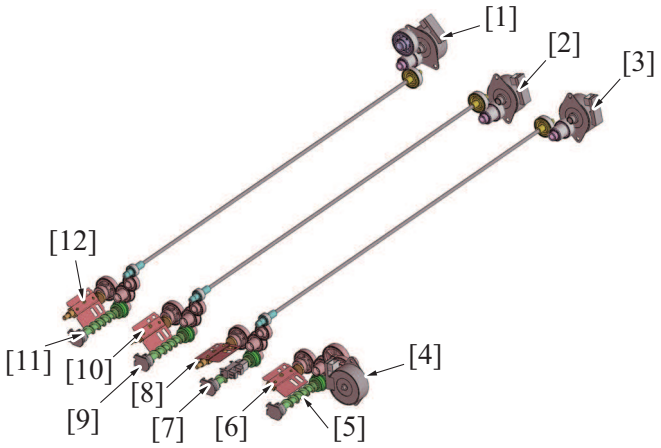


[1]	Toner cartridge drive gear/Y	[2]	Toner cartridge motor/Y,M (M10)
[3]	Toner cartridge drive gear/M	[4]	Toner cartridge motor/C,K (M25)
[5]	Toner cartridge drive gear/K	[6]	Toner cartridge drive gear/C
[7]	Toner cartridge/K	[8]	Toner cartridge/C
[9]	Toner cartridge/M	[10]	Toner cartridge/Y

6.3.3 Toner hopper drive

- Rotation of the toner supply motor causes the toner agitating blade and toner conveying screw inside the toner hopper to rotate.
- Toner conveyed into the toner hopper is agitated by the toner agitating blade.
- As the toner conveying screw rotates, toner is conveyed onto the toner replenishing port located at the front side inside the toner hopper, so that the toner is fed into the developing unit via the toner replenishing pipe.

The following illustration is for bizhub C368/C308/C258.

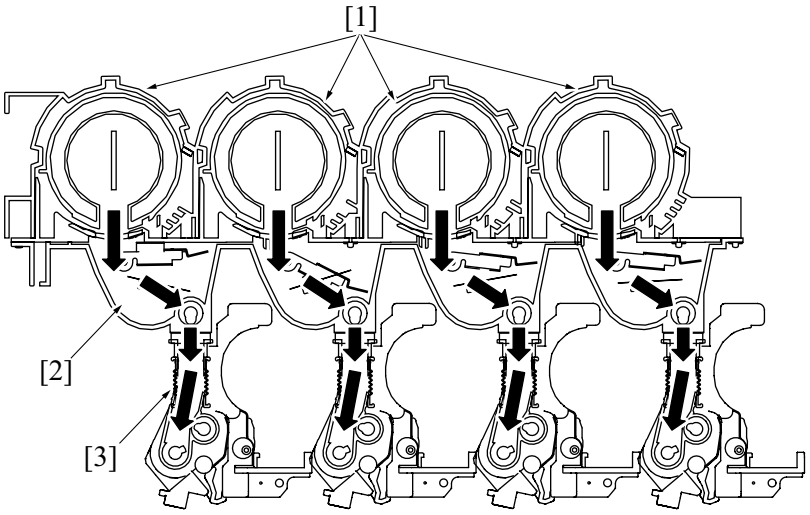


[1]	Toner supply motor/Y (M9)	[2]	Toner supply motor/M (M8)
[3]	Toner supply motor/C (M7)	[4]	Toner supply motor/K (M6)
[5]	Toner conveying screw/K	[6]	Toner agitating blade/K
[7]	Toner conveying screw/C	[8]	Toner agitating blade/C
[9]	Toner conveying screw/M	[10]	Toner agitating blade/M
[11]	Toner conveying screw/Y	[12]	Toner agitating blade/Y

6.4 Operation

6.4.1 Toner replenishing overview

- The toner replenishing mechanism in this machine has a two-step replenishing structure. One is replenishing the toner hopper with the toner from the toner cartridge. The other one is replenishing the developing unit with the toner from the toner hopper.
- The toner cartridge incorporates the auto refining developing system for all colors.
- The interior of the toner cartridge is packed with both toner and carrier. The developing unit is replenished with fresh carrier at the same time of replenishing the toner. Excess carrier in the developing unit is discharged, thereby inhibiting carrier left in the developing unit from being deteriorated and maintaining stable image quality for an extended period of time.
- For details of the auto refining developing system, see “ O.5.3.3 Auto refining developing system”.

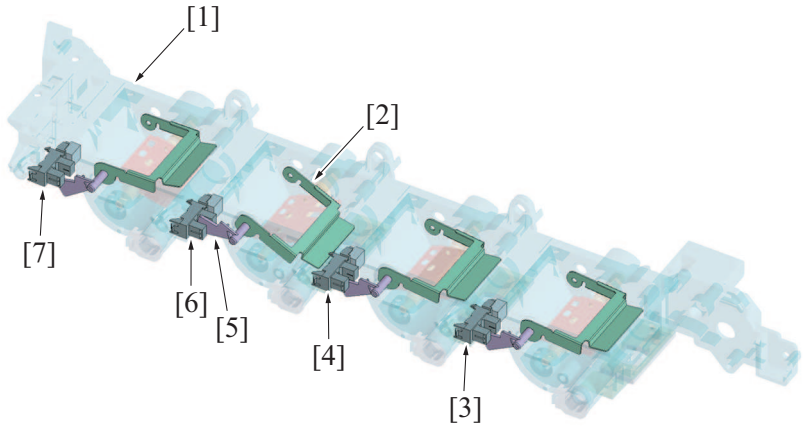


[1]	Toner cartridge	[2]	Toner hopper
[3]	Toner replenishing pipe	-	-

6.4.2 Toner replenishing from toner bottle to toner hopper

(1) Toner replenishing mechanism

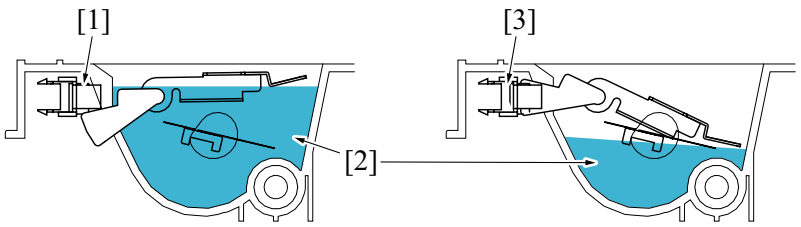
- The toner replenishing from the toner cartridge to the toner hopper is determined by unblocking and blocking the toner empty sensor.
- If the toner empty sensor is blocked a predetermined number of times, the machine determines that it is in a near empty condition. So that, the toner cartridge motor is energized and a toner replenishing sequence is started.
- The toner hopper for each color of toner is provided with a toner empty sensor.
- Each toner empty sensor is blocked or unblocked by an actuator dedicated to it. The detection plate is moved up and down by a cam that is mounted coaxially with the toner agitating blade. The actuator that is mounted on the detection plate is operatively associated with the up-and-down movement that is detected using the toner empty sensor.



[1]	Toner hopper	[2]	Detection plate
[3]	Toner empty sensor/K (PS31)	[4]	Toner empty sensor/C (PS32)
[5]	Actuator	[6]	Toner empty sensor/M (PS33)
[7]	Toner empty sensor/Y (PS34)	-	-

(2) Toner replenishing control

- The toner replenishing control is started when the drive of the toner cartridge motor is started.
- The output of the toner empty sensor is monitored for a predetermined period of time. If the toner empty sensor is turned ON from the OFF state, during the predetermined period of time, the machine determines that the “toner hopper runs out of toner (or there is only a small amount of toner left in the toner hopper)” and increments the near empty counter by one. Next, the toner cartridge motor is rotated for a predetermined period of time, so that toner is supplied from the toner cartridge to the toner hopper.
- If the toner empty sensor remains OFF, the machine determines that “toner is still available for use in the toner hopper”, resetting the near empty counter to zero.
- These operations are repeated. When the near empty counter reaches the predetermined value, the machine determines that the toner hopper is in the near empty condition.



[1]	Toner empty sensor: OFF	[2]	Toner
[3]	Toner empty sensor: ON	-	-

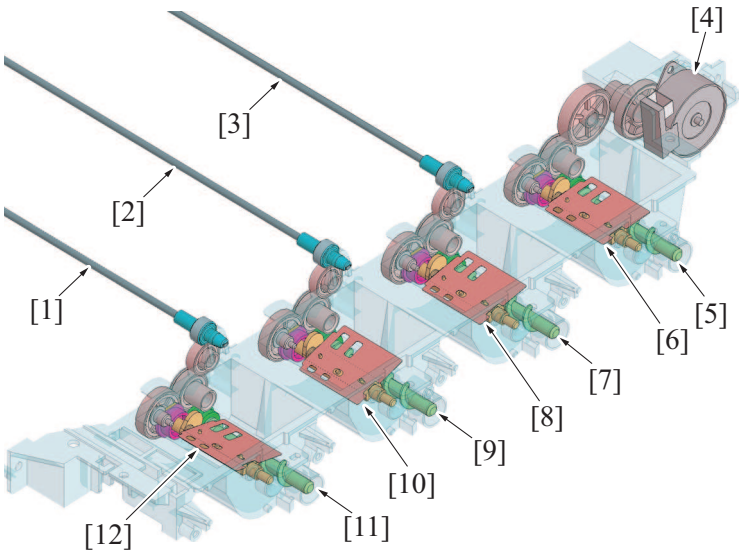
6.4.3 Toner replenishing from toner hopper to developing unit

(1) Toner replenishing control

- Control of replenishing the developing unit with toner from the toner hopper is performed only when the developing unit is driven.
- The toner replenishing time (the amount of toner supplied) during the toner replenishing control is determined based on the T/C ratio detected by the TCR sensor (noncontact magnetic type) disposed at the developing unit for each color of toner and the amount of toner to be consumed (estimated) for the image to be printed.
- If replenishing is interrupted by a paper misfeed, the front door opened or closed, or any similar event, the required replenishing time is carried forward to the next replenishing control sequence.
- For details of the TCR sensor, see " O.5.3.7 Toner density control".

(2) Toner replenishing mechanism

- Four toner supply motors drive the toner conveying screws and the toner agitating blades provided in the toner hoppers of four different colors of toner.
- The toner supply motor of each color drives the toner conveying screw and the toner agitating blade.
- The toner agitating blade rotates to agitate toner in the toner hopper.
- The toner conveying screw rotates to replenish the developing unit with toner.

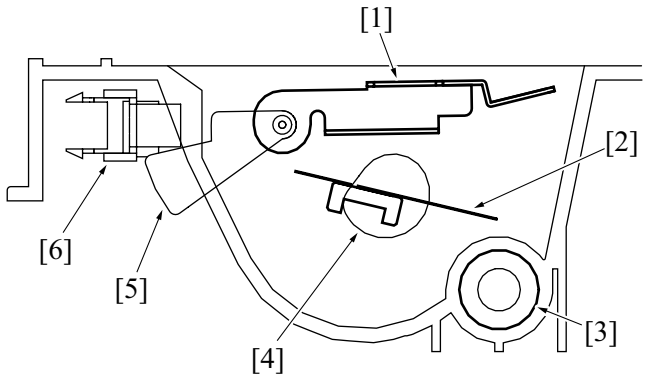


[1]	Drive from toner supply motor/Y	[2]	Drive from toner supply motor/M
[3]	Drive from toner supply motor/C	[4]	Toner supply motor/K (M6)
[5]	Toner conveying screw/K	[6]	Toner agitating blade/K
[7]	Toner conveying screw/C	[8]	Toner agitating blade/C
[9]	Toner conveying screw/M	[10]	Toner agitating blade/M
[11]	Toner conveying screw/Y	[12]	Toner agitating blade/Y

(3) Toner agitating blade drive

1. Toner conveying screw is rotated by the driving of the toner supply motor.
2. The rotation of the toner conveying screw is transmitted to the toner agitating blade drive gear, which results in the toner agitating blade being rotated. The toner agitating blade rotates to agitate toner in the toner hopper.
3. The cam mounted coaxially with the toner agitating blade moves the detection plate and actuator up and down.

*: For details of the toner empty sensor, see " O.6.4.9 Toner empty detection control".



[1]	Detection plate	[2]	Toner agitating blade
[3]	Toner conveying screw	[4]	Cam (operatively connected to toner agitating blade shaft)
[5]	Actuator	[6]	Toner empty sensor

6.4.4 Auxiliary toner replenishing control for toner hopper

- If the amount of toner in the toner hopper is likely decreasing, control is performed to supply toner forcibly from the toner cartridge to the toner hopper.
- The machine prohibits initiation of any new print cycle while the auxiliary toner replenishing control is being executed.

(1) Toner hopper auxiliary toner replenishing control execution timing

- Rotate the toner cartridge motor for a predetermined time to supply toner from the toner cartridge to the toner hopper under one of the following conditions:
  “The toner replenishing menu is performed from the Service Mode”
  “The toner cartridge is replaced with a new one after a toner empty condition is detected in the toner cartridge (toner empty reset control is performed)"
  “The developing unit is replaced with a new one (developing unit new article detection control is performed)”
  “The toner replenishing menu is manually performed from the Service Mode”

(2) Toner hopper auxiliary toner replenishing control end timing

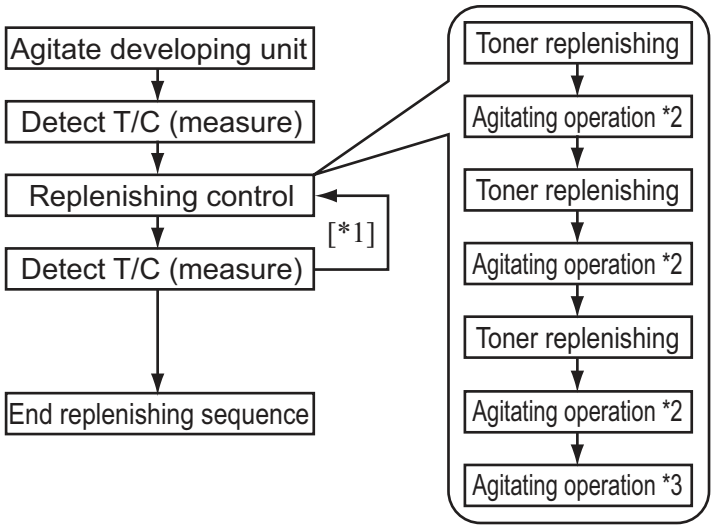
- The auxiliary toner replenishing control is terminated under any of the following conditions:
  “A predetermined period of time elapses after the toner cartridge motor has been energized”
  “The front door is opened and closed”
  “An error or malfunction occurs”
  “The machine enters the power save or sleep mode”

6.4.5 Auxiliary toner replenishing control for developing unit

- If the T/C ratio detected by the TCR sensor is equal to, or lower than, a predetermined value at the start of a print cycle, initiation of the print cycle is prohibited and the developing unit is replenished with toner from the toner hopper until the T/C value reaches the predetermined value. (for a period of about 5 min. maximum)
- The auxiliary toner replenishing control for developing unit is terminated as soon as the predetermined T/C ratio is recovered. It is also terminated if the auxiliary toner replenishing control for developing unit is repeated ten sets. Also, it will be terminated when a toner empty condition is detected in the toner cartridge.

(1) Operation flow

- When the auxiliary toner replenishing control is performed, the following operations will also be performed. Agitate the toner hopper, calculate the T/C ration with the TCR sensor for each color, and replenish toner from toner cartridge to the toner hopper are performed.
- The auxiliary toner replenishing control is performed for a maximum of about 5 min.



- *1: If a predetermined T/C is not reached, return to replenishing control. (a maximum of 10 times)
- *2: Agitate developing unit during replenishing
- *3: Agitate developing unit after replenishing

6.4.6 Toner spillage prevention shutter

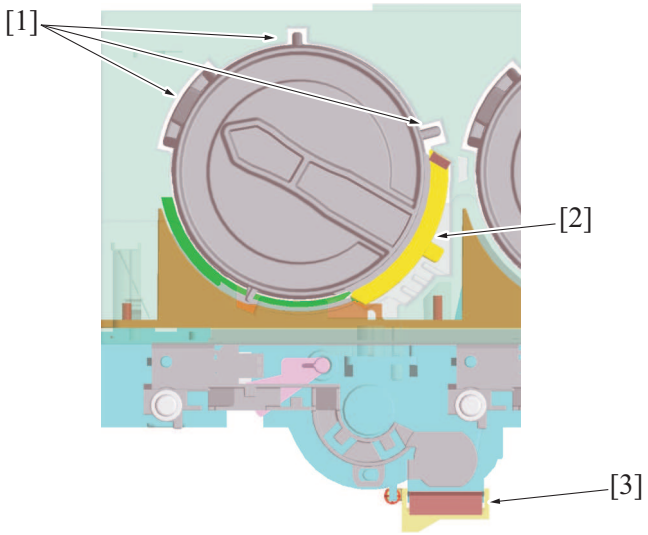
(1) Toner cartridge

(a) Mounting

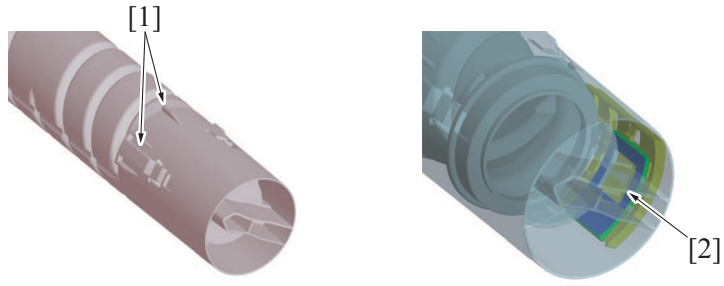
- The shutter of the toner replenishing port is opened when the handle of the toner cartridge is rotated clockwise to the toner replenishing position after the toner cartridge has been inserted into the toner cartridge mounting portion.
- The toner cartridge motor rotates to drive the toner cartridge.
- As the toner cartridge rotates, toner inside the toner cartridge is conveyed toward the toner replenishing port, so that the toner hopper is replenished with toner.

(b) Removal

- The shutter at the toner replenishing port must be closed when the toner cartridge is to be removed.
- Rotating the handle of the toner cartridge counterclockwise to the cartridge removal position closes the shutter of the toner replenishing port. The toner cartridge can be removed when the toner replenishing port of the toner cartridge is closed.



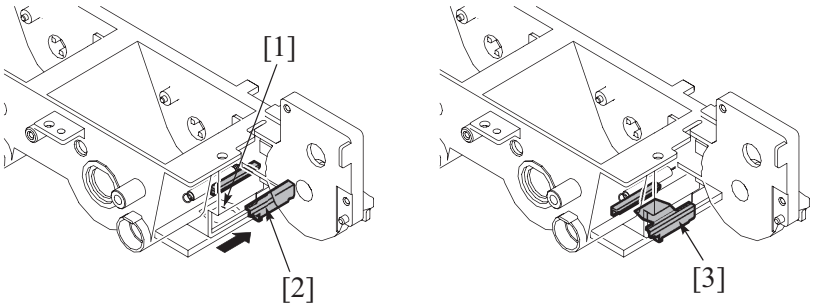
[1]	Toner cartridge positioning protrusion	[2]	Toner cartridge toner spillage prevention shutter
[3]	Toner hopper toner spillage prevention shutter	-	-



[1]	Toner cartridge positioning protrusion	[2]	Toner cartridge toner replenishing port (toner cartridge removal position)

(2) Toner hopper

- The toner replenishing port of the toner hopper of each color of toner is provided with a toner spillage prevention shutter that prevents toner from spilling during removal or reinstallation of the developing unit.
- Mounting the developing unit pushes the shutter at the toner replenishing port, opening the toner replenishing port. Removing the developing unit, on the other hand, closes the shutter and toner is thereby prevented from spilling from the toner replenishing port.



[1]	Toner replenishing port	[2]	Toner hopper toner spillage prevention shutter (opened: toner replenishing position)
[3]	Toner hopper toner spillage prevention shutter (closed: developing unit removal position)	-	-

6.4.7 Toner supply PPM control

NOTE

- **This control is available in bizhub C658/C558 models only.**
- **The print speed is high during a consecutive printing of high-coverage original, and so toner may not be provided fast enough.**
- **To prevent insufficient supply of toner (density reduction), this control temporarily lengthens the interval during a consecutive printing at high coverage ratio to control the reduction of the toner density.**
- **This control will start when the coverage ratio exceeds approximately 80%, and 15 sheets has been printed consecutively.**
- **When the control starts, printing with an efficiency equivalent to bizhub C458 model is executed.**
- **Efficiency returns to normal after toner density is restored.**

6.4.8 Front door mechanism

- The main power switch and total counter are mounted inside the front door.

(1) Front door locking mechanism

- The front door is provided with a locking mechanism.

(a) Unlocking the front door

- Pulling the front door to the front will release the door lock magnets (two) provided at the upper portion of the front door.

(b) Locking the front door

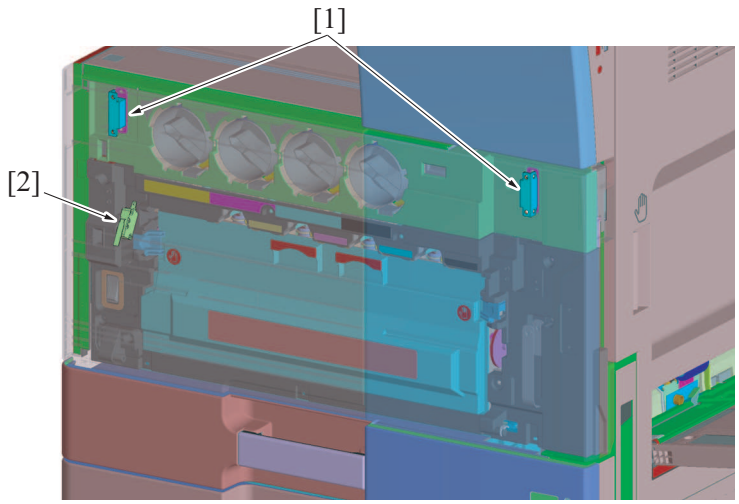
- Close the front door. When the front door is closed in its correct position, the door lock magnets (two) provided at the upper portion of the front door lock the front door in place.
- The front door is provided with a protrusion that detects the correct mounting of the toner cartridge. It prevents operation of the machine, when the toner replenishing shutter of the toner cartridge is closed.

(2) Front door open/close detection mechanism

- The front door switch detects that the front door is opened or closed.

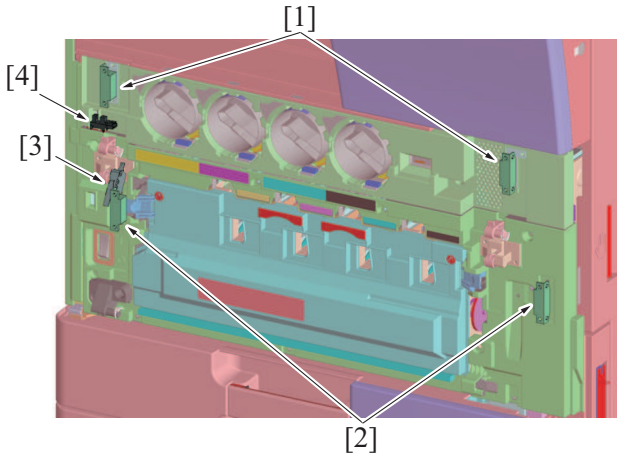
- When the front door is closed, the open/close detection protrusion provided at the upper portion on the left side of the front door presses the actuator of the front door switch. This turns ON the front door switch and the machine determines that the front door is closed.
- When the front door is opened, the front door switch actuator is released, which turns OFF the front door switch. The machine then determines that the front door is open and shows a message that prompts the operator to close the front door.
- When it is determined that the front door is open, use of all jobs but the fax reception job is prohibited. In addition, a paper misfeed results if the front door is opened during a print job.

bizhub C368/C308/C258



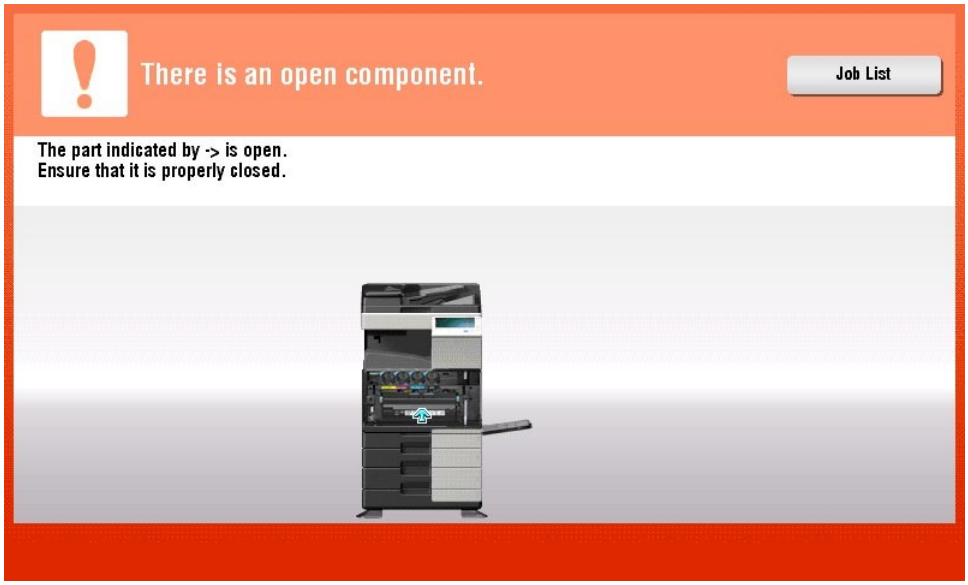
[1]	Door lock magnet	[2]	Front door switch (SW2)

bizhub C658/C558/C458



[1]	Upper door lock magnet	[2]	Lower door lock magnet
[3]	Front door switch (SW2)	[4]	Front upper door sensor (PS43)

Example: bizhub C368/C308/C258



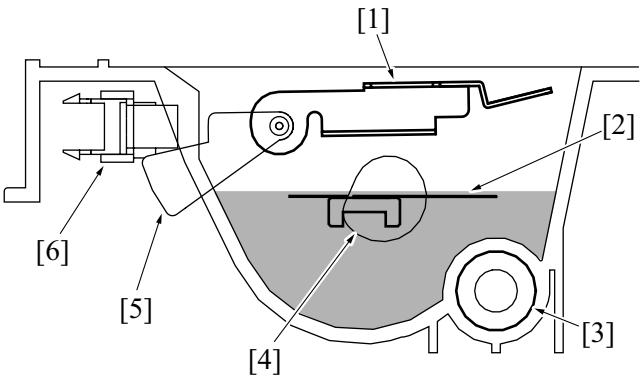
6.4.9 Toner empty detection control

NOTE

- **For the life of the toner cartridge, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

(1) Toner near empty detection

- The toner empty sensor provided for the toner hopper of each color of toner is used to determine the amount of toner still available for use in the toner hopper.
- The cam that is mounted coaxially with the detection plate moves up and down depending on the remaining amount of the toner. Thus, the toner empty sensor detects the condition.
- If the near empty counter exceeds 3 during control of replenishing the toner hopper with toner, a toner near empty condition is considered. As a result, it prompts to perform the toner empty control.
- For details of the toner replenishing control, see " O.6.4.2 Toner replenishing from toner bottle to toner hopper".



[1]	Detection plate	[2]	Toner agitating blade
[3]	Toner conveying screw	[4]	Cam (operatively connected to toner agitating blade shaft)
[5]	Actuator	[6]	Toner empty sensor

(a) Toner near empty detection timing

- The toner replenishing control is started when the drive of the toner supply motor is started.
- The output of the toner empty sensor is monitored for a predetermined period of time. If the toner empty sensor is turned ON from the OFF state, during the predetermined period of time, the machine determines that the "toner hopper runs out of toner (or there is only a small amount of toner left in the toner hopper)" and increments the near empty counter by one.
- If the toner empty sensor remains OFF, the machine determines that "toner is still available for use in the toner hopper", resetting the near empty counter to zero.
- These operations are repeated. When the near empty counter reaches the predetermined value, the machine determines that the toner hopper is in the near empty condition. Then, it shows the message "Toner is low. Replace when indicated" on the control panel.

(2) Resetting the toner near empty and toner empty conditions

- Either the "auxiliary toner replenishing control for toner hopper" or "auxiliary toner replenishing control for developing unit" is performed (both may be performed in some cases) after a toner near empty condition and a toner empty condition have been detected.

- The toner near empty/empty display is reset when the control is normally terminated.
- Initiation of a new print cycle is prohibited during execution of the “auxiliary toner replenishing control for toner hopper” and “auxiliary toner replenishing control for developing unit”.
- See the relevant pages for more details of the “Auxiliary toner replenishing control for toner hopper” and “Auxiliary toner replenishing control for developing unit”.

List of controls

Control name	Parts to be controlled	Description
Auxiliary toner replenishing control for developing unit	Developing unit	Recovers the T/C ratio of the developer in the developing unit.
Auxiliary toner replenishing control for toner hopper	Toner hopper	Recovers the amount of toner in the toner hopper.

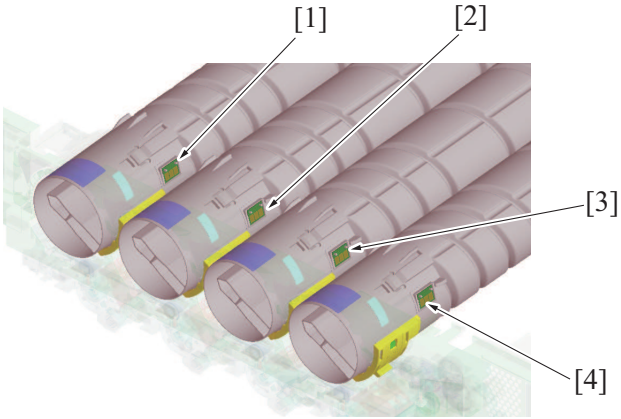
Condition	Toner in unit		Control to be executed	Printing after the end of the control
	Developing unit	Toner hopper		
Near empty	Available	Decreasing	Auxiliary toner replenishing control for toner hopper	Empty display is reset if the amount of toner in the toner hopper is recovered.
Empty 1	Available	Not available		Empty display stays put if the amount of toner in the toner hopper is not recovered.
Empty 2	Not available	Not available	Auxiliary toner replenishing control for toner hopper + auxiliary toner replenishing control for developing unit	Empty display is reset if the T/C ratio is recovered.
				Empty display stays put if the T/C ratio is not recovered.

(a) Toner empty condition resetting timing

- The “auxiliary toner replenishing control for toner hopper” or “auxiliary toner replenishing control for developing unit” is executed under any of the following conditions after a toner near empty/toner empty condition has been detected:
  “The main power switch is turned ON”
  “Release in sub power off mode”
  “The front door is opened and closed” (bizhub C368/C308/C258)
  “The lower front door is opened and closed” (bizhub C658/C558/C458)

6.4.10 Toner cartridge detection

- Toner cartridges contain the toner cartridge set board to detect new toner cartridges.



[1]	toner cartridge set board/Y (TCSB/Y)	[2]	toner cartridge set board/M (TCSB/M)
[3]	toner cartridge set board/C (TCSB/C)	[4]	toner cartridge set board/K (TCSB/K)

NOTE

- **For details of the toner cartridge life, see “ F.6.1 Consumable/part replacement time (bizhub C368/C308/C258)”, “ F.6.2 Consumable/part replacement time (bizhub C658/C558/C458)”.**

(1) Description

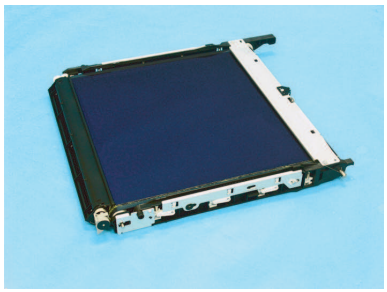
- The toner cartridge detection is controlled by means of accessing the toner cartridge set board when the upper front door is closed or the sub power switch is turned ON to determine whether the toner cartridge is loaded or not.
- After detecting the presence of the cartridge, the machine determines whether the cartridge is new or not.

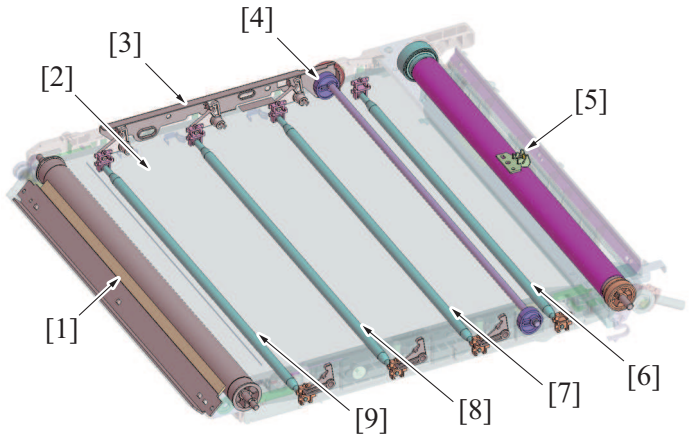
7. 1ST TRANSFER SECTION

7.1 Configuration

NOTE

- **bizhub C658/C558/C458 transfer belt units and bizhub C368/C308/C258 transfer belt units have different cleaning blades. Make sure to use the transfer belt dedicated to your machine.**
- **To replace the transfer belt unit with a new one, confirm the model of machine at first. Then make sure to use the transfer belt unit dedicated to your machine.**

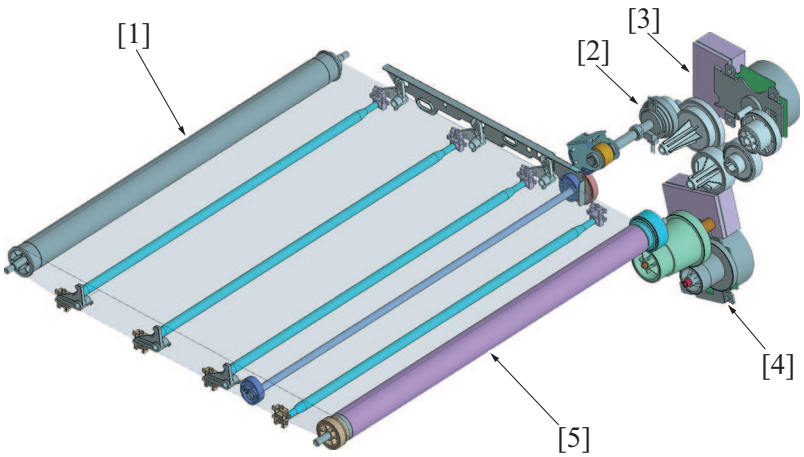




[1]	Cleaning blade	[2]	Transfer belt
[3]	1st transfer roller pressure mechanism	[4]	1st transfer roller pressure cam
[5]	Separation claw	[6]	1st transfer roller/K
[7]	1st transfer roller/C	[8]	1st transfer roller/M
[9]	1st transfer roller/Y	-	-

7.2 Drive

The following illustration is for bizhub C368/C308/C258.



[1]	Transfer belt driven roller	[2]	1st transfer pressure clutch (CL5)
[3]	Fusing motor (M3)	[4]	Transport motor (M1)

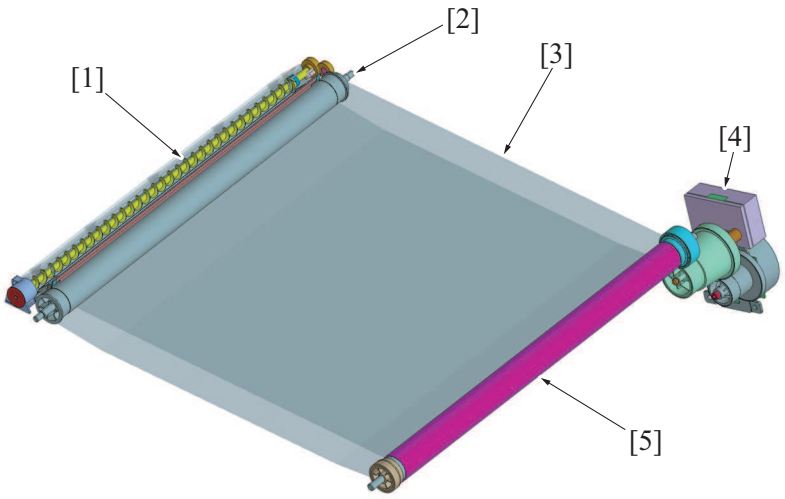
[5]	Transfer belt drive roller	-	-

7.3 Operation

7.3.1 Transfer belt drive

- The transfer belt drive roller is rotated by the driving force of the transport motor.
- Rotation of the transfer belt causes the transfer belt driven roller to rotate. The drive transmission gear located at the transfer belt driven roller rotates the waste toner conveying screw of the cleaning mechanism.

The following illustration is for bizhub C368/C308/C258.



[1]	Waste toner conveying screw	[2]	Transfer belt driven roller
[3]	Transfer belt	[4]	Transport motor (M1)
[5]	Transfer belt drive roller	-	-

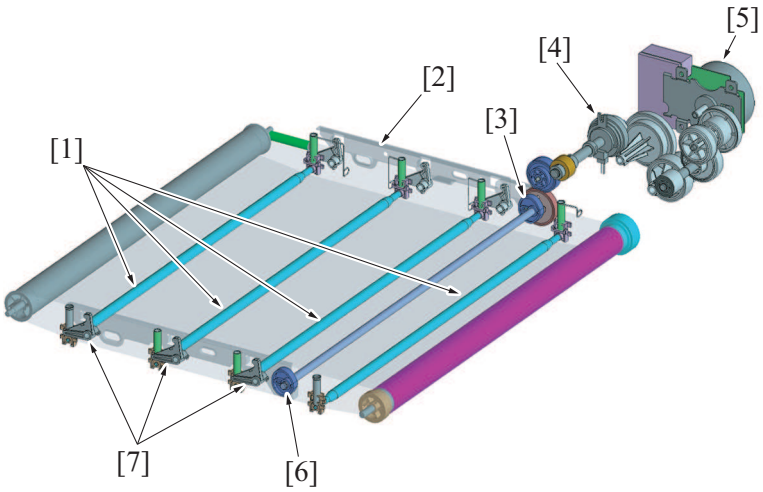
7.3.2 1st transfer roller control

- Pressure mechanism is equipped for pressing the 1st transfer rollers (Y, M, C) to inside the transfer belt at the 1st transfer.
- The 1st transfer roller (K) does not have pressure retraction mechanism. The 1st transfer roller (K) always presses the transfer belt to the PC drum (K).
- The driving force of the fusing motor is transmitted to the fusing drive release gear and transfer belt retraction clutch, thereby pressing the 1st transfer roller. The fusing drive release gear is moved to the drive coupling position when the right door is closed, so that the driving force can be transmitted. For more details of the fusing drive release mechanism, see “ O.13.3.1 Fusing drive release mechanism”.

(1) 1st transfer roller pressure

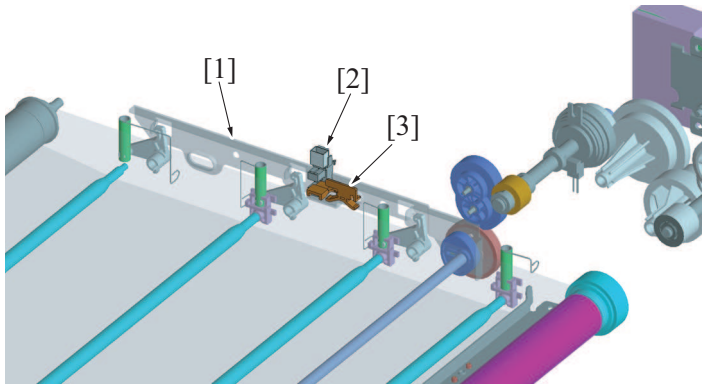
- Rotation of the fusing motor is transmitted to the transfer belt retraction clutch via the fusing drive release gear.
- When the 1st transfer pressure clutch is turned ON, the rotation of the fusing motor is transmitted to the drive gear.
- Rotation of the drive gear rotates the pressure cam, so that the position of contact between the slide plate and the cam is varied.
- The 1st transfer roller pressure spring provided for the slide plate causes the slide plate to move to the pressure position. (Toward the transfer belt driven roller side.)
- The movement of the slide plate results in the 1st transfer roller drive arm being rotated. The rotation of the 1st transfer roller drive arm lowers the 1st transfer roller (Y, M, C), so that the transfer belt is pressed against the PC drum.
- When the slide plate moves to the pressure position, the leading edge of the slide plate pushes the actuator of the 1st transfer pressure sensor.
- The actuator blocks the 1st transfer pressure sensor and the slide plate movement is detected.
- The 1st transfer pressure clutch is turned OFF.
- The cam will stop rotating and the siding plate will stop.
- The 1st transfer roller (Y, M, and C) will stay being pressed.

The following illustration is for bizhub C368/C308/C258.



[1]	1st transfer roller Y/M/C/K	[2]	Slide plate
[3]	Pressure cam	[4]	1st transfer pressure clutch (CL5)
[5]	Fusing motor (M3)	[6]	Pressure cam
[7]	1st transfer roller drive arm Y/M/C/K	-	-

The following illustration is for bizhub C368/C308/C258.



[1]	Slide plate	[2]	1st transfer pressure sensor (PS39)
[3]	Actuator	-	-

7.3.3 Pressure/retraction control by print mode

- To extend the service life of the PC drum/Y, M, C, the transfer belt is retracted from the color PC drum in the black mode.
- In the black mode, the 1st transfer roller/Y, M, C is retracted and the color drum unit and color developing unit are stopped.
- The 1st transfer roller/K is pressed against the PC drum/K at all times in both black and color modes.

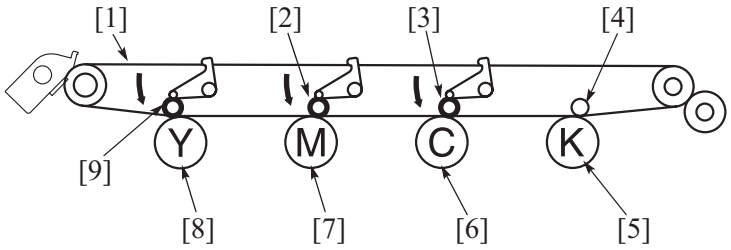
(1) Color mode

- In the color mode, the 1st transfer roller is where the PC drum is pressed against the transfer belt for all four colors of toner.

(2) Black mode

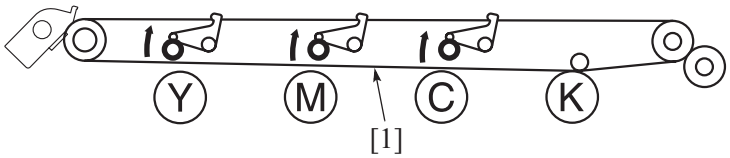
- In the black mode, the 1st transfer roller/Y, M, C is where the PC drum/Y, M, C leaves the transfer belt, while the 1st transfer roller/K is where the PC drum/K is pressed against the transfer belt. This allows the PC drum/Y, M, C to stop rotating in this mode.

Color mode



[1]	Transfer belt	[2]	1st transfer roller/M
[3]	1st transfer roller/C	[4]	1st transfer roller/K
[5]	Photo conductor/K	[6]	Photo conductor/C
[7]	Photo conductor/M	[8]	Photo conductor/Y
[9]	1st transfer roller/Y	-	-

Black mode



[1]	Transfer belt (retraction position)	-	-

(3) ACS mode

(a) ACS mode overview

- When making a copy, any desired copy mode can be selected from the control panel. (The default setting is the “auto color mode”.) The auto color mode is called the ACS (auto color selection) mode. (In PC print job, auto color as the setting item in the printer driver corresponds to the ACS.)
- In ACS mode, the machine analyzes the image data of the original scanned by the “scanner section” to determine whether the image data is colored or in black.
- Determining that it is a color original, the machine presses the 1st transfer roller and runs a color print job.
- Determining that it is a black original, the machine retracts the 1st transfer roller and runs a black print job.

(b) Control of 1st transfer roller in ACS mode

- The number of sheets of continuous series of black originals is counted when color originals are changed to black originals.
- Pressure of the 1st transfer roller is controlled according to the number of sheets of continuous series of black originals during a multi-print cycle, thereby achieving both high print productivity and extended service life of consumables.
- “Control of 1st transfer roller in ACS mode” is executed only when a copy is made with “Auto Color” selected from the control panel. It is not executed when “Full Color”, “Black”, “2 Color”, or “Single Color” is selected.
- The control is executed, for “PC print”, only if the print cycle is run with “Auto Color” selected from the printer driver screen. It is not executed when “Full Color” or “Grayscale” is selected.
- The 1st transfer roller/Y,M,C is in the pressed position (color mode) in its initial state.

NOTE

- **The control of 1st transfer roller in the ACS mode is enabled only after the number of sheets of continuous series of black originals has been counted. It is therefore not an effective control for a copy print job involving only one copy set/stack. The control is effectively operable for the following print jobs: Since on the first copy, the control can be performed only for where the original is read and counted.**
  “Copy print of the second copy set/stack and onward”
  “Copy print from a registered job”
  “PC print job”

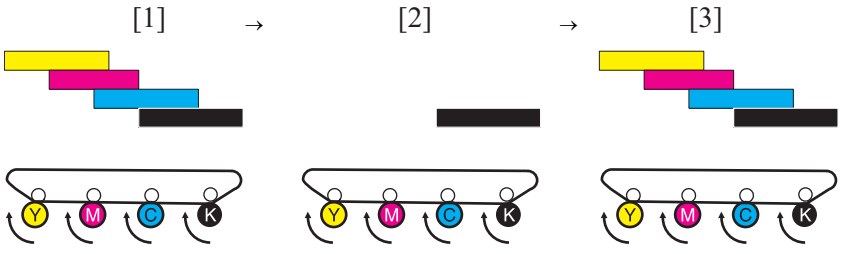
(c) When the number of multi-copies is as specified or under

- ACS control starts counting the number of multi-copies of the black original when switched from the color original to the black original.
- The black printing will start with color mode. (with the 1st transfer roller/Y,M,C being pressed) Developing or transfer does not take place with the developing unit (Y, M, C), but, since the transfer belt is pressed, the PC drum and the developing roller are rotated as the transfer belt rotates. An advantage during pressure the 1st transfer roller/Y,M,C is that the loss time related to print productivity that generates due to retraction of the 1st transfer roller can be reduced.

(d) When the number of multi-copies is as specified or over

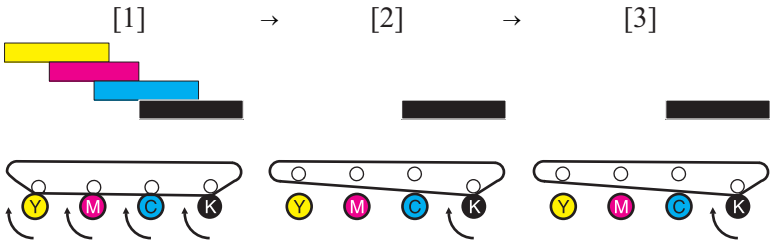
- The black printing will start when the color mode is complete and the 1st transfer roller/Y,M,C is retracted to be switched to the black mode. An advantage during retraction of the 1st transfer roller is that chance of the developing unit (Y, M, C) and drum unit (Y, M, C) being worn as a result of wasteful rotation can be reduced.

When printing in black with color mode (effecting black printing with the four PC drums rotating)



[1]	Color mode	[2]	Color mode
[3]	Color mode	-	-

Printing after switched to black mode



[1]	Color mode	[2]	Black mode
[3]	Black mode	-	-

(e) Black original specified values

- Number of multiple black originals during plain paper printing

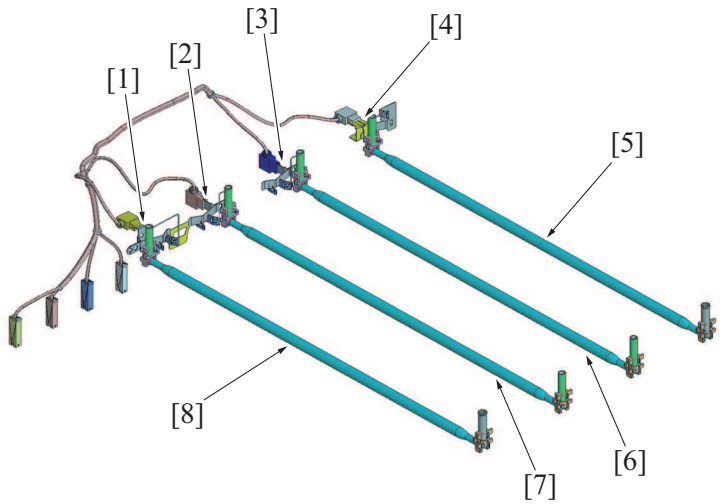
Paper length	Black printing in color mode	Black printing after switched to black mode
216 mm or less	4 sheets or less	5 sheets or more
Over 216 mm and up to 297 mm	2 sheets or less	3 sheets or more
Over 297 mm and up to 381 mm	2 sheets or less	3 sheets or more
Over 381 mm and up to 432 mm	2 sheets or less	3 sheets or more
Over 432 mm and up to 457 mm	2 sheets or less	3 sheets or more
Over 457 mm	Switched to black mode	

(4) ACS mode control change with the Engine FW DipSW

- By changing the Engine FW DipSW “25” setting from “OFF (default) ” to “ON”, you can change the pressure control of the 1st transfer rollers on the ACS mode.
- When “OFF” is selected, productivity has the priority and printing is conducted with the transfer belt being pressed onto the color photo conductors even when the specified quantity of black printing is included.
- When “ON“ is selected, black printing quantity threshold until switching to K press (release of color photo conductors) becomes smaller.
- This setting is to be used when the degradation control of the color photo conductors should have priority over printing productivity.

7.3.4 1st transfer control

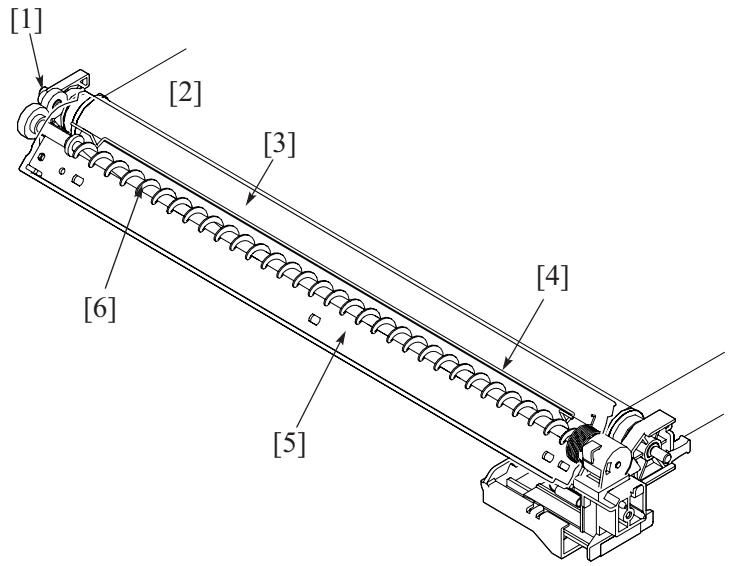
- To transfer the toner image formed on the surface of the PC drum onto the transfer belt, the transfer current supplied from the high voltage unit is applied to the 1st transfer roller of each color.



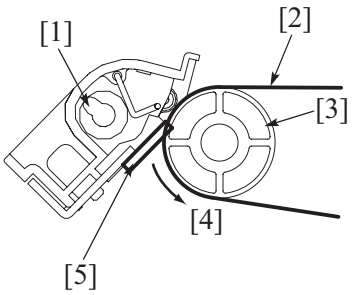
[1]	1st transfer current application terminal/Y	[2]	1st transfer current application terminal/M
[3]	1st transfer current application terminal/C	[4]	1st transfer current application terminal/K
[5]	1st transfer roller/K	[6]	1st transfer roller/C
[7]	1st transfer roller/M	[8]	1st transfer roller/Y

7.3.5 Transfer belt cleaning

- The toner image on the surface of the transfer belt is transferred onto the paper. (2nd transfer)
- Part of the toner image is left on the surface of the transfer belt after the 2nd transfer. A cleaning blade is provided on the transfer belt. It functions to remove the residual toner (waste toner).



[1]	Drive transmission gear	[2]	Transfer belt
[3]	Transfer belt driven roller	[4]	Caking-of-toner prevention blade
[5]	Cleaning blade	[6]	Toner collecting screw



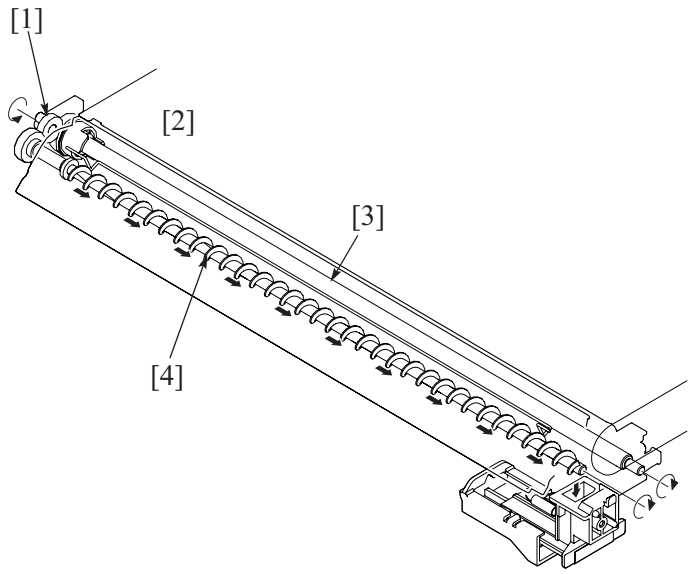
[1]	Toner collecting screw	[2]	Transfer belt
[3]	Transfer belt driven roller	[4]	Transfer belt rotative direction (forward rotation)
[5]	Cleaning blade	-	-

(1) Cleaning blade

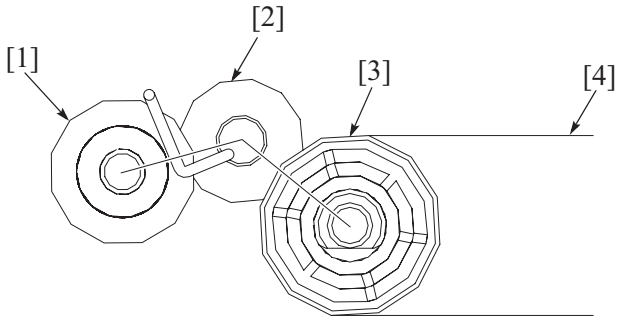
- The cleaning blade, of a fixed blade type, is pressed up against the surface of the transfer belt at all times. No cleaning blade retraction mechanism is provided.
- The waste toner on the surface of the transfer belt is scraped off as the transfer belt is rotated.

(2) Waste toner conveying/collecting mechanism

- Drive for the toner collecting screw comes from the transfer belt driven roller. (The toner collecting screw rotates in time with rotation of the transfer belt.)
- The rotation of the toner collecting screw conveys waste toner scraped off the surface of the transfer belt toward the front of the machine.
- There is a caking-of-toner prevention blade installed. It prevents waste toner from caking at the toner collecting screw portion.
- The waste toner is discharged through the toner collecting port into the waste toner box.
- The waste toner is disposed of when a waste toner box which is detected to be full of waste toner is replaced with a new one and the used waste toner box is discarded.



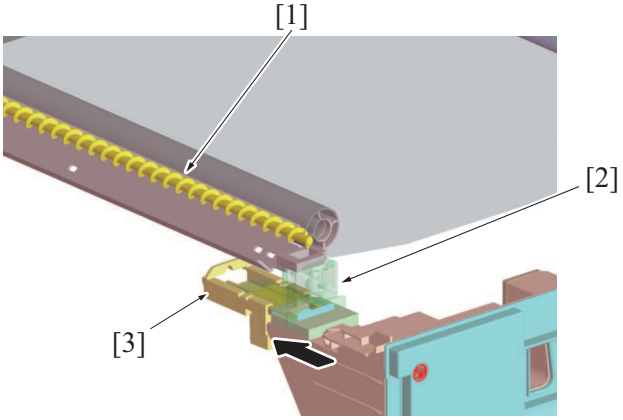
[1]	Drive connecting gear	[2]	Transfer belt
[3]	Transfer belt driven roller	[4]	Toner collecting screw



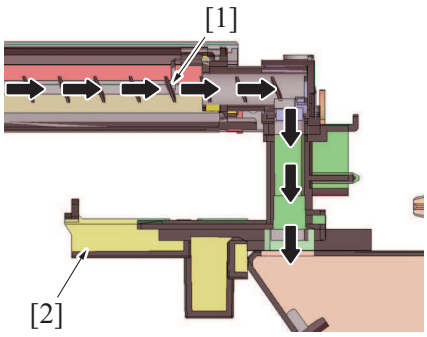
[1]	Toner collecting screw	[2]	Drive connecting gear
[3]	Transfer belt driven roller	[4]	Transfer belt

7.3.6 Waste toner spillage prevention shutter

- The toner collecting port is provided with a waste toner spillage prevention shutter that prevents waste toner from spilling during removal or reinstallation of the waste toner box.
- Mounting the waste toner box pushes the shutter at the toner collecting port, opening the toner collecting port. The shutter is closed by the waste toner box removal and prevents the toner spilling from the toner collecting port.



[1]	Toner collecting screw	[2]	Toner collecting port
[3]	Shutter	-	-



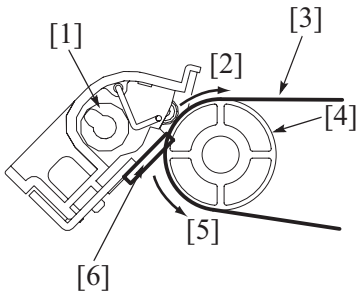
[1]	Toner collecting screw	[2]	Shutter (open)

7.3.7 Cleaning blade foreign matter removal control

- The transfer belt is rotated backward to a small extent and then rotated forward to remove foreign matter (dust, toner, etc.) wedged between the transfer belt and the edge of the cleaning blade.

(1) Operation timing

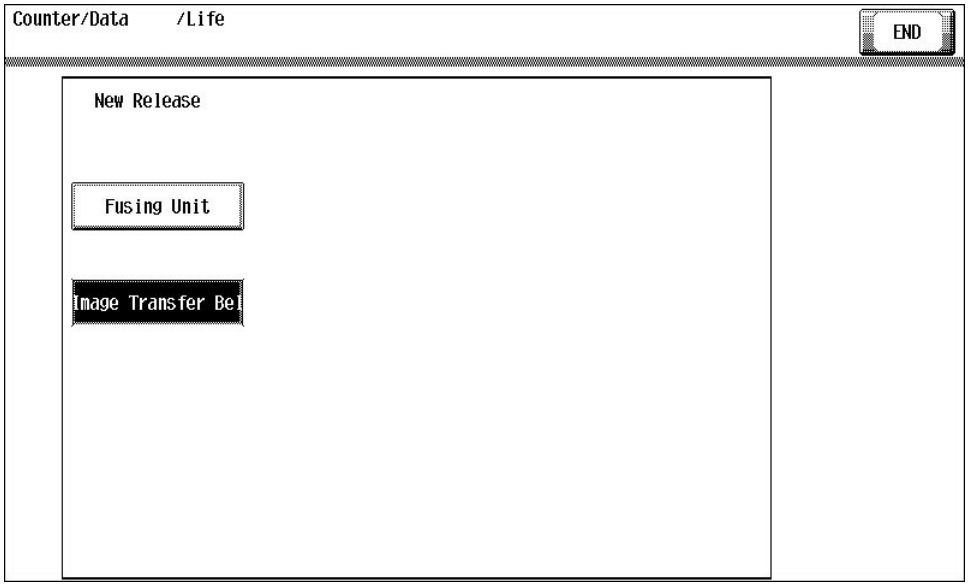
- The backward rotation control is provided at the completion of every print job.



[1]	Toner collecting screw	[2]	Backward rotation
[3]	Transfer belt	[4]	Transfer belt driven roller
[5]	Forward rotation	[6]	Cleaning blade

7.3.8 Transfer belt new article detection

- The transfer belt unit is not provided with any new article detection mechanism. If the transfer belt is replaced with a new one, therefore, “New Release” must be performed in [Counter] -> [Life] of the Service Mode. For detailed operating procedures, see “ I.5.17.2 Life”.

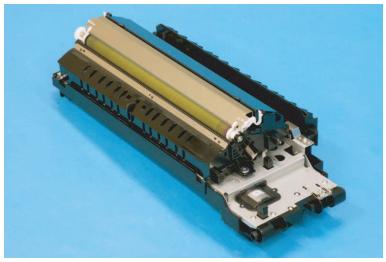


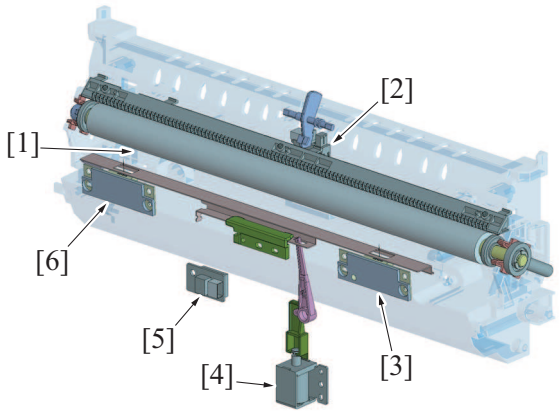
NOTE

- **For the life of the toner cartridge, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

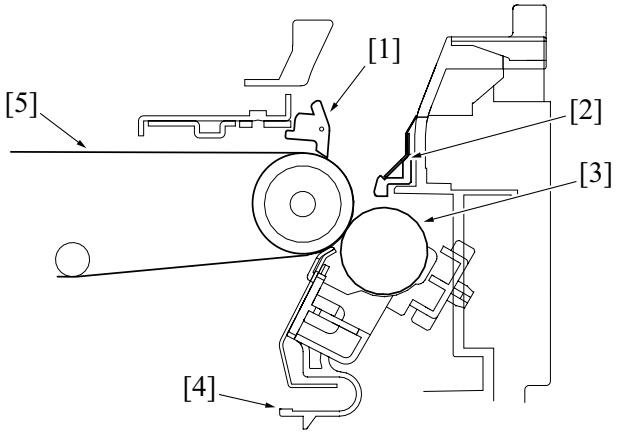
8. 2ND TRANSFER SECTION

8.1 Configuration





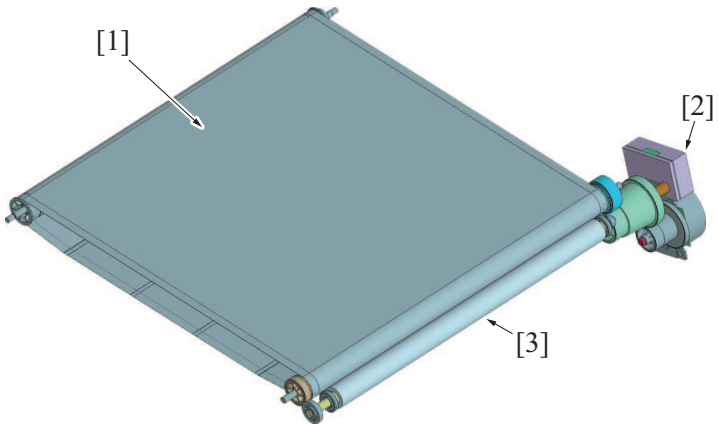
[1]	2nd transfer roller	[2]	Fusing loop sensor (PS2)
[3]	IDC sensor/Fr (IDCS/Fr)	[4]	IDC sensor shutter solenoid (SD2)
[5]	Temperature/humidity sensor (TEM/HUMS)	[6]	IDC sensor/Rr (IDCS/Rr)



[1]	Separation claw	[2]	Charge neutralizing needle
[3]	2nd transfer roller	[4]	2nd transfer roller lock release lever
[5]	Transfer belt	-	-

8.2 Drive

The following illustration is for bizhub C368/C308/C258.

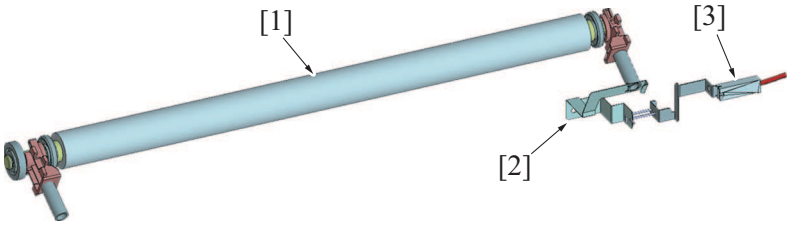


[1]	Transfer belt	[2]	Transport motor (M1)
[3]	2nd transfer roller	-	-

8.3 Operation

8.3.1 2nd transfer control

- To transfer the toner image formed on the transfer belt onto the paper, the 2nd transfer voltage supplied from the high voltage unit is applied to the 2nd transfer roller.
- Resistance of the 2nd transfer roller changes with an environmental change, durability, and other factors. To maintain an optimum output voltage, fixed current is passed through the 2nd transfer roller and the voltage being outputted at that time is detected. An appropriate 2nd transfer voltage is determined based on the measured voltage and other information such as “type of paper used”, “temperature and humidity”, “color mode or black mode”, and “1-sided/2-sided”.



[1]	2nd transfer roller	[2]	2nd transfer voltage conductive plate
[3]	2nd transfer voltage application terminal	-	-

(1) Execution timing

- The 2nd transfer control is executed when a print job is received under any of the following conditions:
  “Main power switch is turned ON”
  “Power key is pushed”
  “The machine exits the sleep mode”
  “The threshold value of a change in machine interior temperature is exceeded.”

(2) 2nd transfer control during image stabilization control

- In this machine, the 2nd transfer roller does not have a retraction mechanism, so that the transfer belt and 2nd transfer roller are pressed up against each other at all times.
- During image stabilization control, a toner image for adjustment purpose is formed on the surface of the transfer belt. A negative voltage is therefore applied to the 2nd transfer roller during image stabilization control. The amount of toner sticking to the 2nd transfer roller is thereby reduced.

8.3.2 Control of toner application to 2nd transfer roller

- In this machine, the 2nd transfer roller does not have a retraction mechanism, so that the transfer belt and 2nd transfer roller are pressed up against each other at all times.
- If a new 2nd transfer roller that has replaced an old one is left to stand idle for a long period of time, a substance contained in the new roller sticks to the surface of the transfer belt, which could result in noise in the print image.

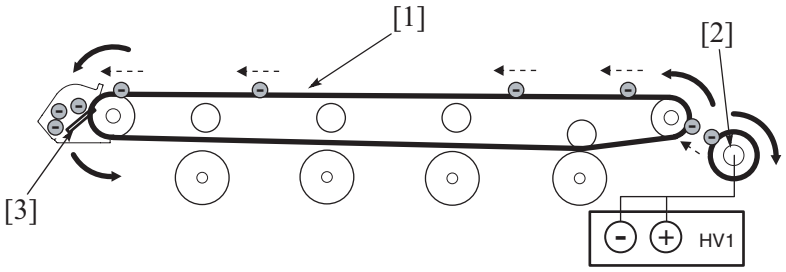
- To prevent the substance contained in the 2nd transfer roller from sticking to the transfer belt, Y toner is applied to the surface of a new 2nd transfer roller at the time of replacement. (The Y toner image that corresponds to two complete revolutions of the transfer roller is formed on the surface of the transfer belt and is then transfer red onto the surface of the 2nd transfer roller.)
- The Y toner that is less noticeable is used for the toner to be applied, in consideration of back marking.

(1) Execution timing

- The control is executed when the life counter of the 2nd transfer roller in the service mode is reset to zero.

8.3.3 2nd transfer roller cleaning

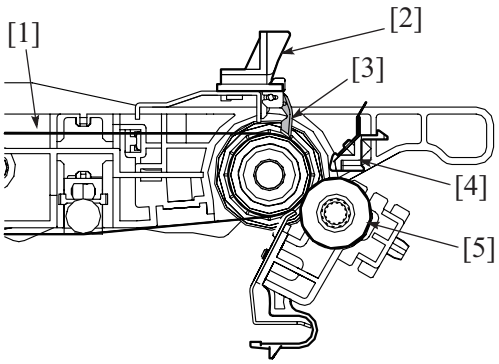
- In order to remove the remaining toner on the 2nd transfer roller, -/+ (DC) charge is applied alternately to transfer the remaining toner on the 2nd transfer roller to the transfer belt. (The number of times that electrical charge is applied to the 2nd transfer roller is different depending on each situation.)
- The cleaning blade then scrapes off the toner on the surface of the transfer belt.



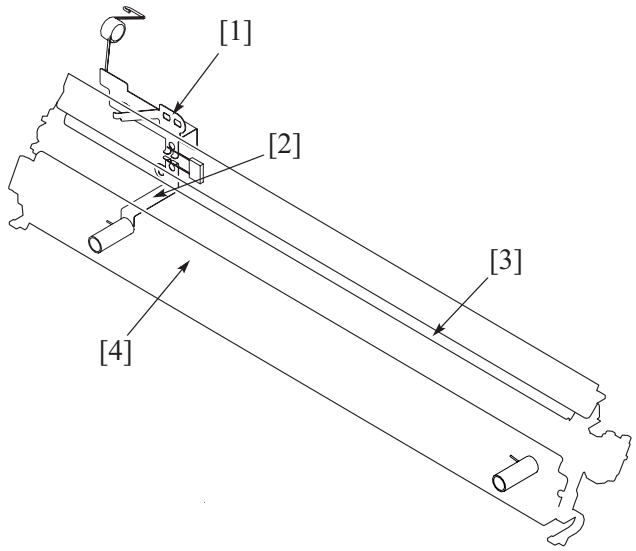
[1]	Transfer belt	[2]	2nd transfer roller
[3]	Cleaning blade	-	-

8.3.4 Charge neutralization and separation of paper

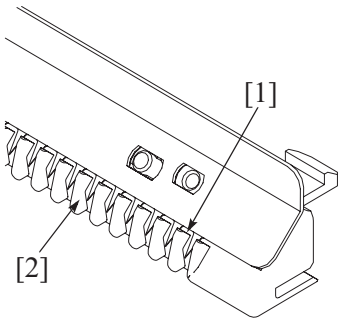
- To neutralize any residual potential on the paper which has undergone the 2nd transfer process, there is a charge neutralizing needle mounted on the guide plate after the 2nd transfer roller. There is a resin guide that prevents the electrode from directly contacting the paper.
- The residual potential neutralized by the charge neutralizing needle is grounded via a conductive plate.
- In order to separate the paper from the transfer belt without fail after the 2nd transfer, a separation claw is mounted (center one point.)



[1]	Transfer belt	[2]	Paper winding prevention guide
[3]	Separation claw	[4]	Charge neutralizing needle
[5]	2nd transfer roller	-	-



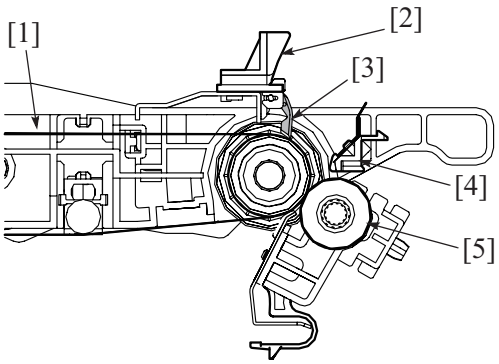
[1]	Charge neutralizing needle conductive plate (ground)	[2]	Transfer paper guide conductive plate (ground)
[3]	Charge neutralizing needle	[4]	Transfer paper guide



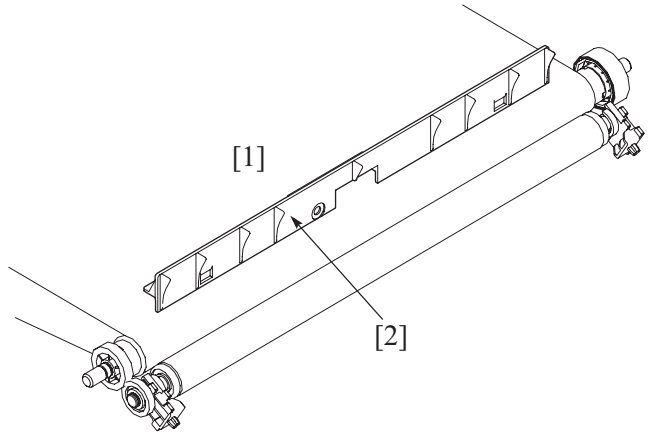
[1]	Charge neutralizing needle	[2]	Resin guide

8.3.5 Paper winding prevention guide

- The paper winding prevention guide prevents paper from being wound around the transfer belt again after its being separated from the transfer belt by the separation claw.



[1]	Transfer belt	[2]	Paper winding prevention guide
[3]	Separation claw	[4]	Charge neutralizing needle
[5]	2nd transfer roller	-	-

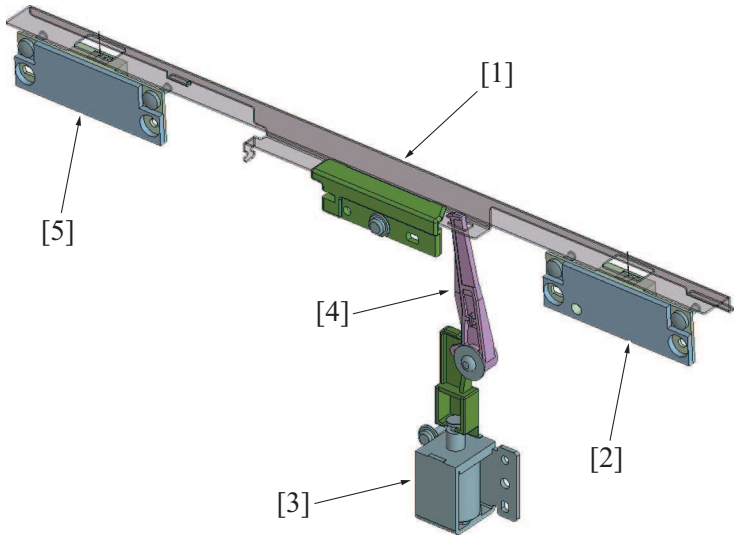


[1]	Transfer belt	[2]	Paper winding prevention guide

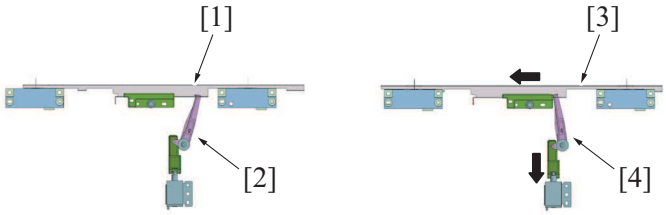
8.3.6 IDC sensor protection

- The IDC sensor can be contaminated with toner since it is located under the transfer belt. There is a shutter mechanism provided for the sensor to prevent it from being contaminated.
- The shutter is opened or closed by the IDC sensor shutter solenoid.

IDC sensor shutter solenoid (SD2)	Shutter
OFF	Closed
ON	Open



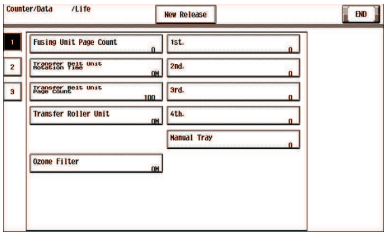
[1]	IDC sensor shutter (open position)	[2]	IDC sensor/Fr (IDCS/Fr)
[3]	IDC sensor shutter solenoid (SD2)	[4]	Actuator for shutter
[5]	IDC sensor/Rr (IDCS/Rr)	-	-

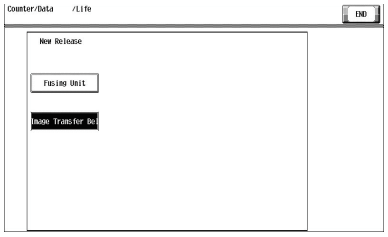


[1]	IDC sensor shutter (close position)	[2]	IDC sensor shutter solenoid: OFF
[3]	IDC sensor shutter (open position)	[4]	IDC sensor shutter solenoid: ON

8.3.7 2nd transfer roller new article detection

- The 2nd transfer roller (hereinafter referred to as the “transfer roller”) is not provided with any new article detection mechanism. If the transfer roller is replaced with a new one, therefore, “New Release” must be performed of the “Transfer Belt Unit” in [Counter] -> [Life] of the Service Mode. Performing “New Release” of the “Transfer Belt Unit” in life counter of the Service Mode will also reset the life counter of the transfer roller to zero.



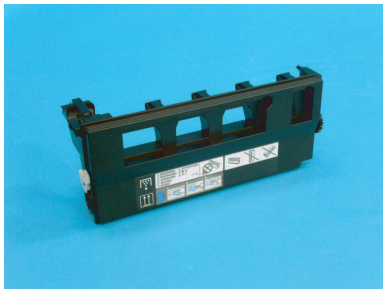


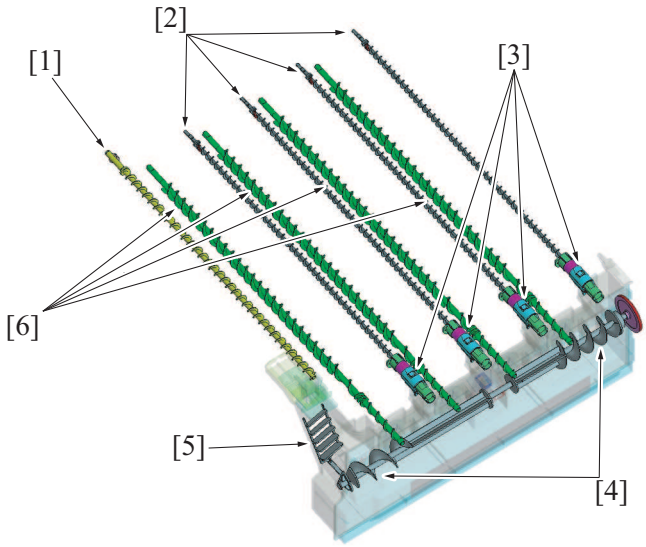
NOTE

- **For the life of the 2nd transfer roller, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

9. TONER COLLECTING SECTION

9.1 Configuration

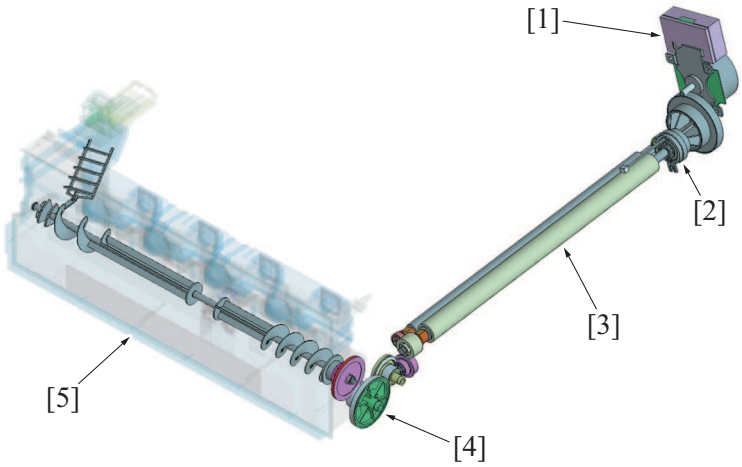




[1]	Toner collecting screw (Transfer belt section)	[2]	Toner collecting screw (Drum unit/Y,M,C,K)
[3]	Toner collecting port (Drum unit/Y,M,C,K)	[4]	Toner collecting screw (Waste toner box)
[5]	Toner agitating blade	[6]	Toner supply screw (Developing unit)

9.2 Drive

The following illustration is for bizhub C368/C308/C258.



[1]	Transport motor (M1)	[2]	Registration clutch (CL4)
[3]	Registration roller	[4]	Waste toner box drive gear
[5]	Waste toner box	-	-

9.3 Operation

9.3.1 Waste toner box drive mechanism

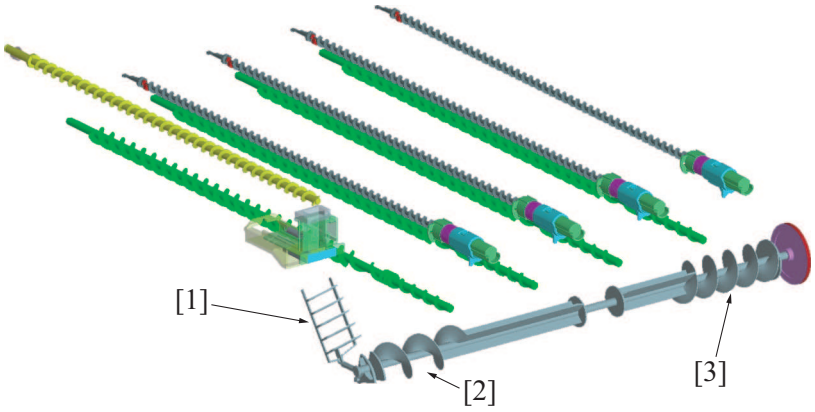
- The waste toner box is driven by the transport motor.
- The driving force of the transport motor is transmitted to the registration roller via the registration clutch. The drive coupling gear mounted coaxially with the registration roller drives the waste toner box.

(1) Execution timing

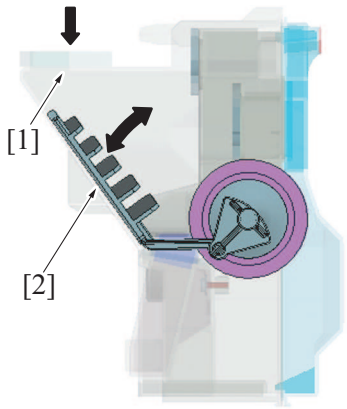
- The waste toner box rotates in synchronism with the registration roller. For details on registration roller, see registration control section.

9.3.2 Control of waste toner conveyance through waste toner box

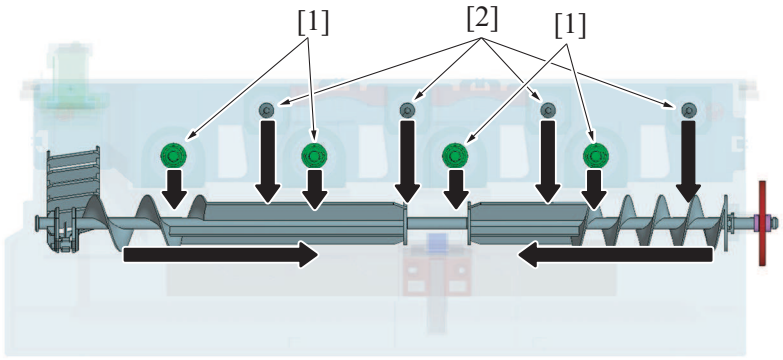
- Waste toner in the transfer belt unit and drum units, and excess toner in the developing unit are conveyed onto the waste toner box by the toner collecting screw.
- Waste toner and waste developer (waste carrier + waste toner) are collected through the toner collecting ports for the each units.
- The waste toner collecting port is provided with a toner agitating blade that prevents toner from stagnating.
- The toner agitating blade is moved up and down as the toner collecting screw rotates. * The toner collecting port for the developing unit is not provided with any toner agitating blade.
- Toner collecting screw 1 and toner collecting screw 2 (dedicated to the transfer belt toner collecting port) are installed in the waste toner box.
- The screws provided on toner collecting screw 1 function to convey waste toner stagnant in the box uniformly onto the central portion of the box.
- Toner collecting screw 2 functions to convey toner conveyed from the transfer belt unit uniformly onto the central portion of the box.
- There is a detection window for detecting a waste toner full condition provided at the central portion of the box. When the waste toner conveyed onto the central portion of the box exceeds a predetermined height, waste toner spills over the waste toner full condition detection section. For details, see “ O.9.3.4 Waste toner box full detection”.



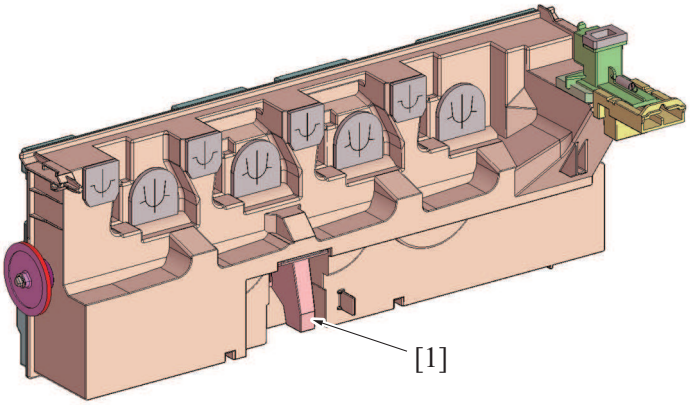
[1]	Toner agitating blade	[2]	Toner collecting screw 2 (dedicated to the transfer belt toner collecting port)
[3]	Toner collecting screw 1 (Waste toner box)	-	-



[1]	Toner collecting port (Transfer belt unit)	[2]	Toner agitating blade



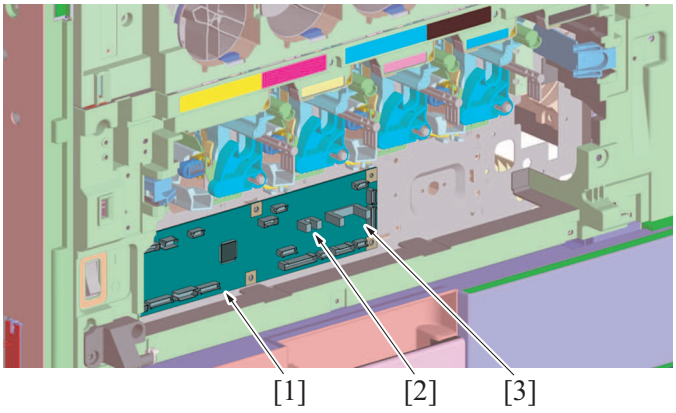
[1]	Toner collecting port (Developing unit)	[2]	Toner collecting port (Drum unit)



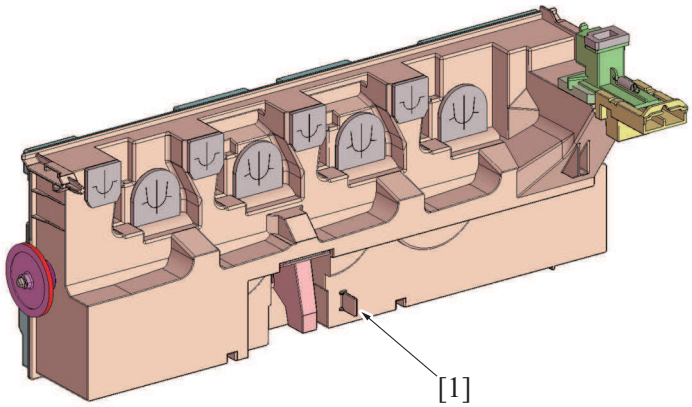
[1]	Waste toner full condition detection window	-	-

9.3.3 Waste toner box-in-position detection

- The waste toner box set sensor provided on the front side board detects mounting condition of the waste toner box. It prevents the machine from being operated with the waste toner box yet to be mounted in place.
- When the waste toner box is removed, the waste toner box set sensor is unblocked, which causes the machine to determine that the waste toner box is yet to be mounted.
- The machine, on determining that the waste toner box is yet to be mounted in place, prohibits initiation of a new print cycle.
- When the waste toner box is mounted, the waste toner box set sensor is blocked, which causes the machine to determine that the waste toner box is mounted in place.
- The machine, on determining that the waste toner box is mounted in place, resets the waste toner box yet-to-be-mounted display, enabling initiation of a new print cycle.



[1]	Front side board (FRB)	[2]	Waste toner box set sensor (PS100)
[3]	Waste toner full sensor (PS101)	-	-



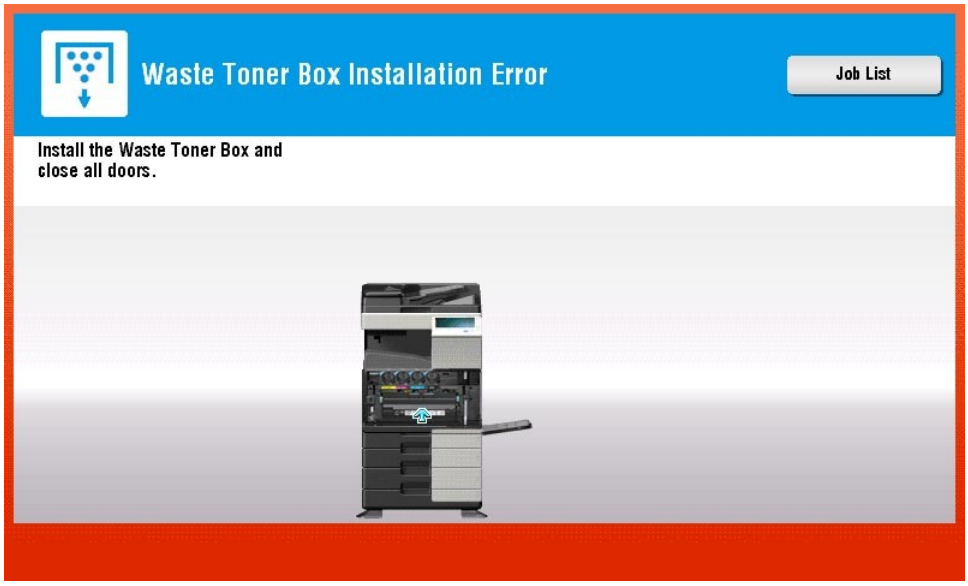
[1]	Waste toner box detection plate	-	-

(1) Execution timing

The waste toner box detection control is performed under any of the following conditions:

- "The power switch is turned ON"
- "The front door or right door is closed"

(2) Waste toner box yet-to-be-mounted display



9.3.4 Waste toner box full detection

- The waste toner full sensor provided on the front side board is used to determine the amount of waste toner accumulated in the waste toner box.

NOTE

- **For the life of the waste toner box, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

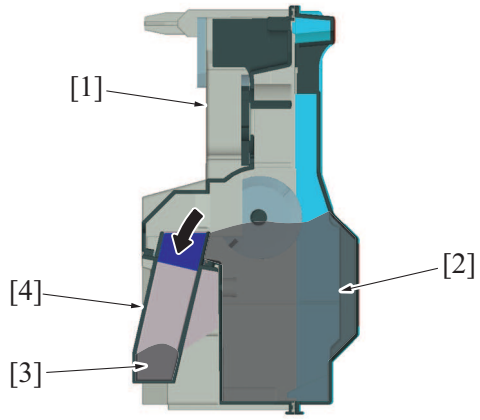
(1) Waste toner near-full

- The toner collecting screw provided in the waste toner box conveys waste toner in the box onto the central portion of the box. For details, see " O.9.3.2 Control of waste toner conveyance through waste toner box".
- A detection window for detecting a waste toner full condition is equipped at the central portion of the waste toner box. When the waste toner conveyed onto the central portion of the box exceeds a predetermined height, waste toner spills over the waste toner full condition detection section.
- The machine determines that there is a waste toner near-full condition, if the waste toner full sensor is blocked by the waste toner stagnant over the waste toner full condition detection section for a predetermined period of time or longer.

(a) Execution timing

The waste toner box near-full detection control is performed under any of the following conditions:

- "The machine determines that the waste toner box is mounted in place using the waste toner box set sensor."
- "During a print cycle"
- "During execution of image stabilization control"



[1]	Waste toner box	[2]	Waste toner
[3]	Waste toner	[4]	Waste toner full condition detection window

(2) Waste toner full condition

- When a waste toner near-full condition is detected, the “waste toner full detection counter” is incremented according to the image density information of the print image during each of subsequent print jobs.
- When the waste toner full detection counter reaches a threshold value, the machine determines that there is a waste toner full condition.

(a) Execution timing

The waste toner box full detection control is performed under any of the following conditions:

- “The machine determines that the waste toner box is mounted in place using the waste toner box set sensor.”
- “The waste toner full sensor detects a waste toner near-full condition.”
- “During a print cycle”
- “During execution of image stabilization control”

9.3.5 Waste toner box new article detection

- The waste toner box is not provided with any new article detection mechanism. Detection made by the waste toner full sensor is used for detecting a new waste toner box.
- When the waste toner full display appears, the existing waste toner box is replaced with a new one. When the waste toner full sensor remains unblocked for a predetermined period of time or more, the machine determines that the normal state is recovered (the old waste toner box is replaced with a new one).
- Determining that a new waste toner box has been mounted, the machine resets the waste toner full display, allowing the initiation of a new print cycle.

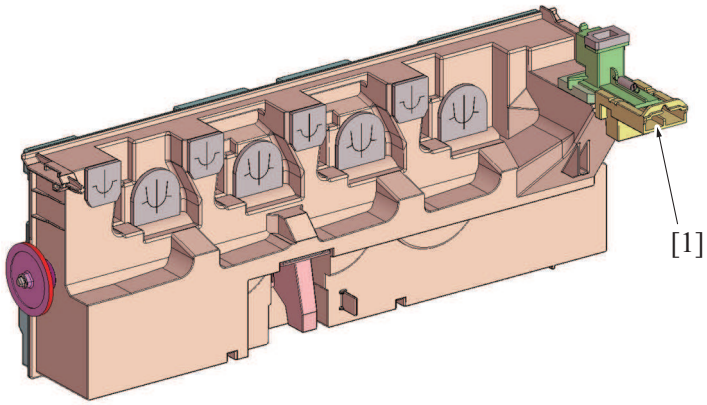
(1) Timing at which to reset the waste toner full display

The waste toner box full detection control is performed under any of the following conditions:

- “The waste toner full sensor detects a waste toner full condition.”
- “The power switch is turned ON”
- “The front door is closed”

9.3.6 Waste toner spillage prevention shutter

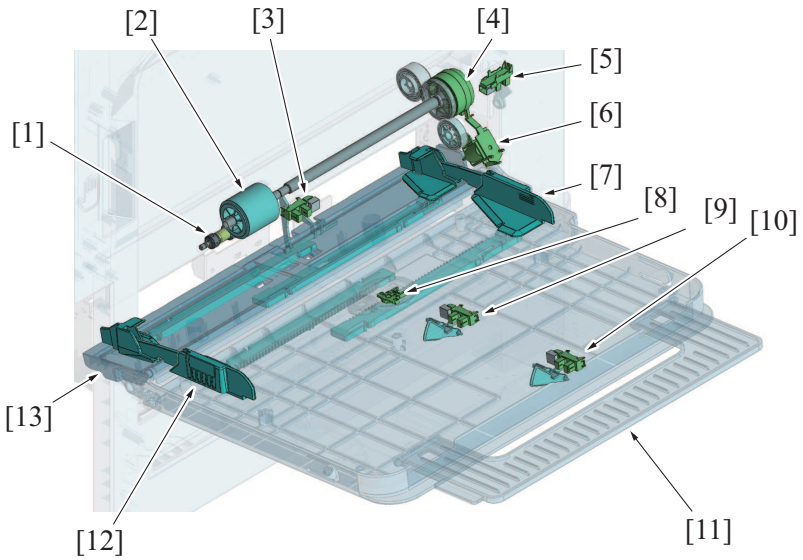
- The toner collecting port for the transfer belt unit is provided with a waste toner spillage prevention shutter that prevents waste toner that is transported from the transfer belt from spilling during removal or reinstallation of the waste toner box.
- Inserting the waste toner box into its mounting position pushes the shutter at toner collecting port of the waste toner box, thus opening the toner collecting port.
- Removing the waste toner box allows the shutter spring to close the shutter at the toner collecting port.



[1]	Toner collecting port	-	-

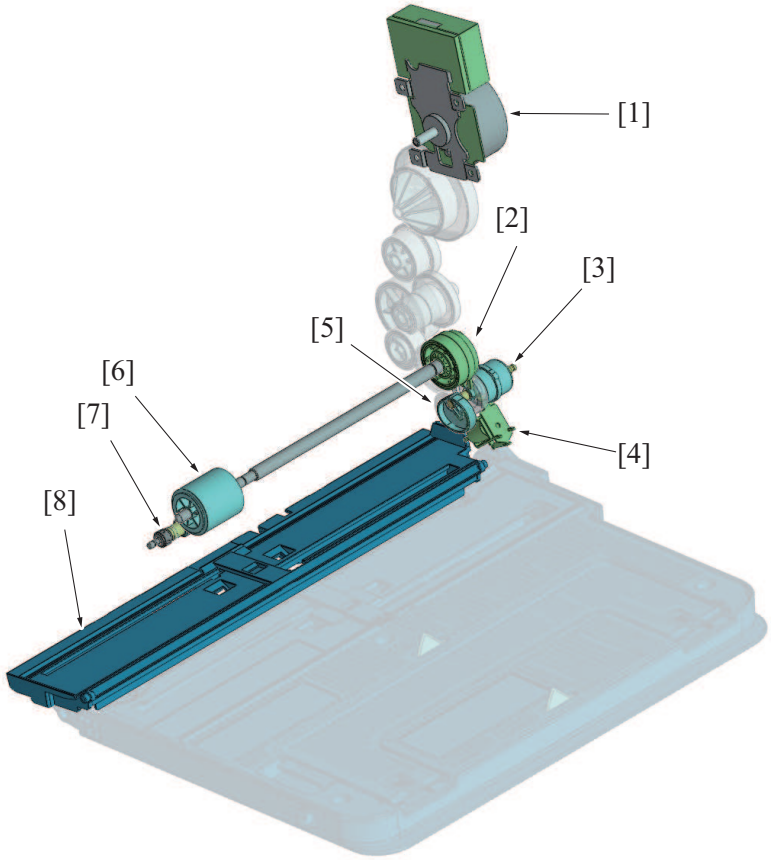
10. PAPER FEED SECTION (MANUAL BYPASS TRAY)

10.1 Configuration



[1]	Manual bypass tray separation roller	[2]	Manual bypass tray feed roller
[3]	Bypass paper empty sensor (PS27)	[4]	Bypass paper feed clutch (CL7)
[5]	Bypass lift-up position sensor (PS26)	[6]	Bypass pick-up solenoid (SD1)
[7]	Paper guide (rear side)	[8]	Bypass CD paper size VR (VR1)
[9]	Bypass FD paper size sensor1 (PS28)	[10]	Bypass FD paper size sensor2 (PS29)
[11]	Sub tray	[12]	Paper guide (front side)
[13]	Paper lift-up plate	-	-

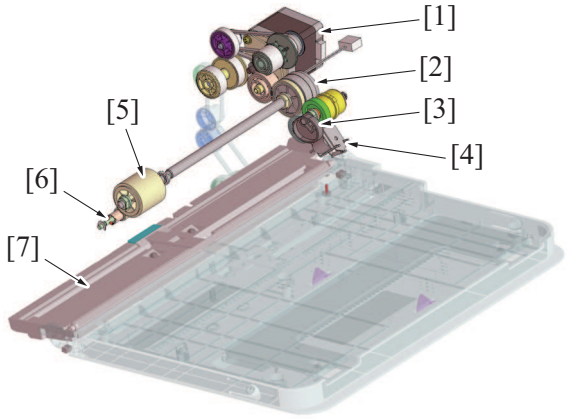
10.2 Drive (bizhub C368/C308/C258)



[1]	Transport motor (M1)	[2]	Bypass paper feed clutch (CL7)
[3]	Paper lift-up plate clutch (mechanical)	[4]	Bypass pick-up solenoid (SD1)
[5]	Paper lift-up cam	[6]	Manual bypass tray feed roller

[7]	Manual bypass tray separation roller	[8]	Paper lift-up plate

10.3 Drive (bizhub C658/C558/C458)



[1]	Paper feed motor (M22)	[2]	Bypass paper feed clutch (CL7)
[3]	Paper lift-up cam	[4]	Bypass pick-up solenoid (SD1)
[5]	Manual bypass tray feed roller	[6]	Manual bypass tray separation roller
[7]	Paper lift-up plate	-	-

10.4 Operation

10.4.1 Up/down control

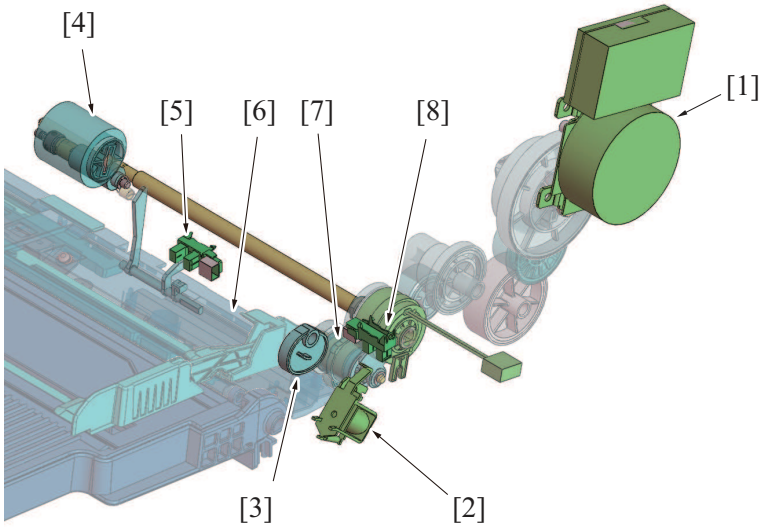
- The paper lift-up plate is moved up and down by the transport motor.

(1) Up operation

- The bypass pick-up solenoid is energized for a predetermined period of time during rotation of the transport motor. This unlocks the paper lift-up plate clutch and the driving force of the transport motor is transmitted to the paper lift-up cam.
- As the paper lift-up cam rotates, the paper lift-up plate which has so far been pushed down by the paper lift-up cam is raised to the paper feed position by the spring.

(2) Down operation

- The bypass pick-up solenoid is energized for a predetermined period of time during rotation of the transport motor. This rotates the paper lift-up cam, so that the cam pushes the paper lift-up plate down into its standby position.



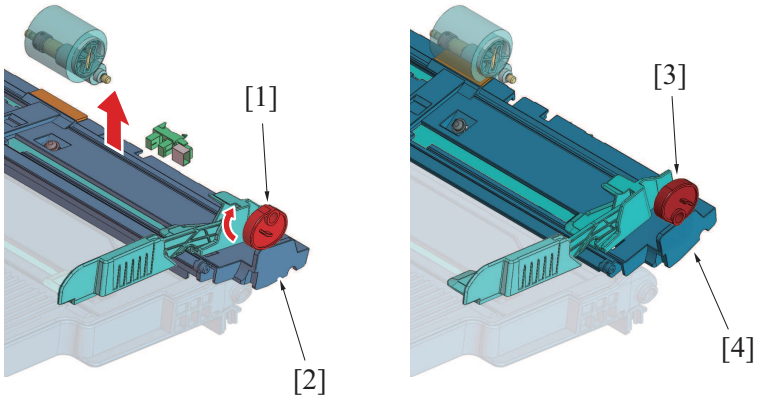
[1]	Transport motor (M1)	[2]	Bypass pick-up solenoid (SD1)
[3]	Paper lift-up cam	[4]	Manual bypass tray feed roller
[5]	Bypass paper empty sensor (PS27)	[6]	Paper lift-up plate
[7]	Paper lift-up plate clutch (mechanical)	[8]	Bypass lift-up position sensor (PS26)

(3) Operation timing

(a) Move to paper feed position (up)

- At the start of a manual bypass paper feed sequence, the paper lift-up plate is raised to the paper feed position.

- After the lapse of a predetermined period of time, the bypass pick-up solenoid is deenergized. The paper lift-up plate is stopped at the paper feed position.
- The actuator of bypass lift-up position sensor rotates in synchronism with the paper lift-up cam. When the paper lift-up plate is raised, the actuator rotates to thereby unblock the bypass lift-up position sensor. Then, the machine determines that the paper lift-up plate is raised to the paper feed position.
- If the bypass lift-up position sensor remains unblocked even after the bypass pick-up solenoid has been deenergized, the machine determines that the paper lift-up plate is at the paper feed position.
- As the paper level lowers during paper feed, the spring pushes up the paper lift-up plate, so that the paper stack is pushed up to the optimum paper feed position.



[1]	Paper lift-up cam (standby position)	[2]	Paper lift-up plate (standby position)
[3]	Paper lift-up cam (paper feed position)	[4]	Paper lift-up plate (paper feed position)

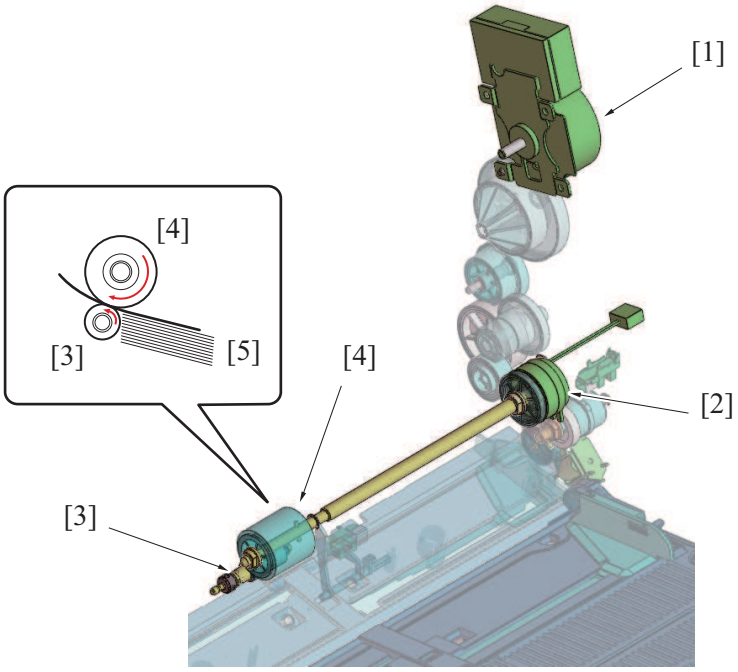
(b) Move to standby position (down)

- The paper lift-up plate is lowered if there is no print job that uses the manual bypass trays and the paper exit sensor detects a sheet of paper fed from the manual bypass tray.
- The paper lift-up plate is lowered if the above conditions are met even during execution of another job.
- If a bypass paper empty condition is detected at the paper feed position, the paper lift-up plate is lowered to the standby position.
- If a paper misfeed occurs, the paper lift-up plate is stopped at the paper feed position. When the transport motor rotates stably after the misfeed is cleared, the paper lift-up plate is lowered to the standby position.
- After the lapse of a predetermined period of time, the bypass pick-up solenoid is deenergized. The paper lift-up plate is stopped at the standby position. As the paper lift-up plate lowers, the bypass lift-up position sensor is blocked. The machine determines that the paper lift-up plate is at the standby position based on the fact that the bypass lift-up position sensor is blocked even after the bypass pick-up solenoid has been deenergized.

10.4.2 Paper feed control

(1) Pick-up control (bizhub C368/C308/C258)

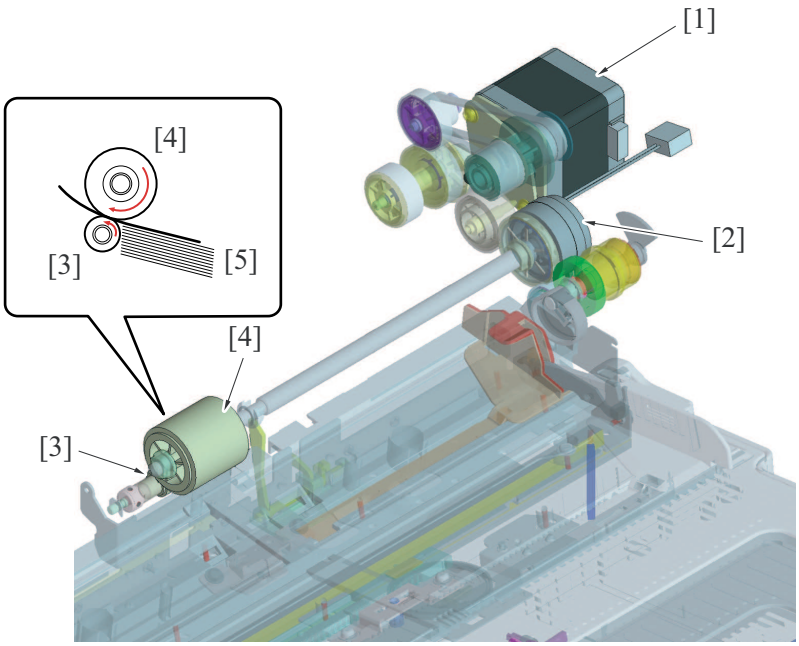
- Paper feed operations of the manual bypass tray are driven by the transport motor.
- The bypass pick-up solenoid is energized by a print start signal and the paper is raised to the paper feed position.
- After the paper is raised to the paper feed position, the bypass paper feed clutch is energized.
- When the bypass paper feed clutch is energized, the drive from the transport motor is transmitted to the manual bypass tray paper feed roller, so that the paper can be fed in.
- The manual bypass tray paper feed roller feeds the paper onto the registration roller.
- When the paper fed from the manual bypass tray is reached onto the registration roller, the bypass paper feed clutch is deenergized to stop the manual bypass tray paper feed roller from rotating.
- The bypass pick-up solenoid is energized and the paper is lowered to the standby position.
- If the registration sensor does not detect paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at the manual bypass tray. Note, however, that the paper feed sequence is repeated a second time if a paper misfeed is detected. If the registration sensor is still unable to detect paper, the machine determines that there is a paper misfeed at the manual bypass tray. (Paper feed retry control)



[1]	Transport motor (M1)	[2]	Bypass paper feed clutch (CL7)
[3]	Manual bypass tray separation roller	[4]	Manual bypass tray feed roller
[5]	Paper	-	-

(2) Pick-up control (bizhub C658/C558/C458)

- Paper feed operations of the manual bypass tray are driven by the paper feed motor.
- The bypass pick-up solenoid is energized by a print start signal and the paper is raised to the paper feed position.
- After the paper is raised to the paper feed position, the bypass paper feed clutch is energized.
- When the bypass paper feed clutch is energized, the drive from the paper feed motor is transmitted to the manual bypass tray paper feed roller, so that the paper can be fed in.
- The manual bypass tray paper feed roller feeds the paper onto the registration roller.
- When the paper fed from the manual bypass tray is reached onto the registration roller, the bypass paper feed clutch is deenergized to stop the manual bypass tray paper feed roller from rotating.
- The bypass pick-up solenoid is energized and the paper is lowered to the standby position.
- If the registration sensor does not detect paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at the manual bypass tray. Note, however, that the paper feed sequence is repeated a second time if a paper misfeed is detected. If the registration sensor is still unable to detect paper, the machine determines that there is a paper misfeed at the manual bypass tray. (Paper feed retry control)



[1]	Paper feed motor (M22)	[2]	Bypass paper feed clutch (CL7)
[3]	Manual bypass tray separation roller	[4]	Manual bypass tray feed roller
[5]	Paper	-	-

(3) Separation control

- The manual bypass tray separation roller is pressed up against, and driven by, the manual bypass tray feed roller. A torque limiter is equipped on the shaft of the manual bypass tray separator roller.
- The acting pressure of the manual bypass tray feed roller/manual bypass tray separation roller/torque limiter serves as the limit torque for preventing double feed.
- When there is no sheet of paper or only one sheet of paper between the manual bypass tray separation roller and manual bypass tray feed roller, the limit torque is exceeded and the manual bypass tray separation roller follows the rotation of the manual bypass tray paper feed roller.
- If there are two or more sheets of paper between the manual bypass tray separation roller and manual bypass tray feed roller, the limit torque is greater than the friction force of the paper, so that the manual bypass tray separation roller stops rotating.
- Because of the stationary manual bypass tray separation roller, the lower sheet of paper in contact with the manual bypass tray separation roller is not fed in, so that the first sheet of paper is properly separated from the second sheet of paper.

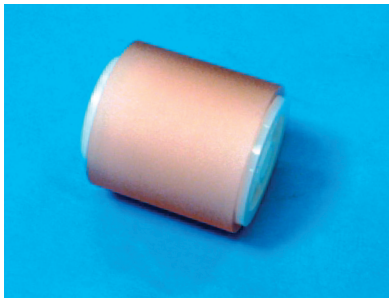
(4) Periodical replacement parts

- The manual bypass tray feed roller and manual bypass tray separation roller are periodical replacement parts. These two rollers must be replaced with new ones at the same time.
- Neither the manual bypass tray feed roller nor manual bypass tray separation roller is provided with a new article detection mechanism. When the two rollers are replaced with new ones, the “Manual Tray” counter must be reset to zero using [Counter] -> [Life] of the Service Mode.
- The number of times the manual bypass tray has been subjected to paper feed operations can be checked with the “Manual Tray” counter of the Service Mode.

Periodical replacement cycle	Paper feed operations 200,000 times

- For details of the applicable replacement procedures for the manual bypass tray feed roller and manual bypass tray separation roller and the Service Mode, see “ F.7.7.3 Replacing the manual bypass tray feed roller, manual bypass tray separation roller assy”.

Manual bypass tray feed roller



Manual bypass tray separation roller assy

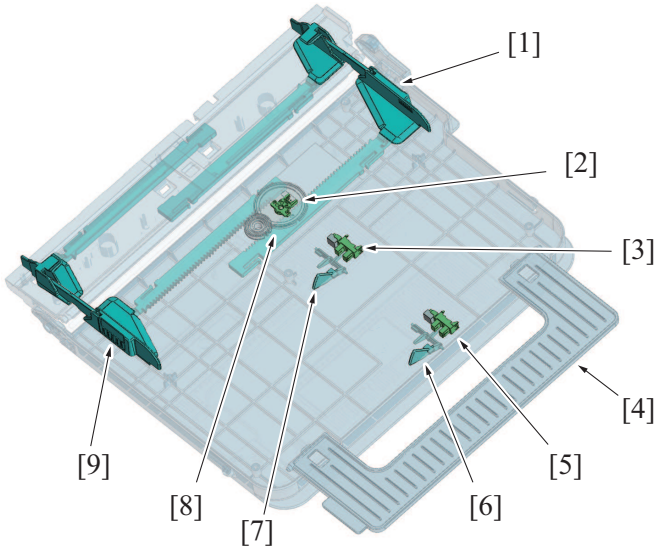


10.4.3 Paper size detection control

- The standard size of the paper loaded in the manual section is detected automatically by the combination of ON or OFF positions of the two bypass FD paper size sensors and the bypass CD paper size VR.
- The two bypass FD paper size sensors are mounted in positions at which they can detect length even with the sub tray closed.
- The size detection gear rotates by the moving of the paper guide. The bypass CD paper size VR mounted on the same axis as the size detection gear detects the paper width.
- The machine supports detection of SRA3 size.
- Irregular paper sizes and postcard can be used by entering the custom size.

NOTE

- **The paper guide has been extended to inhibit "paper skew" caused when the paper is fed and "paper jam due to paper skew".**



[1]	Paper guide (rear side)	[2]	Bypass CD paper size VR (VR1)
[3]	Bypass FD paper size sensor1 (PS28)	[4]	Sub tray
[5]	Bypass FD paper size sensor2 (PS29)	[6]	Actuator 2
[7]	Actuator 1	[8]	Size detection gear
[9]	Paper guide (front side)	-	-

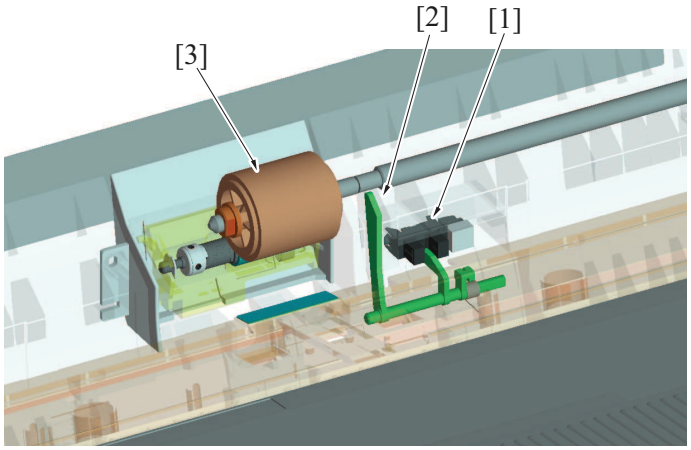
(1) Sheet size determination

Paper size detected	Bypass FD paper size sensor1	Bypass FD paper size sensor2	Bypass CD paper size VR
			Unit: mm
A6S	OFF	OFF	Less than 115
B6S			115 to 144 inclusive
A5 *			196 to 225 inclusive *
Invoice (5 $^1/_2$ × 8 $^1/_2$) *			
B5 *			242 to 268 inclusive *
Executive (7 ^{1}/4 × 10 $^1/_2$) *			
A5S *	ON	OFF	133 to 164 inclusive *
Invoice S (5 $^1/_2$ × 8 $^1/_2$ S)*			
B5S *			169 to less than 196 *
Executive S (7 1/4 × 10 1/2 S) *			
A4S *			196 to 225 inclusive *
Letter S (8$^1/_2$ x 11S) *			
Letter (8$^1/_2$ × 11)			255 to less than 288
A4			288 to 330 inclusive
Legal (8$^1/_2$ × 14)	ON	ON	201 to 231 inclusive
B4			242 to less than 268
Ledger (11 × 17)			268 to less than 288
A3			288 to less than 301
A3 wide (12 × 18)			301 to 312.5 inclusive
SRA3			Over 312.5 and up to 330

- *: When the area is in inches, the size is detected in inches; for other areas, A/B size is detected.

10.4.4 Paper empty detection control

- When the paper is loaded in the manual bypass tray, the paper empty detection actuator is pressed by the leading edge of the paper. The paper empty detection actuator is pressed to unblock the bypass paper empty sensor.
- When there is no paper on the manual tray, the paper empty detection actuator is raised. The paper empty detection actuator is returned to its original position to thereby block the bypass paper empty sensor.



[1]	Bypass paper empty sensor (PS27)	[2]	Actuator
[3]	Manual bypass tray feed roller	-	-

10.4.5 Paper separation pressure switching mechanism

- Paper misfeed may infrequently occur at use of 300g thick paper. (Paper separation pressure is too low for thick paper)
- Switch the pressure (paper separation pressure) of the manual separation roller pressing down on the feed roller to increase the paper separation pressure and reduce a paper misfeed.
- For details about the adjustment procedure, see I.11.2.3 Separator roller pressure adjustment of the bypass tray.

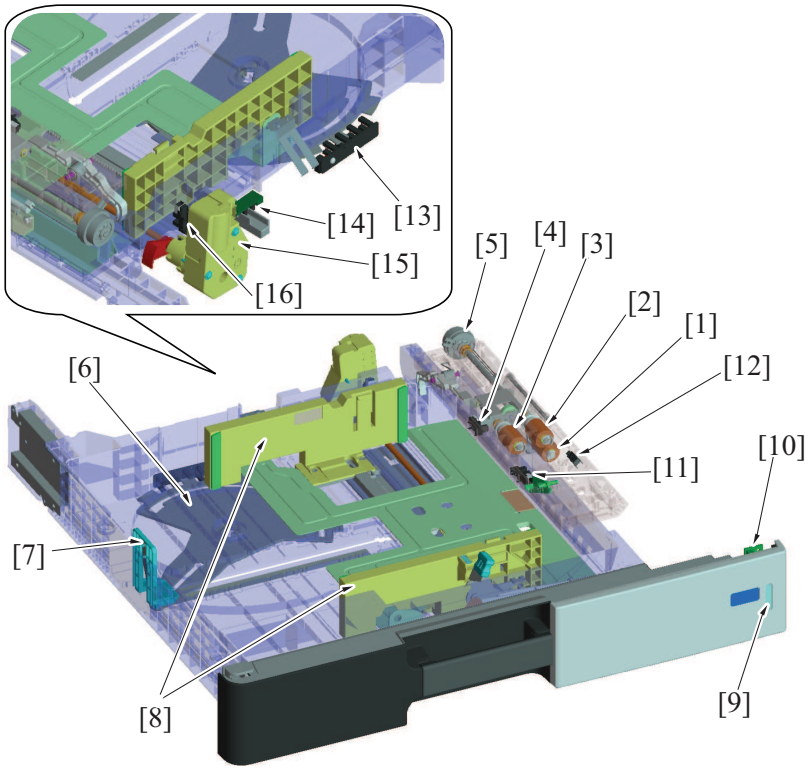
NOTE

- **It does not require to switch the paper separation pressure if paper misfeeds do not occur even at use of 300g thick paper.**
- **Use of plain paper under high-temperature, high-humidity environment after the paper separation pressure is switched may cause a paper misfeed infrequently. (Paper separation pressure is too high for plain paper)**

11. PAPER FEED SECTION

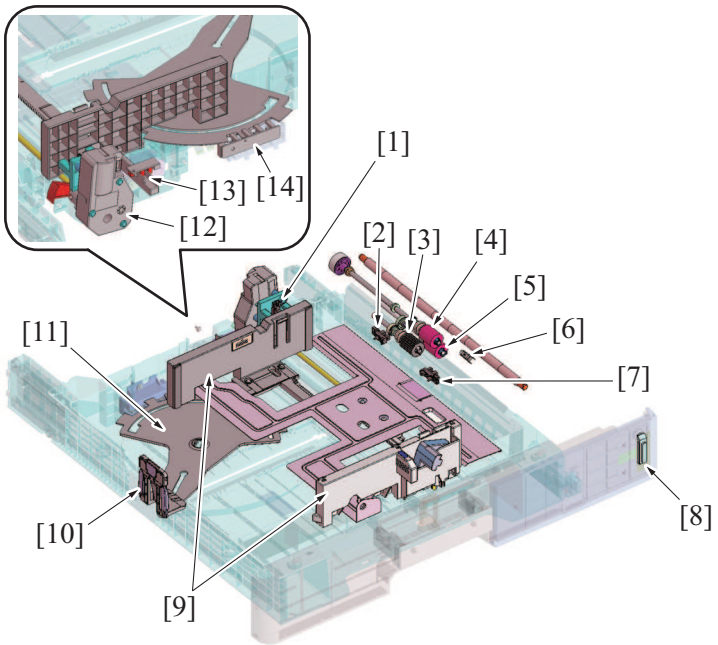
11.1 Configuration

11.1.1 Tray 1 (bizhub C368/C308/C258)



[1]	Tray 1 separation roller	[2]	Tray 1 feed roller
[3]	Tray 1 pick-up roller	[4]	Tray 1 upper limit sensor (PS25)
[5]	Tray 1 paper feed clutch (CL3)	[6]	Paper length detection plate
[7]	Paper length guide	[8]	Paper width guide
[9]	Machine condition monitor window	[10]	Tray 1 empty indicator board (PEIB/1)
[11]	Tray 1 paper empty sensor (PS24)	[12]	Tray 1 paper feed sensor (PS23)
[13]	Tray 1 FD paper size board (FDPSB/1)	[14]	Tray 1 CD paper size board (CDPSB/1)
[15]	Tray 1 lift-up motor (M12)	[16]	Tray 1 paper near empty sensor (PS11)

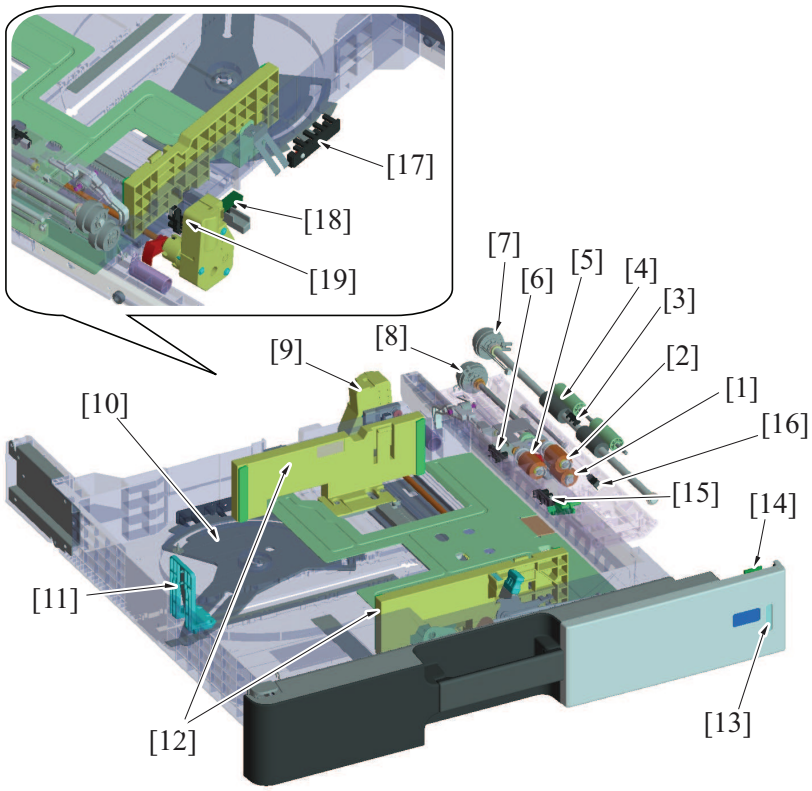
11.1.2 Tray 1 (bizhub C658/C558/C458)



[1]	Tray 1 paper near empty sensor (PS11)	[2]	Tray 1 upper limit sensor (PS25)

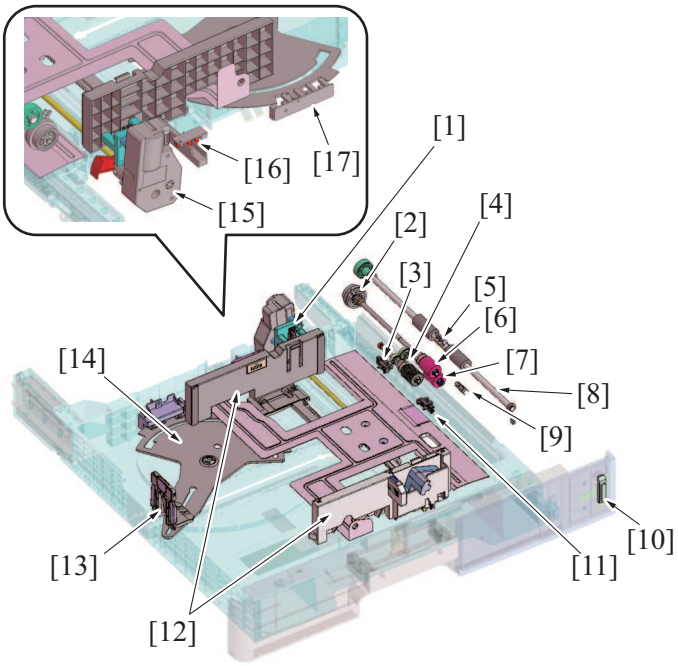
[3]	Tray 1 pick-up roller	[4]	Tray 1 feed roller
[5]	Tray 1 separation roller	[6]	Tray 1 paper feed sensor (PS23)
[7]	Tray 1 paper empty sensor (PS24)	[8]	Machine condition monitor window
[9]	Paper width guide	[10]	Paper length guide
[11]	Paper length detection plate	[12]	Tray 1 lift-up motor (M12)
[13]	Tray 1 CD paper size board (CDPSB/1)	[14]	Tray 1 FD paper size board (FDPSB/1)

11.1.3 Tray 2 (bizhub C368/C308/C258)



[1]	Tray 2 separation roller	[2]	Tray 2 feed roller
[3]	Tray 2 vertical transport sensor (PS19)	[4]	Vertical transport roller
[5]	Tray 2 pick-up roller	[6]	Tray 2 upper limit sensor (PS22)
[7]	Tray 2 vertical transport clutch (CL2)	[8]	Tray 2 paper feed clutch (CL1)
[9]	Tray 2 lift-up motor (M13)	[10]	Paper length detection plate
[11]	Paper length guide	[12]	Paper width guide
[13]	Machine condition monitor window	[14]	Tray 2 empty indicator board (PEIB/2)
[15]	Tray 2 paper empty sensor (PS21)	[16]	Tray 2 paper feed sensor (PS20)
[17]	Tray 2 FD paper size board (FDPSB/2)	[18]	Tray 2 CD paper size board (CDPSB/2)
[19]	Tray 2 paper near empty sensor (PS12)	-	-

11.1.4 Tray 2 (bizhub C658/C558/C458)

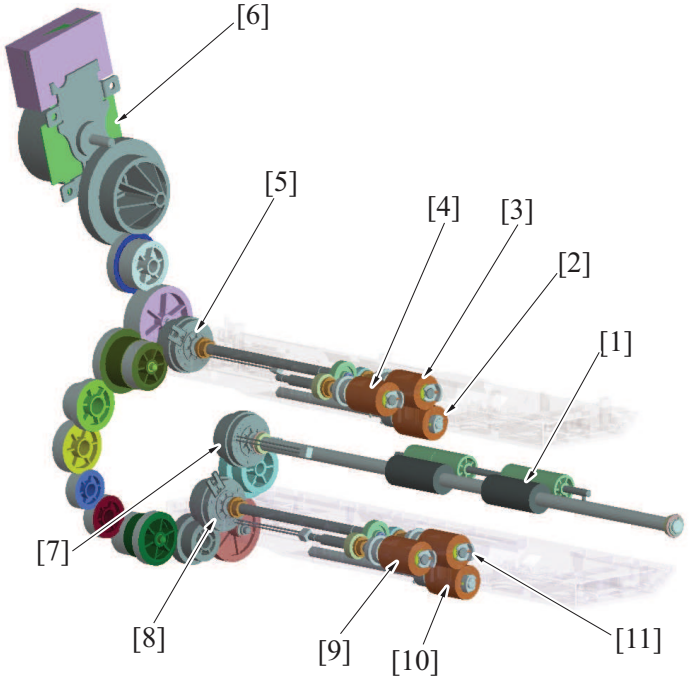


[1]	Tray 2 paper near empty sensor (PS12)	[2]	Tray 2 paper feed clutch (CL1)
[3]	Tray 2 upper limit sensor (PS22)	[4]	Tray 2 pick-up roller
[5]	Tray 2 vertical transport sensor (PS19)	[6]	Tray 2 feed roller
[7]	Tray 2 separation roller	[8]	Vertical transport roller
[9]	Tray 2 paper feed sensor (PS20)	[10]	Machine condition monitor window
[11]	Tray 2 paper empty sensor (PS21)	[12]	Paper width guide
[13]	Paper length guide	[14]	Paper length detection plate
[15]	Tray 2 lift-up motor (M13)	[16]	Tray 2 CD paper size board (CDPSB/2)
[17]	Tray 2 FD paper size board (FDPSB/2)	-	-

11.2 Drive

11.2.1 Drive (bizhub C368/C308/C258)

- Drive parts are arranged in the same way in tray 1 and tray 2. If the description that follows is not identified with tray 1 or tray 2, it is applicable to both tray 1 and tray 2 in terms of mechanism and control.
- Transport motor drives the tray1 and 2 paper feed roller section.
- The drive section of each tray has a clutch that controls rotation of the paper feed roller section.

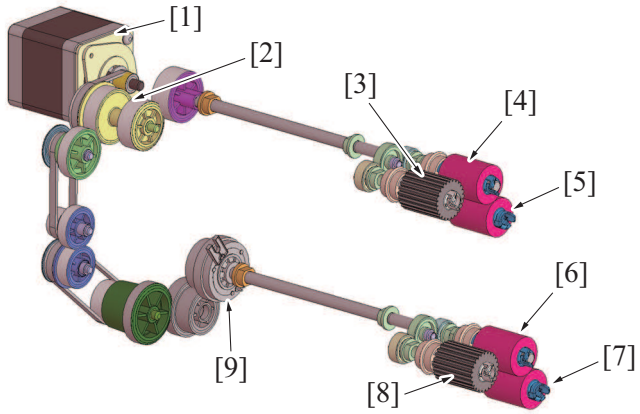


[1]	Vertical transport roller	[2]	Tray 1 separation roller
[3]	Tray 1 feed roller	[4]	Tray 1 pick-up roller
[5]	Tray 1 paper feed clutch (CL3)	[6]	Transport motor (M1)
[7]	Tray 2 vertical transport clutch (CL2)	[8]	Tray 2 paper feed clutch (CL1)
[9]	Tray 2 pick-up roller	[10]	Tray 2 separation roller
[11]	Tray 2 feed roller	-	-

11.2.2 Drive (bizhub C658/C558/C458)

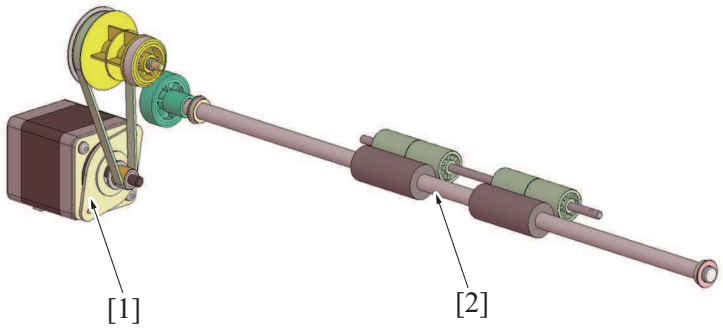
- Drive parts are arranged in the same way in tray 1 and tray 2. If the description that follows is not identified with tray 1 or tray 2, it is applicable to both tray 1 and tray 2 in terms of mechanism and control.
- Paper feed motor drives the tray 1 and tray 2 feed roller section.
- The drive section of each tray has a clutch that controls rotation of the paper feed roller section.
- Forward and reverse operation of the paper feed motor enables switching between drive of the tray 1 paper roller and tray 2 paper roller.
- The one-way clutch on the transport motor drive shaft switches drive modes.
- The tray 2 vertical transport motor drives the vertical transport motor.

Paper feed drive



[1]	Paper feed motor (M22)	[2]	One-way clutch
[3]	Tray 1 pick-up roller	[4]	Tray 1 feed roller
[5]	Tray 1 separation roller	[6]	Tray 2 feed roller
[7]	Tray 2 separation roller	[8]	Tray 2 pick-up roller
[9]	Tray 2 paper feed clutch (CL1)	-	-

Conveyance drive (tray 2)



[1]	Tray 2 vertical transport motor (M23)	[2]	Vertical transport roller

11.3 Operation

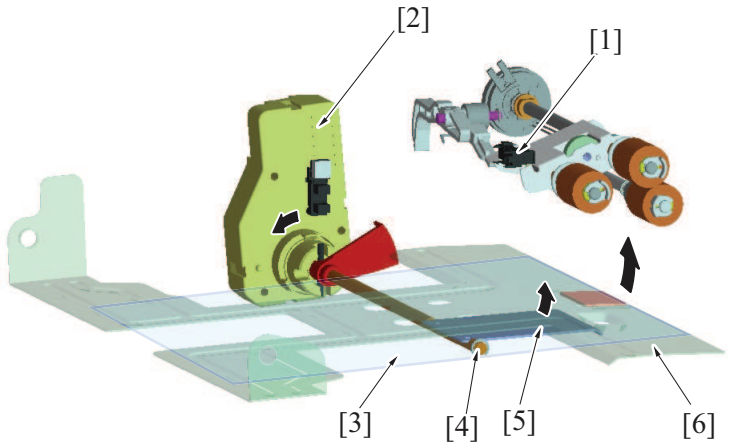
11.3.1 Up/down control

- Tray 1 and tray 2 are controlled in the same control procedure.

(1) Up operation

- The paper lift-up plate B is located under the paper lift-up plate A.
- The lift-up plate drive shaft of the tray 1/2 lift-up motor is connected to paper lift-up plate B.
- When the drive shaft of the tray 1/2 lift-up motor rotates, paper lift-up plate B raises paper lift-up plate A.

The following illustration is for bizhub C368/C308/C258.

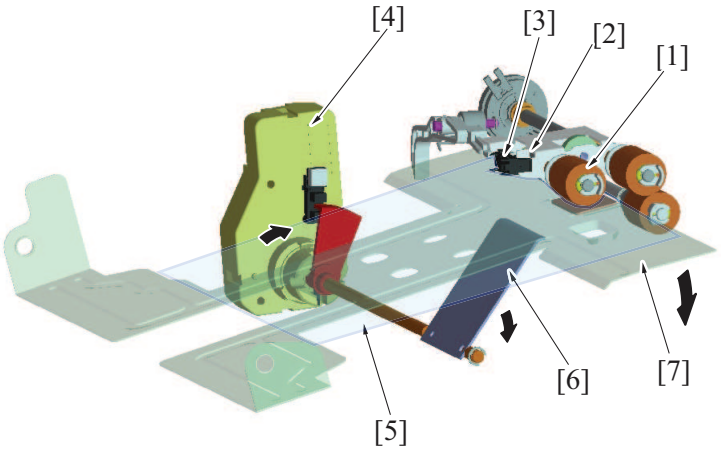


[1]	Tray 1 upper limit sensor (PS25) / Tray 2 upper limit sensor (PS22)	[2]	Tray 1 lift-up motor (M12) / Tray 2 lift-up motor (M13)
[3]	Paper	[4]	Lift-up plate drive shaft
[5]	Paper lift-up plate B	[6]	Paper lift-up plate A

(2) Down operation

- When the tray is slid out of the machine, the coupling of tray 1/2 lift-up motor and the lift-up plate drive shaft are disconnected from each other.
- When the driving force of tray 1/2 lift-up motor is released from the lift-up plate drive shaft, the paper lift-up plate starts lowering by its own weight.

The following illustration is for bizhub C368/C308/C258.



[1]	Pick-up roller	[2]	Light blocking plate of upper limit sensor
[3]	Tray 1 upper limit sensor (PS25) / Tray 2 upper limit sensor (PS22)	[4]	Tray 1 lift-up motor (M12) / Tray 2 lift-up motor (M13)
[5]	Paper	[6]	Paper lift-up plate B
[7]	Paper lift-up plate A	-	-

(3) Operation timing

(a) When the tray is slid in

- When the tray is slid into the machine, the sensor on the tray 1/2 FD paper size board is blocked. The machine then determines that the tray is slid into position.
- The paper lift-up plate is lowering when the tray is slid out, so that the tray 1/2 upper limit sensor is unblocked.
- Determining after tray insertion that the tray 1/2 upper limit sensor is unblocked, the machine lets the tray 1/2 lift-up motor rotate to start the up operation of the paper lift-up plate.
- When the paper stack is raised to a predetermined height after the up operation of the paper lift-up plate has been started, the tray 1/2 upper limit sensor is blocked.
- Determining that the tray 1/2 upper limit sensor is blocked, the machine stops the tray 1/2 lift-up motor to complete the up operation of the paper lift-up plate.
- Control is provided to make sure that only one tray performs the up operation at one time.
- If the tray is slid out during the up operation of the paper lift-up plate and accordingly the sensor on the tray 1/2 FD paper size board is unblocked, the up operation of the paper lift-up plate is terminated.

(b) During a print cycle

- When the amount of paper decreases as the unit keeps printing, the pick-up roller will gradually come down to unblock the tray 1/2 upper limit sensor. The tray 1/2 lift-up motor will rotate again to lift up the paper lift-up plate.

- When the tray 1/2 upper limit sensor is blocked, the tray 1/2 lift-up motor will stop to stop lift-up the paper lift-up plate.
- The sequence of these operations is repeated to keep constant the pressure between the pick-up roller and paper stack (paper take-up pressure) regardless of the amount of paper still available for use.

11.3.2 Paper feed control (bizhub C368/C308/C258)

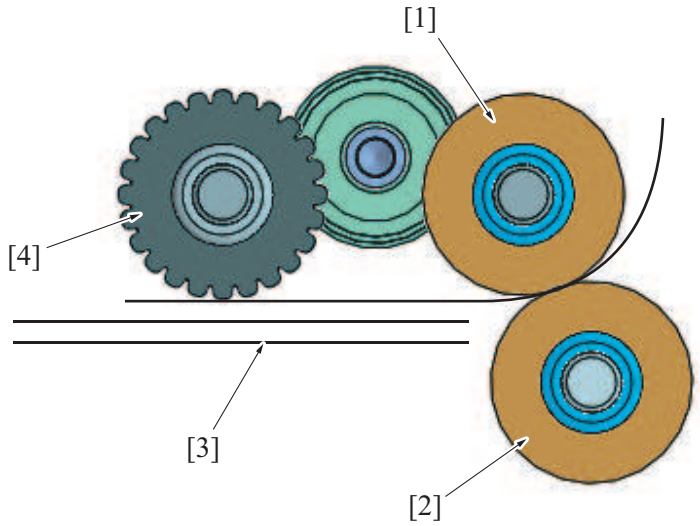
- Tray 1 and tray 2 are controlled in the same control procedure.

(1) Pick-up control

- The tray 1/2 paper feed clutch is energized after the lapse of a predetermined period of time after the print start signal.
- The driving force of the transport motor is transmitted to the pick-up roller and paper feed roller when the tray 1/2 paper feed clutch is energized. These rollers rotate to pick up and feed a sheet of paper into the machine.

(2) Separation control

- The separation roller is pressed up against the feed roller by the pressure of a spring and an acting pressure generated from torque of the torque limiter.
- The acting pressure of the feed roller/separation roller/torque limiter serves as the limit torque for preventing double feed.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If there are two or more sheets of paper between the separation roller and feed roller, the limit torque is greater than the friction force of the paper, so that the separation roller is not rotated.
- The separation roller causes the lower sheet of paper in contact with the separator roller to be pushed backward in the direction of the tray, so that the lower sheet of paper is properly separated.
- Only the upper paper contacting the feed roller is conveyed to the registration section.

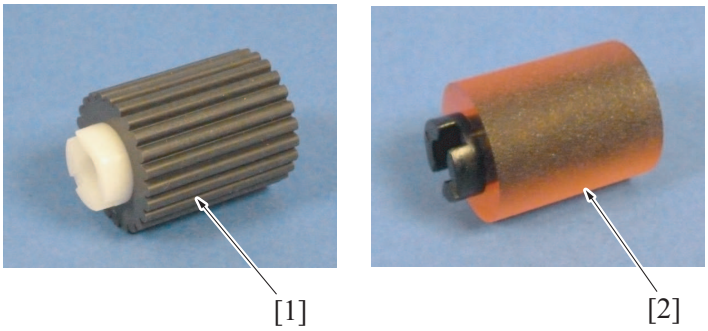


[1]	Feed roller	[2]	Separation roller
[3]	Paper	[4]	Pick-up roller

(3) Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts. These three rollers must be replaced with new ones at the same time.
- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the “1st.” or “2nd.” counter must be reset to zero using [Counter] -> [Life] of the Service Mode.
- The number of times tray 1/tray 2 has been subjected to paper feed operations can be checked with the “1st./2nd.” counter of the Service Mode.

Periodical replacement cycle	Paper feed operations 300,000 times



[1]	Pick-up roller	[2]	Feed roller/Separation roller

- To improve exchangeability, the pick-up roller, feed roller, and separation roller are held in position on one side. At the time of replacement, remove the paper feed tray and remove the C-clip on one side. It allows each of the three rollers to be removed.

- For details of the applicable replacement procedures for the pick-up roller, feed roller, and separation roller and the Service Mode, see " F.7.7.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller" and " F.7.7.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller."

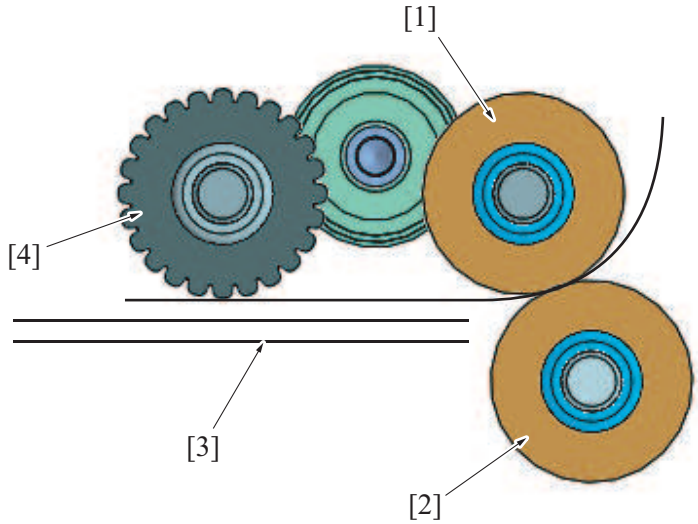
11.3.3 Paper feed control (bizhub C658/C558/C458)

(1) Pick-up control

- The paper feed motor turns ON when the predetermined amount of time elapses after the print start signal is input. Drive power transfers to tray 1 and tray 2 via forward and reverse operation of the paper feed motor.
- Drive power from the paper feed motor transfers to the tray 1 pick-up roller and feed roller when the paper feed motor is turned ON. Paper is picked up and fed by the rotation of the rollers.
- Drive power from the paper feed motor transfers to the tray 2 pick-up roller and feed roller when the tray 2 paper feed clutch is turned ON. Paper is picked up and fed by the rotation of the rollers.

(2) Separation control

- The separation roller is pressed up against the feed roller by the pressure of a spring and an acting pressure generated from torque of the torque limiter.
- The acting pressure of the feed roller, separation roller, and torque limiter serves as the limit torque for preventing double feed.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If there are two or more sheets of paper between the separation roller and feed roller, the limit torque is greater than the friction force of the paper, so that the separation roller is not rotated.
- The separation roller causes the lower sheet of paper in contact with the separator roller to be pushed backward in the direction of the tray, so that the lower sheet of paper is properly separated.
- Only the upper paper contacting the feed roller is conveyed to the registration section.

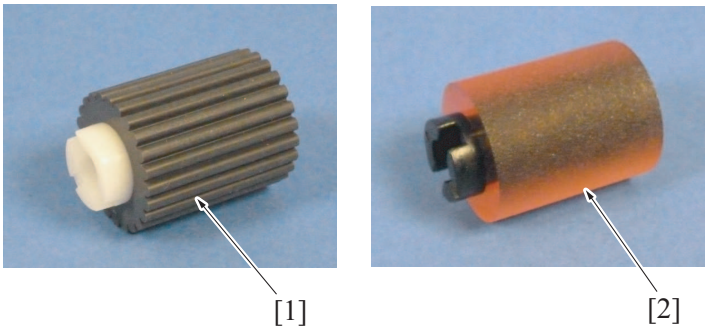


[1]	Feed roller	[2]	Separation roller
[3]	Paper	[4]	Pick-up roller

(3) Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts. These three rollers must be replaced with new ones at the same time.
- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the "1st." or "2nd." counter must be reset from [Service Mode] -> [Counter] -> [Life].
- The number of times tray 1/tray 2 has been subjected to paper feed operations can be checked with the "1st./2nd." counter of the Service Mode.

Periodical replacement cycle	Paper feed operations 300,000 times



[1]	Pick-up roller	[2]	Feed roller, Separation roller

- To improve exchangeability, the pick-up roller, feed roller, and separation roller are held in position on one side. At the time of replacement, remove the paper tray and release the claws on each roller to remove each of the three rollers.
- For details of the applicable replacement procedures for the pick-up roller, feed roller, and separation roller and the Service Mode, see " F.8.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller" and " F.8.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller."

11.3.4 Paper feed retry control

- If the specified sensor is unable to detect the paper even after the lapse of a predetermined period of time after the start of the paper feed sequence, the machine determines that there is a paper misfeed. To reduce possibility of paper misfeed, if a paper misfeed is detected during a print job under the following conditions, the paper feed sequence is performed again (retry) only once. The feed roller is temporarily stopped, and is then turned again. A paper misfeed results if the specified sensor is still unable to detect the paper even after the paper feed retry sequence, the machine determines that there is a paper misfeed.

bizhub C368/C308/C258

Paper port	Paper feed retry control	Sensor name
Manual bypass tray	Only in black mode	Registration sensor
Tray 1	No retry control is performed.	
Tray 2	Only in black mode	Tray 2 vertical transport sensor
Tray 3 (Option: PC-110/210)	Retry control is performed both in color and black mode.	Tray 3 vertical transport sensor
Tray 4 (Option: PC-210)		Tray 4 vertical transport sensor
LCC (Option: PC-410)		LCT vertical transport sensor
LCT (Option: LU-302)		LU paper feed sensor

bizhub C658

Paper port	Paper feed retry control	Sensor name
Manual bypass tray	Only in black mode	Registration sensor
Tray 1	No retry control is performed.	
Tray 2	Only in black mode	Tray 2 vertical transport sensor
Tray 3 (Option: PC-115/215)		Tray 3 vertical transport sensor
Tray 4 (Option: PC-215)	Retry control is performed both in color and black mode.	Tray 4 vertical transport sensor
LCC (Option: PC-415)	Only in black mode	LCT vertical transport sensor
LCT (Option: LU-302/LU-207)		LU paper feed sensor

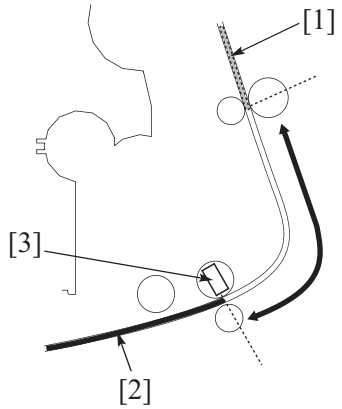
bizhub C558/C458

Paper port	Paper feed retry control	Sensor name
Manual bypass tray	Only in black mode	Registration sensor
Tray 1		
Tray 2		Tray 2 vertical transport sensor
Tray 3 (Option: PC-115/215)	Retry control is performed both in color and black mode.	Tray 3 vertical transport sensor
Tray 4 (Option: PC-215)		Tray 4 vertical transport sensor
LCC (Option: PC-415)		LCT vertical transport sensor
LCT (Option: LU-302/LU-207)		LU paper feed sensor

11.3.5 Feed roller speed reduction control

- During multi-print cycles, the target printed pages number is maintained due to correction of the transport speed variations and a proper paper-to-paper distance.
- Measure the time that is taken from starting paper feed to the paper feed sensor ON. If the paper-to-paper distance is too narrow, the paper roller is decelerated for a predetermined time, so that a proper paper-to-paper distance can be achieved.
- Feed roller speed reduction control is implemented when paper is fed from the following paper trays.

Paper port	Controlled roller	Sensor name
Tray 1	Tray 1 feed roller	Tray 1 paper feed sensor
Tray 2	Tray 2 feed roller	Tray 2 paper feed sensor



[1]	Preceding sheet	[2]	Sheet of paper being controlled
[3]	Paper feed sensor	-	-

11.3.6 Vertical transport roller speed reduction control

- In the same manner as with the feed roller speed reduction control, control is performed to reduce the speed of the vertical transport roller during a multi-print cycle, thereby maintaining a proper paper-to-paper distance.
- Time it takes the vertical transport sensor to be activated after the start of a paper feed sequence is measured. If the distance between two sheets of paper is determined to be narrow, the vertical transport roller is decelerated for a predetermined period of time, so that a proper paper-to-paper distance can be achieved.
- Vertical transport roller speed reduction control is implemented paper is fed from the following paper trays.

bizhub C368/C308/C258

Paper port	Controlled roller	Sensor name
Tray 3 (Option: PC-110/210)	Tray 3 vertical transport roller	Tray 3 vertical transport sensor
Tray 4 (Option: PC-210)	Tray 4 vertical transport roller	Tray 4 vertical transport sensor
LCC (Option: PC-410)	LCT vertical transport roller	LCT vertical transport sensor
LCT (Option: LU-302)	LU roller	LU paper feed sensor

bizhub C658/C558/C458

Paper port	Controlled roller	Sensor name
Tray 2	Tray 2 vertical transport roller	Tray 2 vertical transport sensor
Tray 3 (Option: PC-115/215)	Tray 3 vertical transport roller	Tray 3 vertical transport sensor
Tray 4 (Option: PC-215)	Tray 4 vertical transport roller	Tray 4 vertical transport sensor
LCC (Option: PC-415)	LCT vertical transport roller	LCT vertical transport sensor
LCT (Option: LU-302/207)	LU roller	LU paper feed sensor

11.3.7 Paper transport control (bizhub C368/C308/C258)

(1) Tray 1

- The tray 1 feed roller feeds the paper onto the registration roller.
- The tray 1 paper feed sensor located downstream of the tray 1 feed roller detects the paper fed from the feed roller.
- When the paper fed from the feed roller moves past the registration roller and reaches a predetermined position, the tray 1 paper feed clutch is deenergized to disconnect the driving force of the transport motor. The pick-up roller and feed roller follow the movement of the paper, continuing rotating. The pick-up roller and feed roller stop rotating as soon as the paper moves past them.
- If the registration sensor is unable to detect paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at tray 1.

(2) Tray 2

- The tray 2 feed roller feeds the paper onto the tray 2 vertical transport roller.
- The tray 2 paper feed sensor located downstream of the tray 2 feed roller detects the paper fed from the tray 2 feed roller.
- When the tray 2 vertical transport sensor located downstream of the tray 2 vertical transport roller along the paper path detects the leading edge of the paper fed from the feed roller, the tray 2 paper feed clutch is deenergized to disconnect the driving force of the transport motor. The pick-up roller and feed roller follow the movement of the paper, continuing rotating. The pick-up roller and feed roller stop rotating as soon as the paper moves past them.
- If the tray 2 vertical transport sensor is unable to detect the leading edge of paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at tray 2.

11.3.8 Paper transport control (bizhub C658/C558/C458)

(1) Tray 1

- The tray 1 feed roller feeds the paper onto the registration roller.
- The tray 1 paper feed sensor located downstream of the tray 1 feed roller detects the paper fed from the feed roller.
- The paper feed motor turns OFF when the trailing edge of paper that is transported from the feed roller reaches the specified position upstream from the tray 1 feed roller. The pick-up roller and feed roller follow the movement of the paper, continuing rotating. The pick-up roller and feed roller stop rotating as soon as the paper moves past them.

- If the registration sensor is unable to detect paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at tray 1.

(2) Tray 2

- The tray 2 feed roller feeds the paper onto the tray 2 vertical transport roller.
- The tray 2 paper feed sensor located downstream of the tray 2 feed roller detects the paper fed from the tray 2 feed roller.
- The paper feed motor and the tray 2 paper feed clutch are turned OFF when the tray 2 vertical transport sensor located downstream from the tray 2 vertical transport roller along the paper path detects the leading edge of the paper that is fed from the feed roller. The pick-up roller and feed roller follow the movement of the paper, continuing rotating. The pick-up roller and feed roller stop rotating as soon as the paper moves past them.
- If the tray 2 vertical transport sensor is unable to detect the leading edge of paper even after the lapse of a predetermined period of time, the machine determines that there is a paper misfeed at tray 2.

11.3.9 Downstream exit control during multi-print cycle

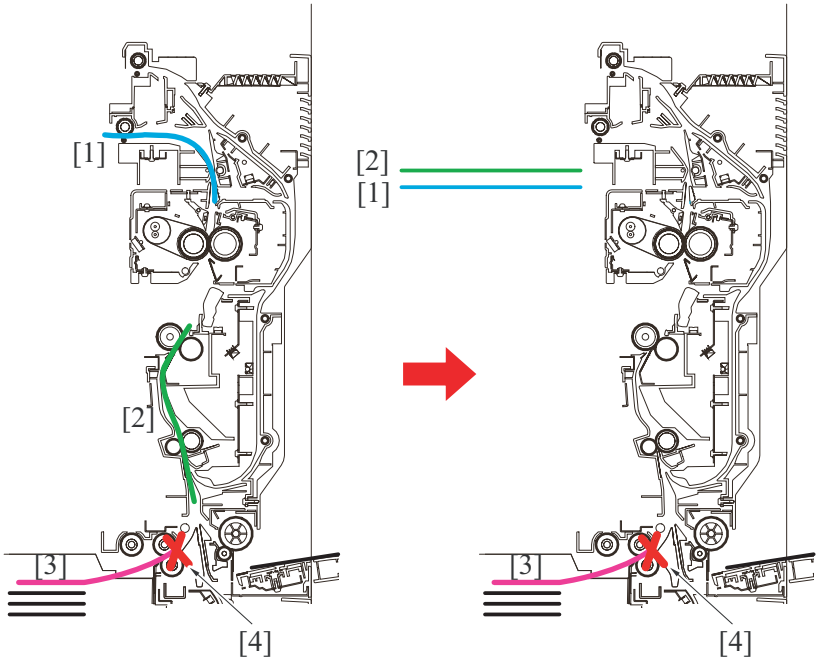
- When a paper jam in the paper feed section is detected, the print operation does not stop immediately. Paper that has been printed completely and paper that can be printed completely is discharged outside of the machine after being printed.
- Completely discharge printed paper to make jam removal easily and reduce paper consumption.

(1) Downstream exit control jams

Misfeed at tray 1 paper feed section	Misfeed at LCC (PC-410/PC415) paper feed section
Misfeed at tray 2 paper feed section	Misfeed at LCT (LU-207/LU-302) paper feed section
Misfeed at tray 3 paper feed section	Misfeed at manual bypass tray paper feed section
Misfeed at tray 4 paper feed section	Misfeed at vertical transport section

(2) 1-sided printing

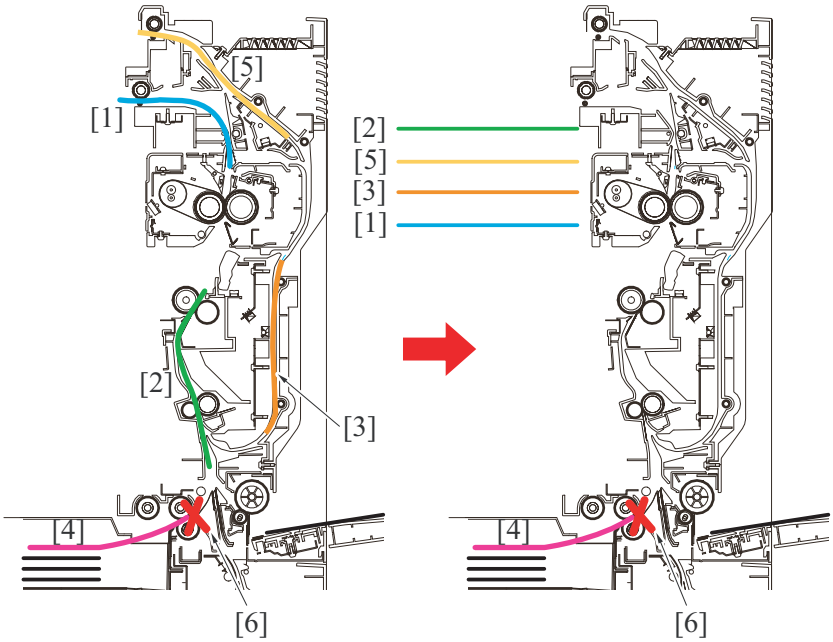
1. Stops the feeding of paper [3] where the jam occurred and the transport operation.
2. Exit paper [1].
3. Transfers, fuses image onto, and then discharges paper [2].



[1]	Sheet after a 1-sided image transfer	[2]	Sheet before a 1-sided image transfer
[3]	Jamming paper	[4]	Jamming

(3) 2-sided printing

1. Stops the feeding of paper [4] where the jam occurred and the transport operation.
2. Exit paper [1].
3. Transfer and fuse 2-side image onto, and then exit, sheets [3] and [5] located at the reverse/duplex section.
4. Performs 2-sided printing and discharges paper [3] in the pre-image transfer process.



[1]	Sheet after a 2-sided image transfer	[2]	Sheet before a 1-sided image transfer
[3]	Sheet after a 1-sided image transfer	[4]	Jamming paper
[5]	Sheet after a 1-sided image transfer	[6]	Jamming

11.3.10 Paper pick-up pressure switching mechanism

- A paper misfeed may infrequently occur, if lightweight 52 g recycled paper, or the like, is used under high temperature, high humidity environment. (Paper pick-up pressure is too high for the thin paper)
- Replacement of the pick spring that is mounted to paper feed unit 2 may lower the paper pick-up pressure and reduce the paper misfeed.
- For the replacement procedure, see " I.11.2.2 Pick-up pressure adjustment of the tray 1/2".

NOTE

- **Since the spring is available to the recommended thin paper (CS520), replacement is not required.**
- **At using plain paper under high-temperature, high-humidity environment or feeding thick paper after replacement of the pick-up spring, a paper misfeed may infrequently occur. (Paper pick-up pressure is too low for the thick paper)**

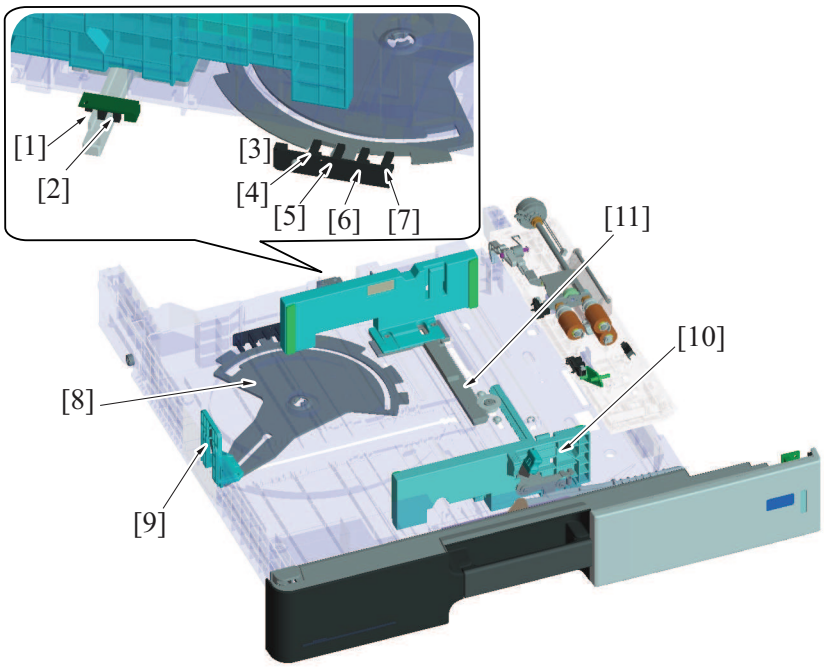
11.3.11 Paper size detection control

(1) Paper width detection (CD)

- The size in paper width is detected with the combination of ON/OFF the transmission type photosensors 1, 2 on the CD paper size board.
- The CD paper size sensor is unblocked or blocked according to the position of the paper width detection plate connected to the paper width guide plate.

(2) Paper length detection (FD)

- The size in paper length is detected with the combination of ON/OFF transmission type photosensors 1 to 4 on the FD paper size board.
- The FD paper sensor is unblocked or blocked by the paper length detection plate position connected to the paper length guide plate.
- The sensor on the FD paper size board also functions to detect whether the tray is mounted.



[1]	CD paper sensor2	[2]	CD paper sensor1
[3]	FD paper size board	[4]	FD paper sensor1
[5]	FD paper sensor2	[6]	FD paper sensor3
[7]	FD paper sensor4	[8]	Paper length detection plate
[9]	Paper length guide	[10]	Paper width guide
[11]	Paper width detection plate	-	-

(3) Sheet size determination

- The 2 CD paper size sensors detect the paper width, and the 4 FD paper size sensors detect the paper length. Paper size is determined with the combination of the above paper width and paper length.

Paper size	FD paper size board				CD paper size board	
	Sensor 4	Sensor 3	Sensor 2	Sensor 1	Sensor 2	Sensor 1
SRA3 (*1)	H	L	L	H	H	H
A3 Wide (*1)	H	L	L	H	L	H
A3	L	L	H	L	L	H
B4	L	H	H	H	L	H
A4S	H	H	L	L	L	L
A4	H	L	L	H	L	H
B5S	L	H	H	L	L	L
B5	L	H	L	L	L	H
A5S (*2)	H	L	H	L	L	L
Invoice S (*2)	H	L	H	L	L	L
Ledger (11×17)	L	L	H	L	H	H
Legal (8 $^{1}/_{2}$x14)	L	H	H	H	L	L
Letter S (8$^{1}/_{2}$x11 S)	L	L	L	H	L	L
Letter (8$^{1}/_{2}$x11)	H	L	H	L	H	H
FLS S (*3)	H	H	H	H	L	L
8K S (270 mm x 390 mm)	L	H	L	H	H	H
16K (270 mm × 195 mm)	L	H	H	L	H	H

- *1: SRA3 and A3 Wide are support only from the tray 2 and the bypass tray.
- *2: For regions using inches, Invoice S size is detected. For other regions, A5S size is detected.
- FLS can be configured with one of the following paper sizes from Foolscap Size Setting in Service Mode.
  - 8 $^{1}/_{2}$×13 $^{1}/_{2}$, 8×13, 8 $^{1}/_{4}$×13, 8 $^{1}/_{2}$×13

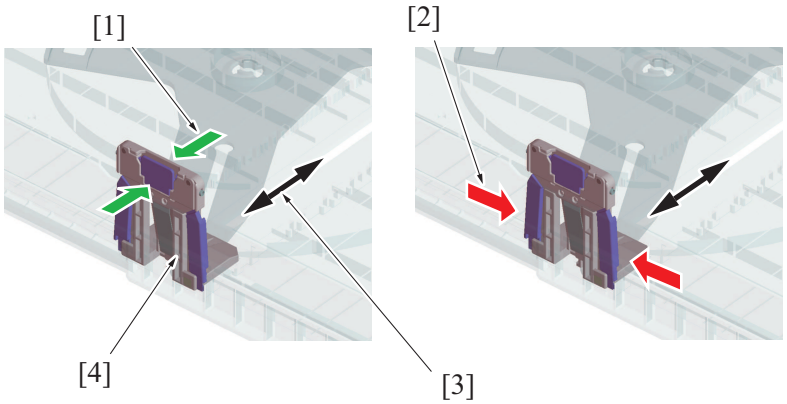
(a) Sensor states

Sensor	Physical state	
	HIGH signal	LOW signal
FD paper size board: sensor 1 to 4	Blocked	Unblocked
CD paper size board: sensor 1, 2		

11.3.12 Paper length guide operation mechanism

Two methods are provided to operate the paper length guide.

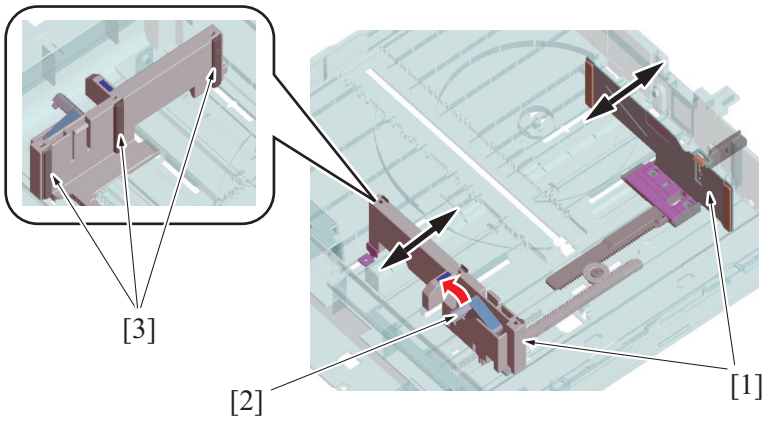
- Squeeze the paper length guide to operate it in the direction orthogonal to the direction of movement.
- Squeeze the paper length guide to operate it in the same direction as the direction of movement.



[1]	Squeeze in the same direction as the direction of movement	[2]	Squeeze in the direction orthogonal to the direction of movement
[3]	Movement direction of paper length guide	[4]	Paper length guide

11.3.13 Paper width guide

- A latching positioning method is used to prevent paper width guide misalignment due to shock that is generated during insertion of trays.
- Operating the lock lever releases the lock that is installed to the front side of the paper width guide. The paper width guide can then be moved.
- The front side paper width guide is equipped with a support guide. The support guide presses paper in the tray with spring force to reduce paper skew.



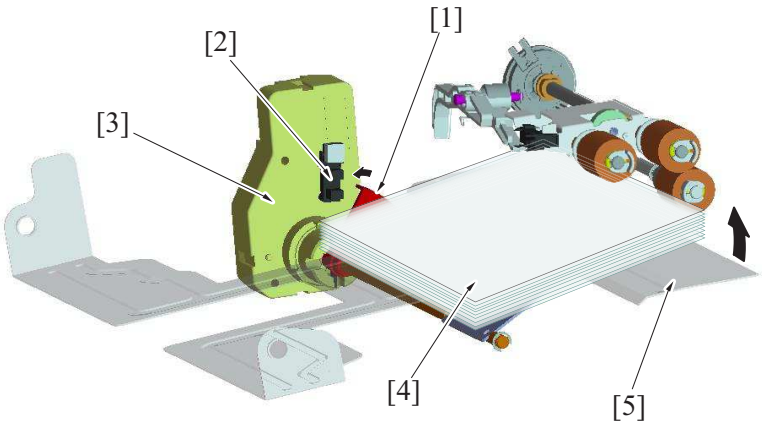
[1]	Paper width guide	[2]	Lock lever
[3]	Support guide	-	-

11.3.14 Remaining paper detection control

- The remaining paper detection control is performed under any of the following conditions:
  - “Tray 1/tray 2 is closed in position”
  - “The up/down control of the paper lift-up plate is completed”

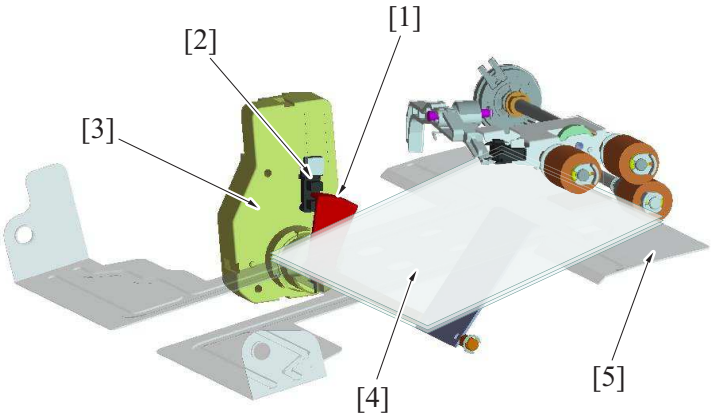
(1) Paper near-empty detection

- The tray 1/2 near empty sensor detects a paper near-empty condition of the tray.
- As paper is consumed, the paper lift-up plate is raised. This raises the near empty detection actuator provided at the lift-up plate drive shaft of the lift-up motor.
  When a sufficient amount of paper is loaded



- When the near empty detection actuator is raised to a position at which the tray 1/2 near empty sensor is blocked, the machine detects a near-empty condition.
  NOTE
  - **A near-empty condition is detected when the amount of paper still available for use becomes about 50 sheets.**

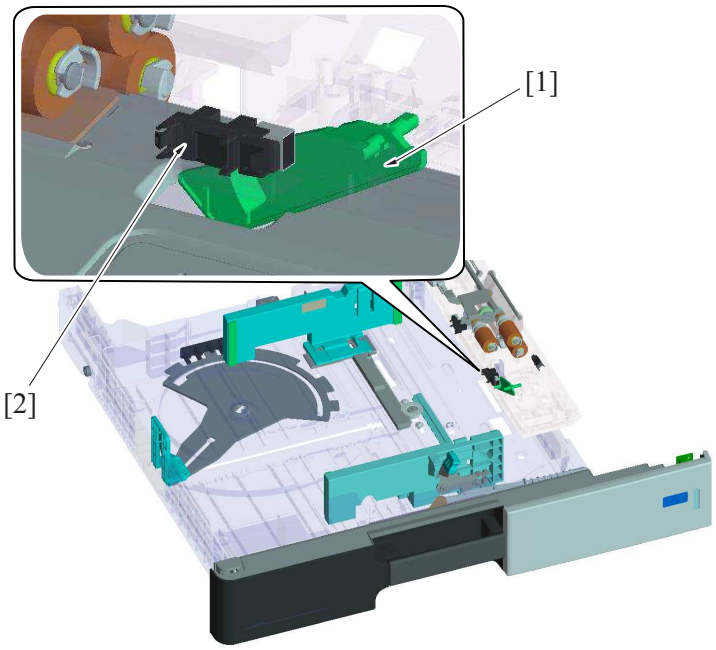
  Near empty condition



[1]	Actuator	[2]	Tray 1/2 paper near empty sensor (PS11/PS12)
[3]	Tray 1/2 lift-up motor (M12/M13)	[4]	Paper
[5]	Paper lift-up plate	-	-

(2) Paper empty detection

- Tray 1 and tray 2 use the same control system to detect a paper empty condition.
- A paper empty condition is detected by the tray 1/2 paper empty sensor.



[1]	Actuator	[2]	Tray 1/2 paper empty sensor (PS24/PS21)

(3) Remaining paper level display

- The amount of remaining paper is indicated by the LED on the right side of each tray and by the screen of the control panel.
- The following shows how the level is displayed.

Tray condition	Empty	Near empty	Other statuses (Including during lift-up and no tray conditions)
LED	ON	Blinking/OFF *	OFF

*: LED turns OFF when Paper Remainder is set to Type 2: Service Mode -> System 1 -> Machine State LED Setting -> Paper Remainder.



[1]	Tray 1 empty indicator	[2]	Tray 2 empty indicator

11.3.15 Paper feed tray locking mechanism

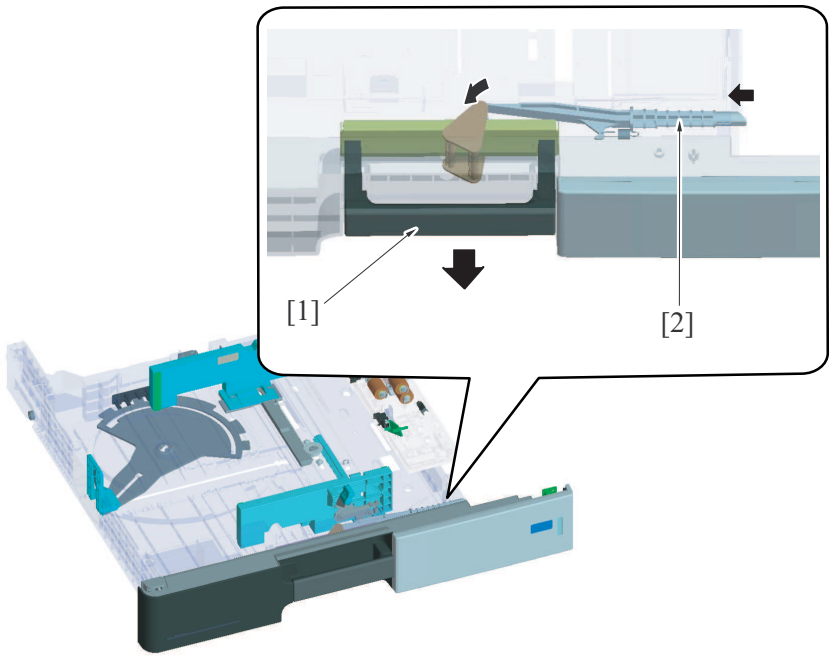
- The paper feed tray is provided with a locking mechanism.

(1) Unlocking the paper feed tray

- With drawing the lever of the paper feed tray to the front will disengage the tray lock lever equipped on the right side of the paper feed tray.
- The paper feed tray can be pulled out of the machine by continuing pulling the lever with the tray lock lever disengaged.
- Rollers are provided for the right and left tray rails. They reduce the operating force required for sliding in/out the paper feed tray.

(2) Locking the paper feed tray

- Pushing the lever of the paper feed tray all the way toward the rear will allow the paper feed tray to be slid into the machine.
- When the paper feed tray is inserted all the way in place, the tray lock lever equipped on the right side of the paper feed tray locks the tray in place.
- To prevent false detection, the paper feed tray is equipped with a spring in the rear that pushes the tray back out if the tray is not inserted all the way in place.

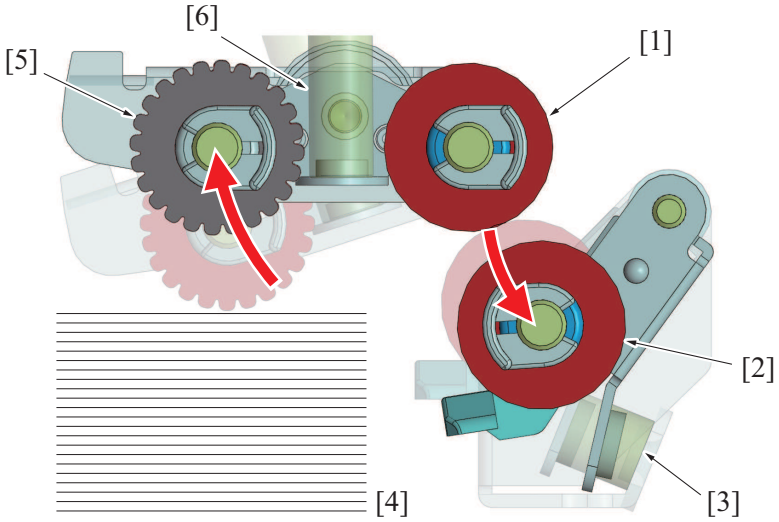


[1]	Lever of the paper feed tray	[2]	Lock lever

11.3.16 Roller retract mechanism

- When the paper feed tray is inserted or pulled out, there is a mechanism which retracts the pick-up roller and the separation roller.
- The pick-up roller retracts from the paper.
- The separation roller retracts from the feed roller.

Front view

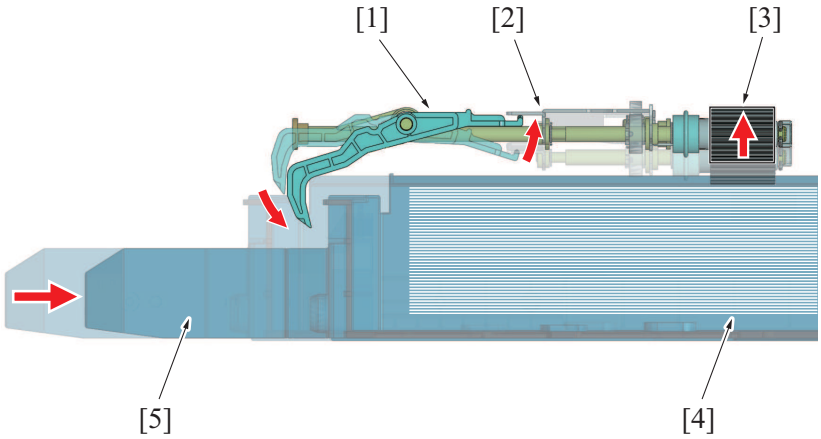


[1]	Feed roller	[2]	Separation roller
[3]	Separation roller pressure spring	[4]	Paper
[5]	Pick-up roller	[6]	Pick-up roller pressure spring

(1) Pick-up roller retract mechanism

- When the paper feed tray is inserted or pulled out, the pick-up roller prevents the paper from being damaged.
- The pick-up roller comes down through spring pressure when the paper feed tray is closed. When paper is placed, the roller is pressed against the paper surface. (Paper feed position)
- Released the paper feed tray lock, the roller lifting lever is also released and the pick-up roller holder is pushed up to the retracted position. It prevents the paper surface from being damaged even if the paper tray is pulled out.

Left side view

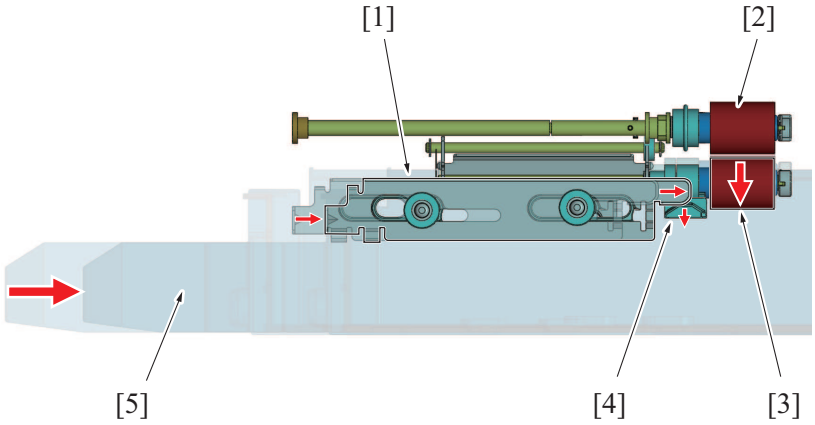


[1]	Roller lifting lever	[2]	Pick-up roller holder
[3]	Pick-up roller (retracted position)	[4]	Paper
[5]	Paper feed tray (lock released)	-	-

(2) Separation roller retract mechanism

- When a paper jam occurs and paper is caught between rollers where the feed roller is pressing the separation roller, paper will be left inside the machine through pulling out the paper feed tray. If you insert the paper feed tray in that state, the paper may get torn in pieces which may fall off and scatter inside the machine. It prevents paper from being torn or falling off through retracting the separation roller.
- The separation roller is pressed against the feed roller by spring pressure when the paper feed tray is closed. (Paper feed position)
- Release the paper tray lock, the roller pushdown lever is also released and the separation roller retract lever is pushed down to the retracted position. It releases the paper from the rollers even if it is jammed between the rollers.

Left side view



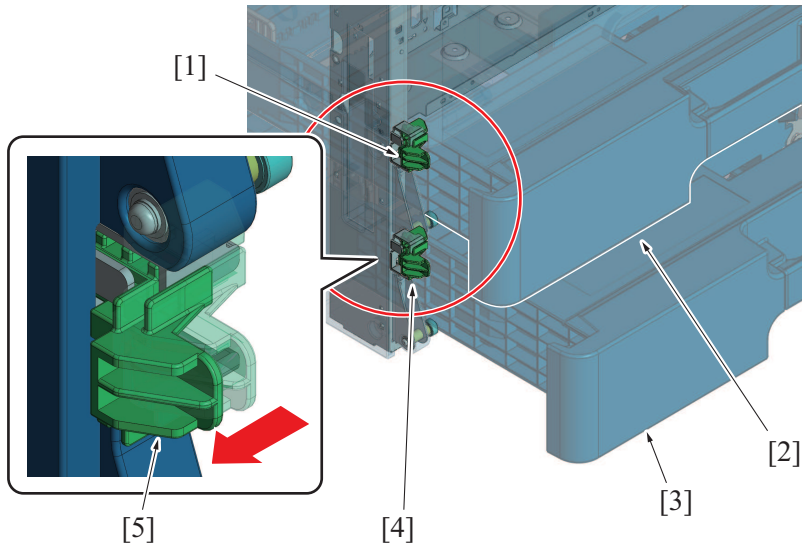
[1]	Roller pushdown lever	[2]	Feed roller
[3]	Separation roller (retracted position)	[4]	Separation roller retract lever
[5]	Paper feed tray (lock released)	-	-

11.3.17 Paper feed tray stopper release mechanism

- The paper feed tray is equipped with a stopper mechanism.
- When paper is placed, the stopper prevents the paper feed tray from falling off from the machine even if it is pulled out.
- The paper feed tray can be removed if paper is remained inside the machine at the time of handling a paper jam or a misfeed.

NOTE

- **The paper feed stopper release mechanism is mounted only on tray 1, tray 2, and optional PC-115/215.**
- **To remove trays 3 and 4 of optional PC-110/210, remove the paper feed stopper (1 screw).**



[1]	Tray 1 stopper	[2]	Tray 1
[3]	Tray 2	[4]	Tray 2 stopper
[5]	Tray stopper release	-	-

(1) Releasing the paper tray stopper

- Press the stopper on its left side, the stopper lock will be released.

(2) Locking the paper tray stopper

- Press the stopper on its right side, the stopper lock will be locked.

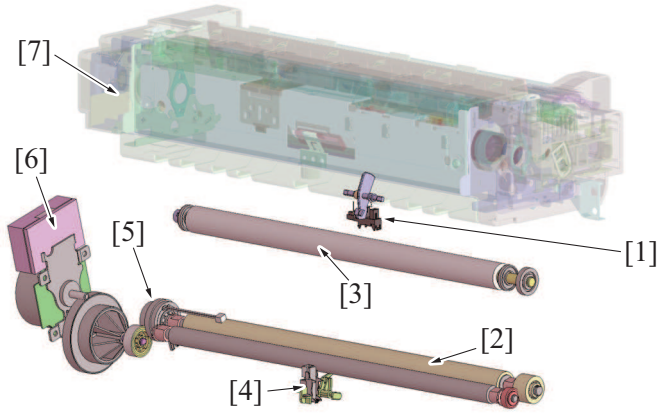
NOTE

- **A mechanism is provided to push and lock the stopper through closing the paper tray to its home position even if you forget to lock it. (Mechanism to prevent forgetting lock)**

12. REGISTRATION SECTION

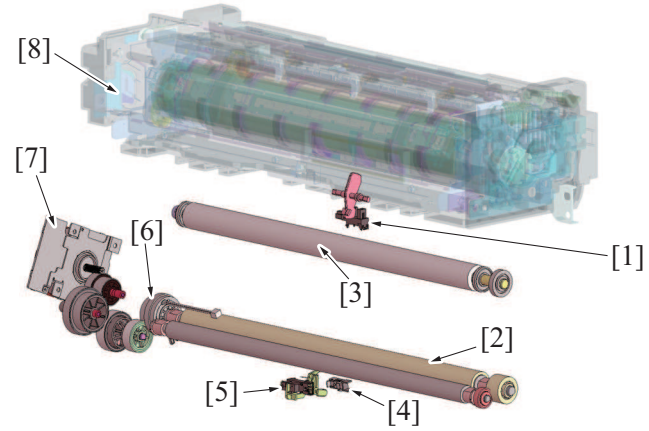
12.1 Configuration

12.1.1 Configuration (bizhub C368/C308/C258)



[1]	Fusing loop sensor (PS2)	[2]	Registration roller
[3]	2nd transfer roller	[4]	Registration sensor1 (PS1)
[5]	Registration clutch (CL4)	[6]	Transport motor (M1)
[7]	Fusing unit	-	-

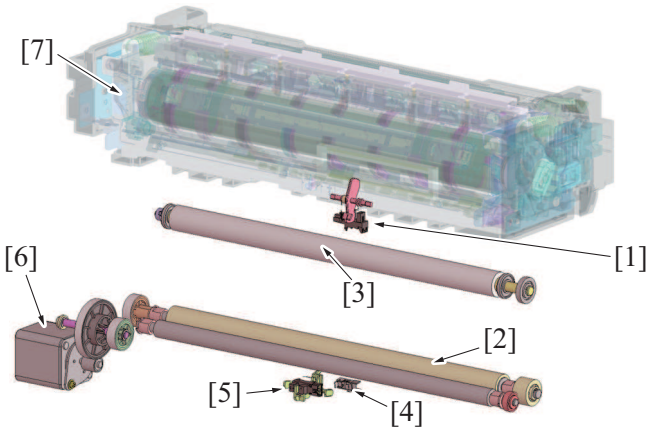
12.1.2 Configuration (bizhub C558/C458)



[1]	Fusing loop sensor (PS2)	[2]	Registration roller
[3]	2nd transfer roller	[4]	Registration sensor2 (PS72) *
[5]	Registration sensor1 (PS1)	[6]	Registration clutch (CL4)
[7]	Transport motor (M1)	[8]	Fusing unit

- *: Only bizhub C558 is equipped with the registration sensor 2.

12.1.3 Configuration (bizhub C658)



[1]	Fusing loop sensor (PS2)	[2]	Registration roller
[3]	2nd transfer roller	[4]	Registration sensor2 (PS72)
[5]	Registration sensor1 (PS1)	[6]	Registration motor (M24)
[7]	Fusing unit	-	-

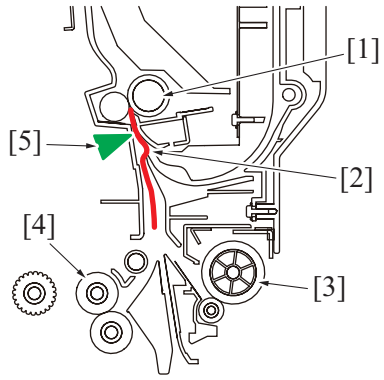
12.2 Operation

12.2.1 Registration control

- The transport motor and registration clutch controls rotation of the registration roller. Note that control in bizhub C658 models is provided by the registration motor.
- The paper will create a loop between the tray 1 paper feed roller (or tray 2 vertical transport roller or bypass paper feed roller) and the registration roller when the paper is being conveyed in order to correct the skew.
- Registration roller is controlled in order to synchronize the timing the unit starts writing the image and conveying paper.
- The amount of the loop of the paper can be adjusted in the [Service Mode] -> [Machine] -> [Printer Reg. Loop Adj.]. Changing the adjustment value will change the amount of loop in the paper.

(1) Operation

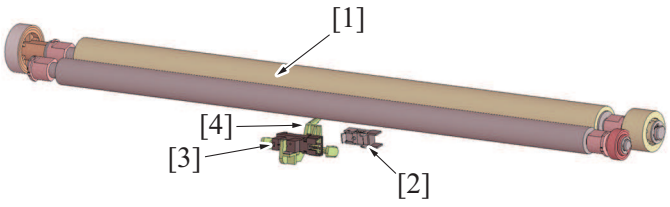
1. The paper is transported while the registration roller is stationary.
2. The registration sensor1 detects the leading edge of the paper, which is interpreted to mean that the paper has reached the registration roller.
3. A paper loop is formed thus skew in the paper is corrected.
4. The registration roller rotates to transport the paper.



[1]	Registration roller	[2]	Loop formation
[3]	Manual bypass tray feed roller	[4]	Tray 1 feed roller
[5]	Registration sensor1 (PS1)	-	-

(2) Paper trailing edge detection (bizhub C658/C558)

- The registration sensor2 is provided to detect paper trailing edges.
- The registration sensor2 is a reflective optical sensor which detects paper using reflected light.
- The registration sensor1 (photosensor and actuator) is used to detect paper leading/trailing edges. However, paper detection accuracy decreases when the speed of paper transport is increased. The registration sensor2 has been provided to resolve this issue.
- The registration sensor1 and registration sensor2 can be used in combination to increase the paper transport detection accuracy and reduce the paper transport variability.



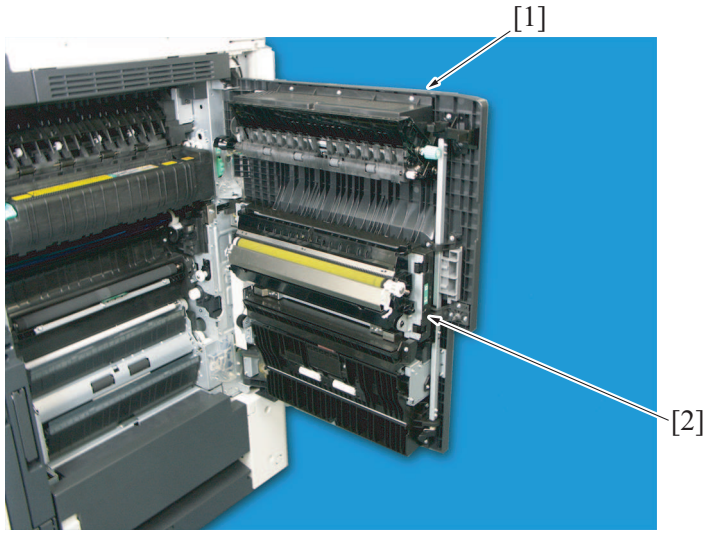
[1]	Registration roller	[2]	Registration sensor2
[3]	Registration sensor1	[4]	Registration sensor1 actuator

12.2.2 Right door mechanism

- The machine has the right door to enable easy access into the inside of the machine for clearing a paper misfeed or performing other service jobs.
- The right door is mounted with the mechanisms of the vertical transport section, paper feed section (manual bypass tray), and the duplex section. For detailed functions of the paper feed section (manual bypass tray) and the duplex section, see the corresponding chapters.
- The regist unit (2nd transfer section, registration section, and duplex section) is found inside the right door when opened.

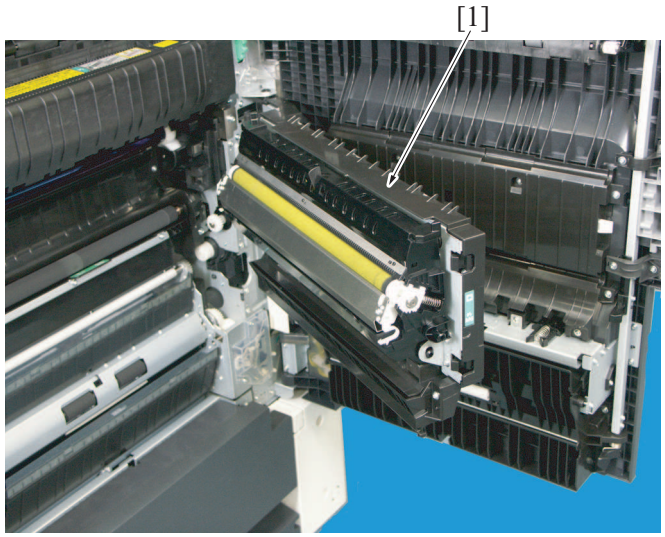
- The regist unit is not provided with a locking mechanism or open/close detection mechanism. The locking mechanism and open/close detection mechanism provided for the right door are used also for the regist unit. For details of the regist unit, see O.12.1.1 Configuration (bizhub C368/C308/C258), O.12.1.2 Configuration (bizhub C558/C458), and O.12.1.3 Configuration (bizhub C658).

The following illustration is for bizhub C368/C308/C258.



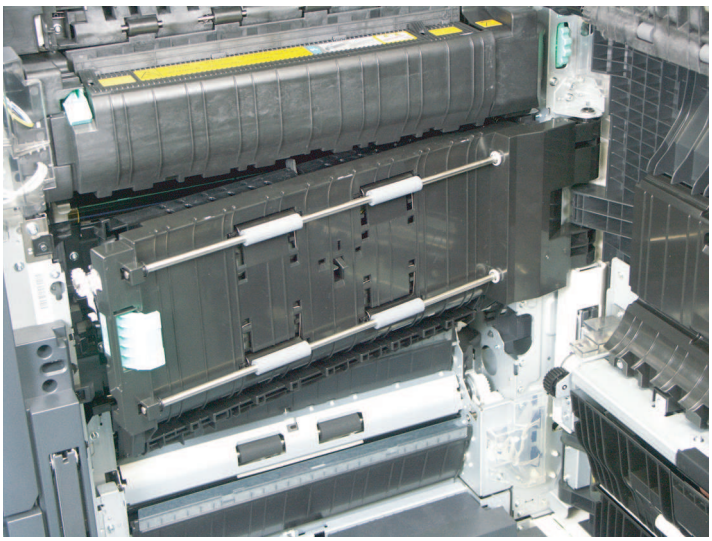
[1]	Right door section	[2]	Regist unit

Regist unit (registration section/ 2nd transfer section)



[1]	Regist unit	-	-

Regist unit (duplex section)



(1) Right door locking mechanism

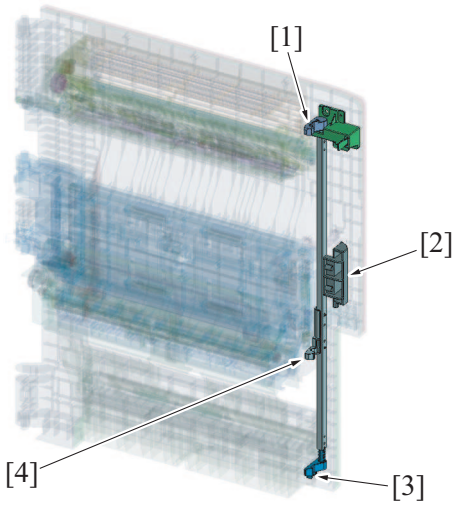
- The right door is provided with a locking mechanism.

(a) Unlocking the right door

- With drawing the lever of the right door to the front will disengage the door lock pawls (three) equipped at the front side of the right door.

(b) Locking the right door

- Close the regist unit and then close the right door. When the right door is closed in its correct position, the door lock pawls (three) equipped at the front side of the right door lock the right door in place.

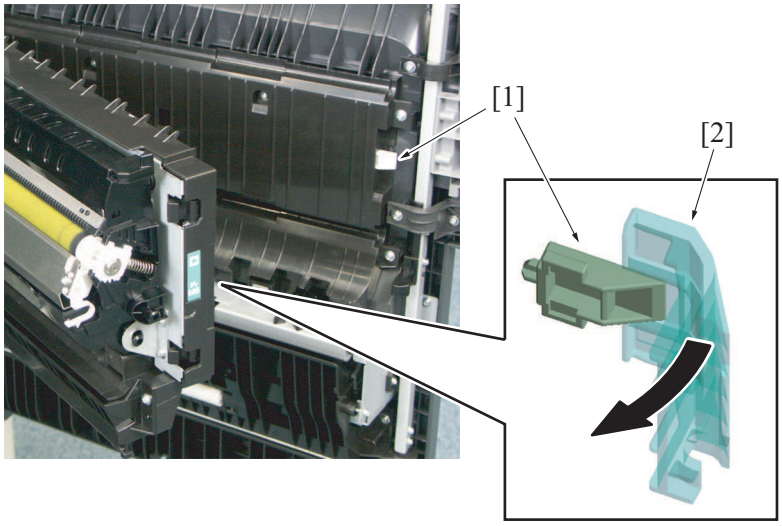


[1]	Door lock pawl (upper)	[2]	Right door lever
[3]	Door lock pawl (lower)	[4]	Door lock pawl (center)

(2) Regist unit lock mechanism

1. When the right door is opened, the regist unit that is left locked to the right door is also opened.

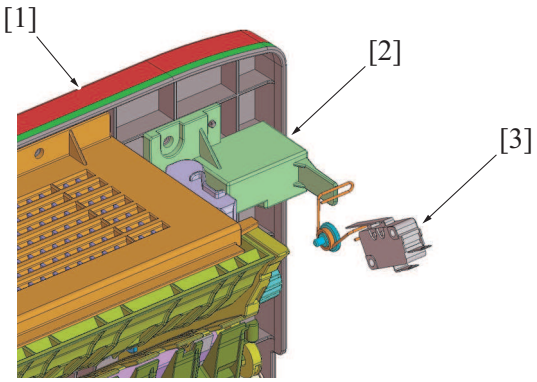
- The regist unit can be separated from the right door when the regist unit lever is disengaged from the door lock pawl equipped on the right door side.



[1]	Door lock pawl	[2]	Lever

(3) Right door open/close detection mechanism

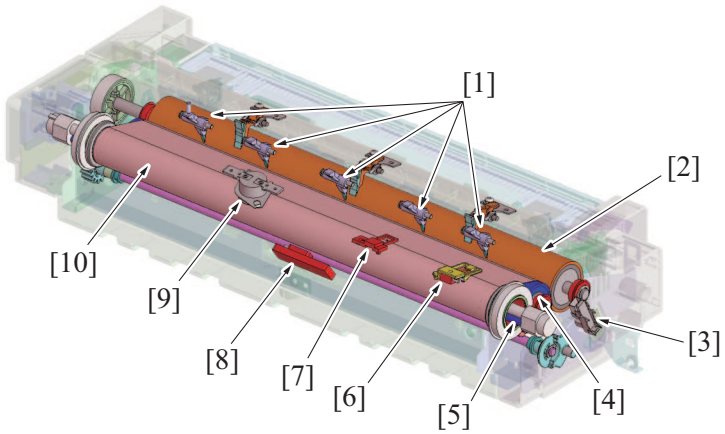
- The right door switch detects that the right door is opened or closed.
- When the right door is closed, the open/close detection plate equipped at an upper portion at the front of the right door presses the actuator of the right door switch. This turns ON the right door switch and the machine determines that the right door is closed.
- When the right door is opened, the actuator of the right door switch is released. This turns OFF the right door switch and the machine determines that the right door is opened, giving a message that prompts the operator to close the right door.
- On determining that the right door is open, the machine prohibits the use of all jobs but the fax reception job. A paper misfeed results if the right door is opened during a print cycle.



[1]	Right door	[2]	Open/Close detection plate
[3]	Right door switch (SW3)	-	-

13. FUSING SECTION (bizhub C458/C368/C308/C258)

13.1 Configuration

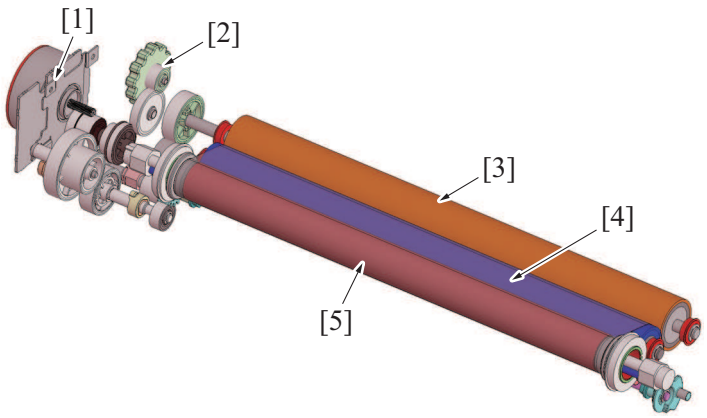


[1]	Paper separator claws (noncontact type)	[2]	Pressure roller
[3]	Fusing pressure home sensor (PS38)	[4]	Fusing roller
[5]	Fusing heater lamp assy	[6]	Heating roller thermistor1 (TH1)
[7]	Heating roller thermistor2 (TH2)	[8]	Heating roller temperature sensor (TEMS) *
[9]	Heating roller thermostat (TS1)	[10]	Fusing belt

- *: Equipped to bizhub C368/C308/C258 only

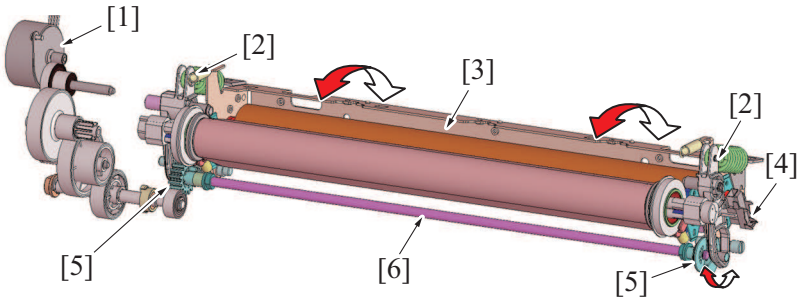
13.2 Drive

13.2.1 Fusing section roller drive



[1]	Fusing motor (M3)	[2]	Fusing drive release gear
[3]	Pressure roller	[4]	Fusing roller
[5]	Heating roller	-	-

13.2.2 Pressure roller pressure drive

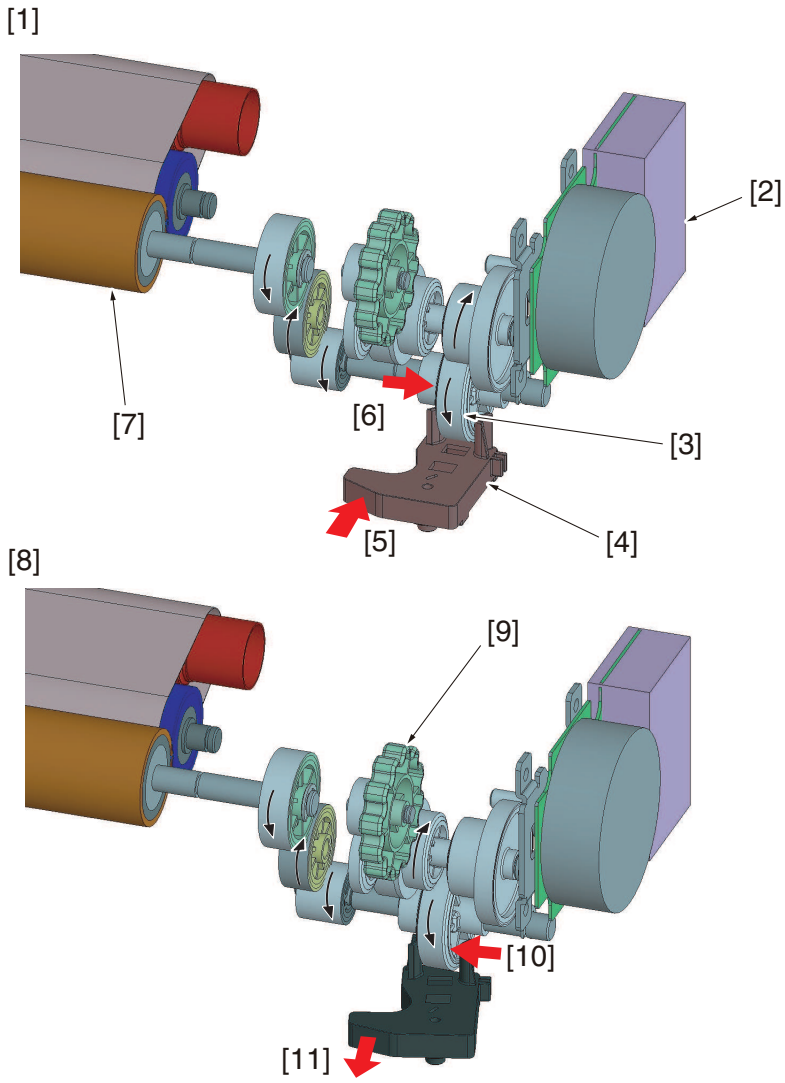


[1]	Fusing motor (M3)	[2]	Fusing lever
[3]	Fusing belt	[4]	Fusing pressure home sensor (PS38)
[5]	Pressure cam	[6]	Cam shaft

13.3 Operation

13.3.1 Fusing drive release mechanism

- At the fusing drive position, transmit the driving force of the fusing motor to the pressure roller by a fusing drive release gear.
- Opening the right door places the fusing drive release lever in the fusing drive release position.
- With the fusing drive release lever in the fusing drive release position, the fusing drive release gear is disconnected from the fusing motor and, instead, connected to the jam removal dial.
- If a paper misfeed occurs in the fusing section, opening the right door allows the jam removal dial to be used for removing the misfed paper.



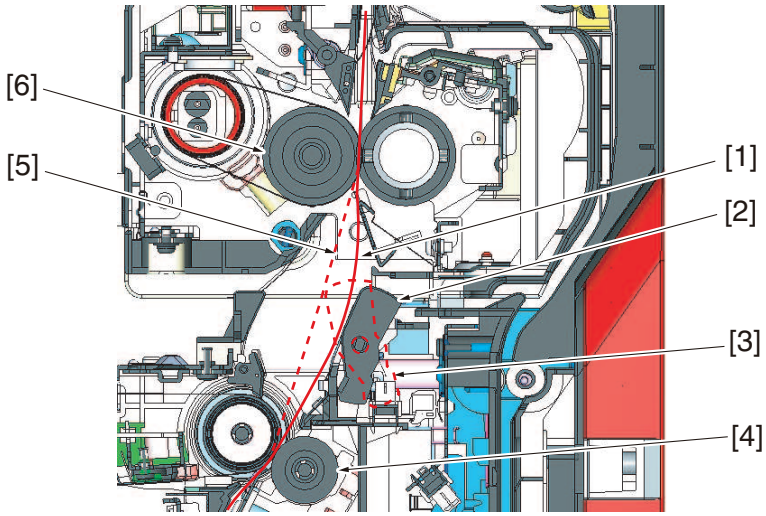
[1]	Fusing drive position	[2]	Fusing motor (M3)
[3]	Fusing drive release gear	[4]	Fusing drive release lever
[5]	Right door close position	[6]	Connected to fusing motor
[7]	Pressure roller	[8]	Fusing drive release position
[9]	Jam removal dial	[10]	Connected to jam removal dial
[11]	Right door open position	-	-

13.3.2 Fusing speed correction

(1) Fusing loop control

- To prevent double transferred images and brush effects that occur due to a difference in speed between paper transport during image transfer and fusing, a loop is formed in the paper between the 2nd transfer and fusing sections.
- The fusing loop sensor detects the length of the loop formed in the paper between the 2nd transfer section and the fusing roller.
- The fusing motor increases or decreases the fusing speed according to the length of loop in the paper, thereby ensuring that the length of loop falls within a predetermined range.

Fusing loop sensor	Loop amount	Fussing speed
Unblocking	Large	Speed-up
Blocking	Small	Slowdown



[1]	Loop length: large	[2]	Actuator
[3]	Fusing loop sensor (PS2)	[4]	2nd transfer roller
[5]	Loop length: small	[6]	Fusing roller

Operation timing

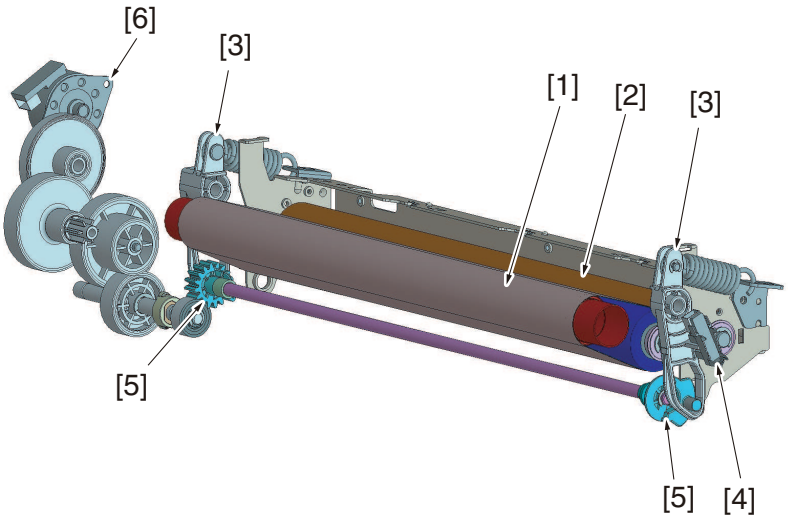
- It starts controlling when the front-edge of the paper reaches to the predetermined position before the fusing roller.
- The fusing speed is decelerated so that a loop is formed in the paper between the 2nd transfer roller and the fusing roller.
- When the paper loop amount is large, the fusing loop sensor is unblocked, and the fusing speed is increased.
- When the paper loop amount is small, the fusing loop sensor is blocked, and the fusing speed is decreased.
- The fusing speed is increased or decreased as necessary to make sure that the paper loop amount falls within a predetermined range, thereby absorbing a difference between the fusing speed and image transfer speed.
- The fusing loop control will finish after the trailing of the paper passes the 2nd transfer roller.

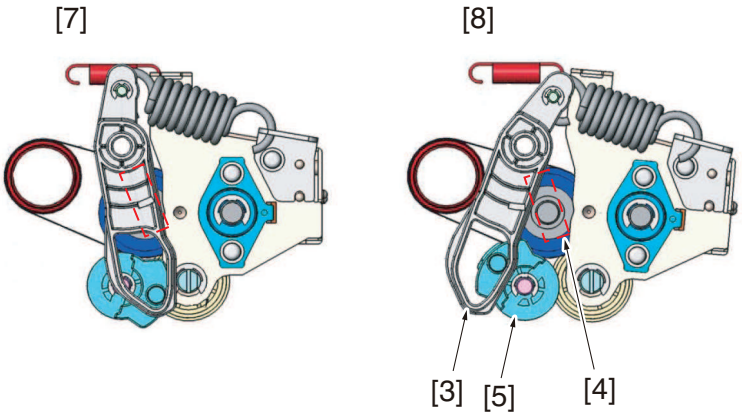
Fusing speed adjustment

- If double transferred images or brush effects occur due to inadequate paper loop before fusing, adjust the fusing speed using [Service Mode] -> [Machine] -> [Fusing transport speed].
- For detailed adjustment method, see “ I.5.4.3 Fusing Transport Speed”.

13.3.3 Fusing pressure/retraction control

- To maintain durability of the fusing belt, the fusing pressure roller is retracted *1 from the fusing belt during any time other than a print cycle. (The roller is, however, retracted during a print cycle using envelopes.)
  *1: The pressure roller does not completely retract from the fusing belt but is slightly pressed to the fusing belt.
- The fusing pressure roller is pressed against, and retracted from, the fusing belt by rotating the pressure cam through forward or backward rotation of the fusing pressure motor.
- The fusing pressure home sensor detects the pressure roller at its pressure position.
- The position at which the fusing pressure roller is retracted is controlled by the period of time (number of pulses) through which the fusing pressure motor is rotated.
- When there is no change in the output of the fusing pressure home sensor even after the lapse of a predetermined period of time after the fusing pressure motor has started rotating, the machine determines that there is a pressure/retraction fault and displays the “Trouble code C3101: Pressure roller separation failure” message or “Trouble code C3103: Pressure roller release failure” message.





[1]	Fusing belt	[2]	Pressure roller
[3]	Pressure lever	[4]	Fusing pressure home sensor (PS38)
[5]	Pressure cam	[6]	Fusing pressure motor (M11)
[7]	Pressure position	[8]	Release position

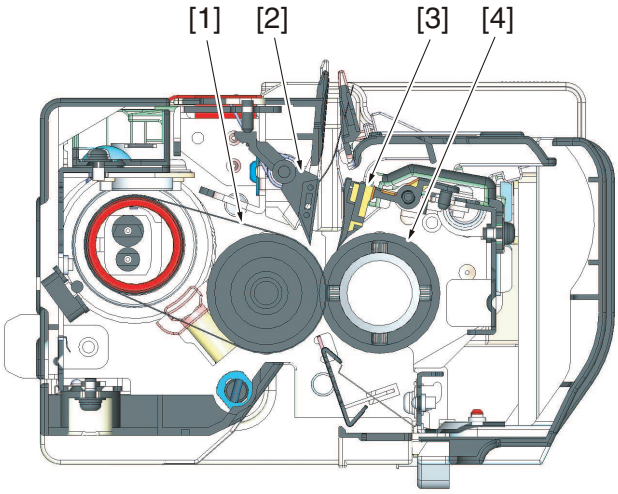
(1) Operation timing

Condition		Pressure roller position
Warm-up	At the start of a warm-up cycle	Pressure
Pre-standby	At the start of the pre-standby	Pressure
Standby	At the start of the standby	Retraction
Printing	For envelopes	Retraction
	For paper types other than envelopes	Pressure
When printing the multi jobs	When current printing is for other than envelopes and the next job is for the envelopes.	Pressure -> Retraction *1
	When current printing is for the envelopes and the next job is for other than envelopes.	Retraction -> Pressure *1
Energy save mode (lower power mode, sleep mode)		Retraction
When a malfunction or misfeed occurs		Retraction
When the fusing heater lamp is turned OFF (a door opened, a malfunction occurs, or other factors.)		Stop

- *1: Pressure/retraction will be conducted after the currently printed paper passes between the fusing belt and the pressure roller. The timing for the next paper to be fed will be delayed during the pressure/retraction and keep the certain period of time between feeding the papers.

13.3.4 Paper separation mechanism

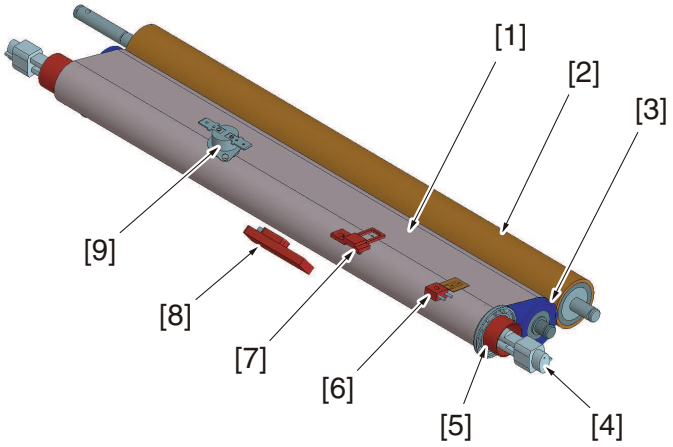
- Paper separator claws are provided on the fusing pressure roller side and the fusing belt side in order to separate the sheet of paper reliably after the fusing process.
- Three contact type paper separator claws are installed on the fusing pressure roller side.
- Five noncontact type paper separator claws are installed on the fusing belt side.



[1]	Fusing belt	[2]	Paper separator claws (noncontact type)
[3]	Paper separator claws (contact type)	[4]	Pressure roller

13.3.5 Fusing temperature control

- Fusing temperature control uses the heating roller temperature sensor and the heating roller thermistor that detect the surface temperature of the fusing belt to turn ON or OFF the fusing heater lamp as necessary.
  The fusing heater lamp when turned ON heats the fusing belt to a set temperature.

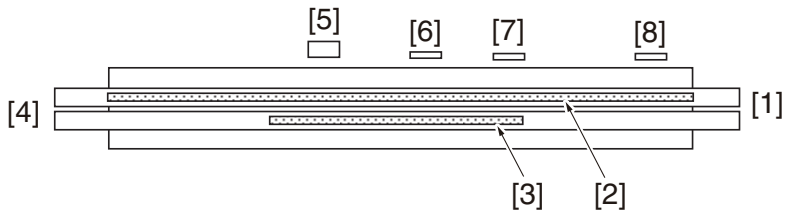


[1]	Fusing belt	[2]	Pressure roller
[3]	Fusing roller	[4]	Fusing heater lamp assy
[5]	Heating roller	[6]	Heating roller thermistor1 (TH1)
[7]	Heating roller thermistor2 (TH2)	[8]	Heating roller temperature sensor (TEMS) *
[9]	Heating roller thermostat (TS1)	-	-

- *: Equipped to bizhub C368/C308/C258 only

(1) Fusing heater lamp

- The heating roller contains a fusing heater lamp assy in it. The fusing heater lamp turns ON to generate heat, which heats the heating roller and fusing belt.
- The fusing heater lamp assy consists of two heaters, each having a unique heating range different from each other.
  - The fusing heater lamp1 (long) * uniformly heats the entire area of the heating roller.
    NOTE
    ▪ *: Only bizhub C458 dedicated for Japan contains both the fusing heater lamp1 (long) (FH1) and the fusing heater lamp3 (long) (FH3).
  - The fusing heater lamp2 (short) heats only the central portion of the heating roller.
- The fusing heater lamp is turned ON or OFF according to the width of the paper and the surface temperature of the fusing belt.
  - For a paper width of 209 mm or less, the fusing heater lamp2 is used to heat the central portion.
  - For a paper width exceeding 209 mm, the surface temperature of the fusing belt is measured and the fusing heater lamp1 and the fusing heater lamp2 are alternately turned ON.

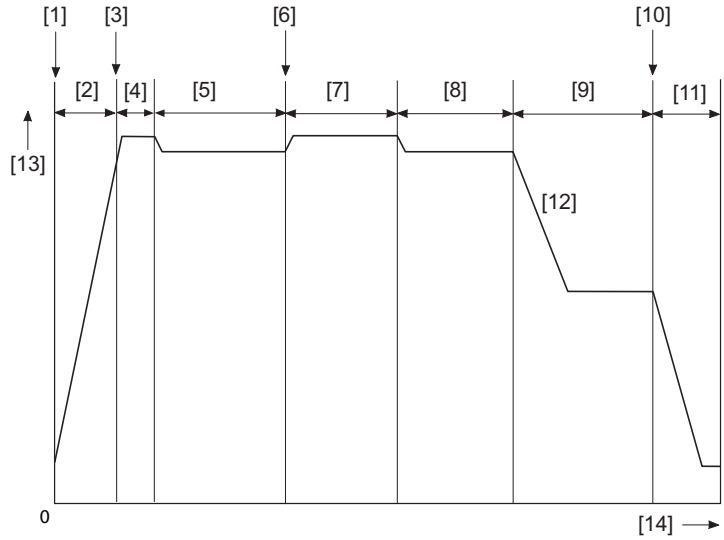


[1]	Front of machine	[2]	Fusing heater lamp1 (FH1)
[3]	Fusing heater lamp2 (FH2)	[4]	Rear of machine
[5]	Heating roller thermostat (TS1)	[6]	Heating roller temperature sensor (TEMS) *
[7]	Heating roller thermistor2 (TH2)	[8]	Heating roller thermistor1 (TH1)

- *: Equipped to bizhub C368/C308/C258 only

(2) Temperature control chart

* An example when a machine is warmed up under a normal ambient condition



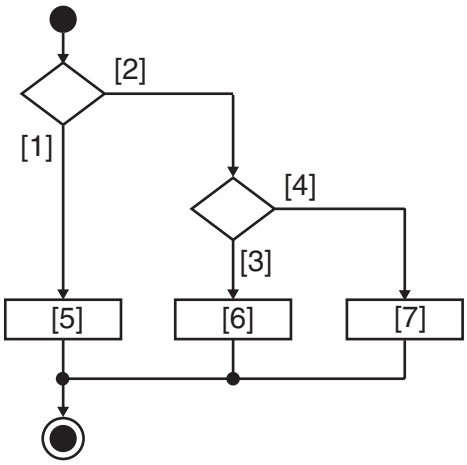
[1]	Main power switch ON	[2]	Warm-up control
[3]	Warm-up completed	[4]	Pre-standby control
[5]	Standby control (including a countermeasure against overshoot)	[6]	Print request
[7]	Print control	[8]	Standby
[9]	Low power mode	[10]	Entry in sleep mode
[11]	Sleep mode	[12]	Fusing belt temperature
[13]	Temperature	[14]	Time

(3) Fusing temperature control during warm-up

- To prevent image fixability from being degraded due to environmental changes when the main power switch is turned ON, three different warm-up modes are incorporated for fusing temperature control.
- The warm-up mode is performed “at low temperatures”, “at ordinary temperatures”, or “under high humidity condition”.
- In the warm-up mode under high humidity condition, the warm-up time is extended to prevent paper from curling and the difference in temperature between the fusing belt and fusing pressure roller is minimized.
- When the temperature of the fusing belt reaches the warm-up completion temperature, control is passed onto the pre-standby process.

Warm up mode	Environment	
	Machine interior temperature	Machine interior humidity (absolute humidity *1)
Warm-up at low temperatures	18 °C or less	Not judged by absolute humidity
Warm-up at ordinary temperatures	More than 18 °C to 32 °C or less	Less than a predetermined value
Warm-up under high humidity condition	More than 32 °C	Predetermined value or more

- *1: Absolute humidity: water content contained in the air (1 m3) as steam regardless of the temperature



[1]	Machine interior temperature 18 °C or less	[2]	Machine interior temperature exceeding 18 °C
[3]	Absolute humidity, specified value or more	[4]	Absolute humidity, less than the specified value
[5]	Warm-up at low temperatures	[6]	Warm-up under high humidity condition
[7]	Warm-up at ordinary temperatures	-	-

(4) Temperature control during pre-standby
- After the warm-up completion temperature is reached, control is then passed onto the pre-standby process.
- The temperature control in the pre-standby state turns ON or OFF the fusing heater lamp as necessary in order to maintain the fusing belt temperature at a level that enables printing.
- A print job, when received during the pre-standby state, can be started without waiting.

(5) Temperature control during stand-by
- If no print request is received after the temperature control in the pre-standby state is started, control is passed onto the standby process.
- The temperature control in the standby state maintains the fusing belt temperature at a level lower than the temperature that enables printing.
- The control is intended to shorten time it takes the temperature to reach the printable level when a print request is received.
- An overshoot preventive process may be performed before control is passed onto the temperature control in the standby state.
- The fusing motor repeats rotating (at low speed) and stopping for 30 minutes after the standby starts.
  After the 30-min. period, the fusing motor is deenergized.

(6) Temperature control during the print cycle
(a) Temperature control
- The machine enters a print state as it receives a print control and carries out a print cycle at a set temperature corresponding to the type of paper selected for the job.
- The fusing temperature is measured during the print cycle and temperature control suitable for the print condition is performed accordingly.

(7) Energy save mode
- The machine enters the energy save mode from any standby state to thereby reduce power consumption (TEC value).
- The energy save mode may be either the low power mode or sleep mode, whichever is enabled depending on the set conditions.

NOTE
TEC value (Typical Electricity Consumption):
- **Energy saving criteria for copiers and printers to comply with the Energy Start program.**
- **Power consumption (kWh) at the office assuming operation of a product for one week (5 working days + 2 holidays) is calculated from the print speed and power consumption of the product.**

(a) Temperature control during low power mode
- To reduce power consumption in the low power mode, the surface temperature of the fusing belt is made lower than the controlled temperature under “temperature control during the standby state”.
- In the low power mode, the printable temperature can be recovered within a period of time shorter than warm-up.

(b) Temperature control during sleep mode
- To reduce power consumption during the sleep mode, power to the fusing heater lamp is shut down to stop heating the fusing belt.
- If the fusing belt temperature is decreased to room temperature, the printable temperature can be recovered within the same period of time as that of warm-up.

(8) Fusing-related control
- The following types of control are available as they relate to fusing temperature:
- For detailed setting method, see each item.

(a) Service Mode

- [Machine/Fusing Temperature]
- [Machine/Heater Control Level].
- [System 1/Warmup]
- [System 2/Smart Fusing Control]

(b) Enhanced Security

- [Engine FW DipSW / No.5 Choice of high humidity circumstance]
- [Engine FW DipSW / No.13 Choice of securing fusibility]

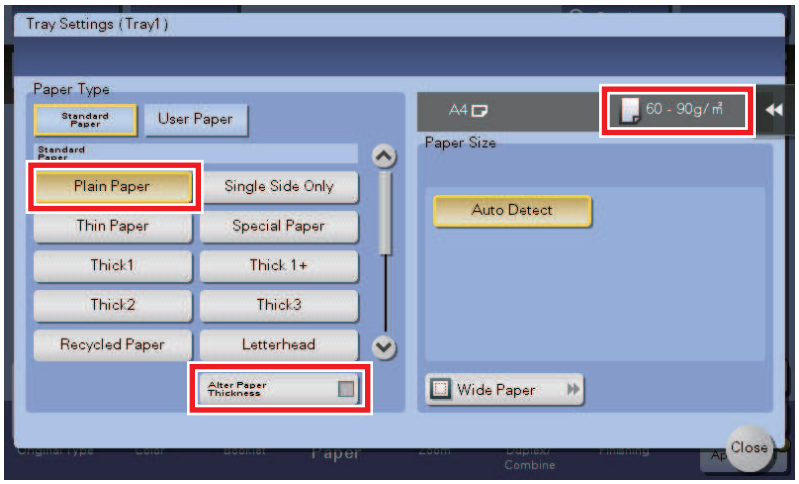
13.3.6 Plain paper fusing temperature control

- Two different target temperatures control the printing on plain paper.

Basis weight	Specific controls
Plain paper (60g/m^2 - 70g/m^2)	The base weight is limited to 60g/m^2 - 70g/m^2. Power consumption (TEC value) is controlled through lowering the target temperature to lower than the normal fusing temperature.
Plain paper (60g/m^2 - 90g/m^2)	The normal target temperature controls the fusing temperature control of plain paper.

(1) Setting procedure

Example of display



1. Select [Paper] on the basic screen.
2. Select your desired paper feed port and tap [Change Tray Setting].
3. Select [Plain Paper] and tap [Alter Paper Thickness] to select "Plain Paper (60g/m2 - 70g/m2)".
   A "check mark" will be displayed in the check box of the [Alter Paper Thickness] key.
4. Tap the [Alter Paper Thickness] key again to select "Plain Paper (60g/m2 - 90g/m2)".
   The "check mark" in the check box of the [Alter Paper Thickness] key will disappear.

NOTE

- **"Plain Paper (60g/m2 to 70g/m2)" is specified by default only for Japan.**
- **You can only use the [Alter Paper Thickness] key for plain paper.**

13.3.7 Smart fusing control

- Lower the target temperature as much as possible according to the information of each sheet of paper to control the fusing temperature adjustment. In this way, the power consumption (TEC value) is controlled.
- Smart fusing control is only performed when the execution conditions below are met.
- If these execution conditions are not met, the normal fusing temperature control is performed.
- Smart fusing control can also prohibit control execution from [Service Mode] -> [System 2] -> [Smart Fusing Control].
  For details on how to configure the settings, see " I.5.16.35 Smart Fusing Control".

(1) Smart fusing control execution conditions

Function		Execution conditions
Temp-Inside		10 °C and above
Print mode		Only for PC printing, BOX printing, and direct printing (USB)*1
Basic Settings	Print zoom	Only 100%
	Paper type	Plain paper only
Layout	Combination	1 in 1 only
	Image shift	No
Cover sheet insertion	Cover sheet	No
	Back cover	No
	Inter sheet	No
	OHP interleave	No

Function		Execution conditions
	Booklet	No
Image quality	Select color	Black mode only
	Gloss mode	No
	Toner save (density 50%)	No
	Edge enhancement	No
	Negative-positive reversal	No
	Maximum black density	80% or more to 90% or less
	Line width	1.5pt or less
	Character decoration	Normal characters only*2
	Character size	16pt or less
	Image object	No
Stamp/page printing	No watermarks	No
	No overlay	No
	No copy security	No
	No header/footer	No
	No management number	No

- *1: Copies are not included in the control
- *2: Bold characters are not included in the control

13.3.8 Protection from abnormal temperatures

(1) First approach: software protection

- If the heating roller temperature sensor detects a predetermined temperature or more continuously, the temperature is determined to be abnormally high and a “trouble code C3725: Fusing abnormally high temperature detection (Main of the heating side)” will be displayed.
- If the heating roller thermistor1 detects a predetermined temperature or more continuously, the temperature is determined to be abnormally high and a “trouble code C3722: Fusing abnormally high temperature detection (Edge of the heating side)” will be displayed.
- If the heating roller thermistor2 detects a predetermined temperature or more continuously, the temperature is determined to be abnormally high and a “trouble code C3726: Fusing abnormally high temperature detection (Center of the heating side)” will be displayed.
- When the trouble code is displayed, printing will be prohibited.

(2) Second approach: hardware protection

- A different protection is provided when the CPU overruns, becoming unable to detect the malfunction of an abnormally high temperature. If the heating roller temperature sensor detects an abnormal temperature, the heater relay of the DC power supply is turned OFF through the MFP board. Power supply to the fusing heater lamp is then shut down.
- When the hardware circuit in the MFP board detects the heater relay being OFF, the temperature is judged to be abnormally high. Trouble code C3731: Fusing abnormally high temperature detection (Hard protector) will be displayed.
- Through these control procedures, the power supply to the heater lamps can be shut down before the thermostat is activated. It thereby suppresses damage to the fusing unit itself.

(3) Third approach: thermostat protection

- If detection of the abnormally high temperature through approaches 1 and 2 above is not possible due to a defective the heating roller temperature sensor, heating roller thermistor or other reason, the thermostat comes into play to shut down the power supply to the heater lamp.

13.3.9 Fusing PPM control

(1) PPM control

- To achieve the intended level of fixability of printed images, the PPM control reduces the number of printed pages per minute by widening the distance between sheets of paper.

PPM mode	Control execution conditions	Purpose	Specific controls	Print productivity *1
Low temperature environment mode	Room temperature at the start of the print cycle is 18°C or less	To achieve the intended level of fixability under low temperature environment	To prevent fixability from being degraded in a multi-print cycle, paper-to-paper distance is widened to thereby limit a decrease in the fusing temperature.	100%: default value 90% 80% 70% 60% 50%
High humidity environment mode *2	Environmental humidity at the start of the print cycle is a predetermined value or more	To suppress occurrence of paper curl under high humidity environment	Paper-to-paper distance is widened in a multi-print cycle run under high humidity environment so as to prevent paper from curling, thereby achieving a required fusing temperature.	100%: default value 70% 50%

PPM mode	Control execution conditions	Purpose	Specific controls	Print productivity *1
Paper curl suppression mode	“Mode 3” is selected for “Change Warm Up Time” of the service mode	To suppress occurrence of paper curl under conditions other than high humidity environment	Paper-to-paper distance is widened in a multi-print cycle run under any condition other than high humidity environment so as to prevent paper from curling, thereby achieving a required fusing temperature.	100%: default value 50%
Heating roller end temperature rise suppression mode	• Print request is received for paper with a paper width of 209 mm or less • Temperature of the heating roller ends becomes a predetermined value or more	To suppress inordinate rise in temperature on heating roller ends in a print cycle using paper of a small size	Paper-to-paper distance is widened in a multi-print cycle so as to prevent the temperature on ends of the heating roller from increasing, thereby promoting reduction in temperature.	100%: default value 90% 80% 70% 60% 50% 40% 30%
Reduced power supply mode	Only an insufficient power is supplied to the fusing heater lamp, resulting in a fusing temperature lower than a predetermined value	To achieve the intended level of fixability under low power supply condition	To prevent fixability from being degraded in a multi-print cycle, paper-to-paper distance is widened to thereby limit a decrease in the fusing temperature.	70%: default value 50%
Thin paper mode	“100%” is selected for “PPM Control Choice” of the service mode	To increase the print productivity of thin paper and recycled paper. To increase productivity during printing using thin paper. * The choice of 100% may result in paper curling.	Paper-to-paper distance is narrowed to thereby increase productivity.	100% 70%: default value *3

- *1: Exemplary calculation of print speed: If 36 ppm can be achieved at a print productivity of 100% on A4 plain paper, a change in print productivity to 90% results in 32.4 ppm.
- *2: Execution of the control for the high humidity environment mode can be prohibited when "No. 5 PPM control (high humidity environment mode) prohibited" is turned ON in [Service Mode] -> [Enhanced Security] -> [Engine FW DIP SW].
- *3: For recycled paper, the print productivity will be set to 70% when “Mode 3” is selected for warm-up choice. For thin paper, the print productivity will be set to 70% regardless of the mode setting for warm-up choice.

13.3.10 Fusing unit new article detection

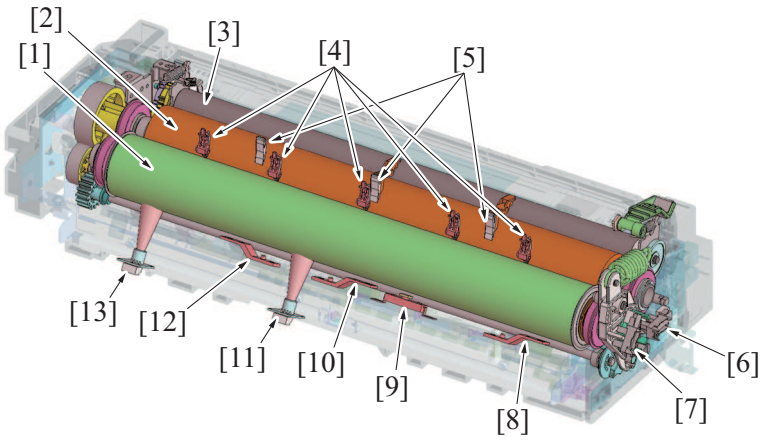
- The fusing unit is not provided with any new article detection mechanism. If the fusing unit is replaced with a new one, therefore, “New Release” of “Fusing Unit” must be performed in [Counter] -> [Life] of the Service Mode.

NOTE

- **For the life of the fusing unit, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

14. FUSING SECTION (bizhub C658/C558)

14.1 Configuration

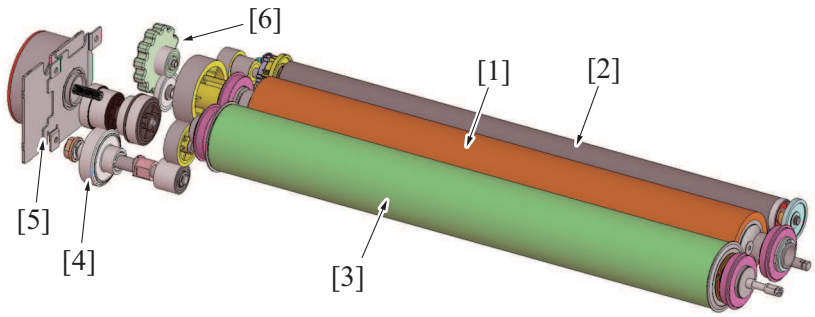


[1]	Heating roller assy	[2]	Fusing pressure roller
[3]	Soaking roller	[4]	Heating roller separation claw
[5]	Fusing pressure roller separation claw	[6]	Heating roller rotation sensor (PS37)
[7]	Fusing pressure home sensor (PS38)	[8]	Heating roller thermistor1 (TH1)
[9]	Heating roller thermostat (TS1)	[10]	Heating roller thermistor3 (TH3)
[11]	Heating roller temperature sensor1 (TEMS/1, Fixed at the main body)	[12]	Heating roller thermistor2 (TH2)
[13]	Heating roller temperature sensor2 (TEMS/2, Fixed at the main body)	-	-

- *: Equipped to bizhub C658 only

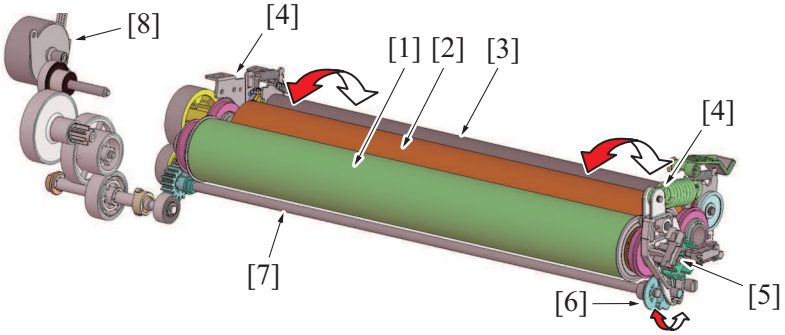
14.2 Drive

14.2.1 Fusing section roller drive



[1]	Fusing pressure roller	[2]	Soaking roller
[3]	Heating roller assy	[4]	Fusing drive release gear
[5]	Fusing motor (M3)	-	-

14.2.2 Fusing pressure roller pressure drive



[1]	Heating roller assy	[2]	Fusing pressure roller
[3]	Soaking roller	[4]	Pressure lever

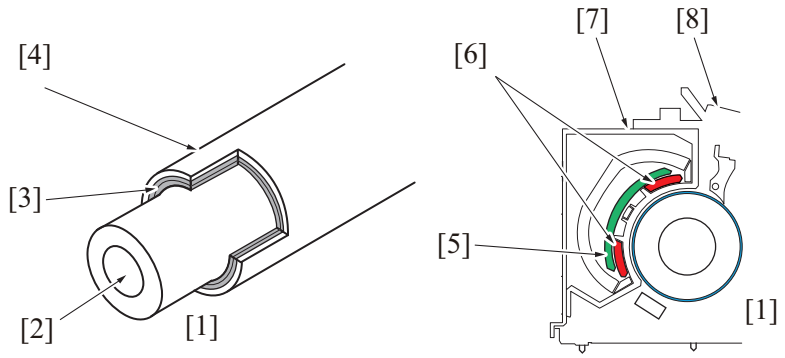
[5]	Fusing pressure home sensor (PS38)	[6]	Pressure cam
[7]	Cam shaft	[8]	Fusing pressure motor (M11)

14.3 Operation

14.3.1 Heating roller assy heating control

(1) Heating control

- The heating roller assy consists of the fusing belt (cylindrical shape) into which the fusing roller is inserted.
- The inside surface of the fusing belt is formed with Ni layer and Cu layer.
- The IH coil unit located beside the heating roller assy radiates magnetic flux to the fusing belt when energized.
- The IH coil unit consists of two different types of coil: main coil and demagnetization coil.
- The fusing belt is heated by the main coil. The demagnetization coil controls the heating zone.
- Ni layer and Cu layer of the fusing belt is the conducting layer in which eddy current is generated with magnetic flux. The eddy current generated in the conducting layer produces Joule heat to heat the heating roller.
- The main coil is provided only on one side of the heating roller assy, so that the heating roller generates heat from a local surface of the fusing belt close to the main coil. The heating roller assy is therefore rotated to ensure that the entire periphery of the roller is heated to an adequate temperature.
- The heating roller temperature sensor and heating roller thermistor1 to 3 measure the temperature of the fusing belt.



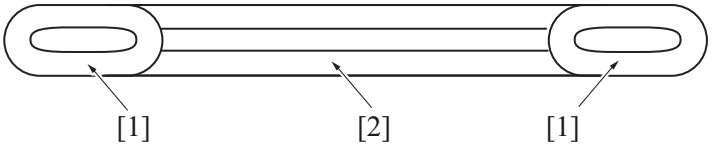
[1]	Heating roller assy	[2]	Fusing roller
[3]	Ni layer and Cu layer (coated back side)	[4]	Fusing belt
[5]	Demagnetization coil	[6]	Main coil
[7]	IH coil unit	[8]	Fusing unit

(2) Whole area heating control

- During printing, the whole area of the fusing belt is heated by the main coil.

(3) Center heating switch control

- The temperature on ends of the fusing belt is measured with the heating roller thermistor1.
- When the temperature of ends of the fusing belt exceeds a predetermined value during printing using paper of a small size or in the standby state, the demagnetization coil comes into play in inhibiting heating of roller ends and only the center portion of the roller is heated.
- When the demagnetization coil is energized, the magnetic flux from the main coil is cancelled by the repulsive magnetic flux induced from the demagnetization coil. When the magnetic flux at the ends of the roller is canceled, heating of the ends of the roller can be controlled.
- The IH coil unit is provided with one type of demagnetization coil.
- The ON/OFF control of the demagnetization coil is performed depending on the paper width (CD: main scanning length), the temperature on sides of the fusing belt, and the type of paper to be fed.

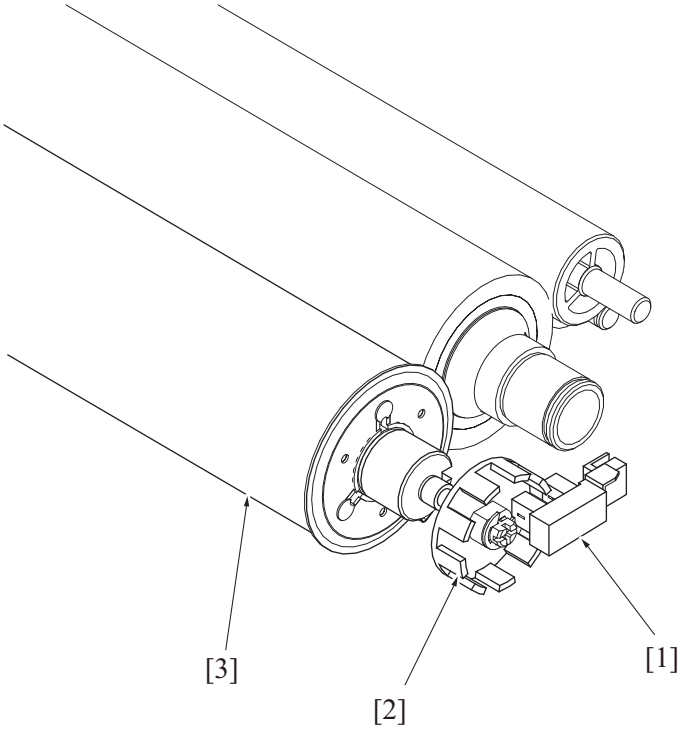


[1]	Demagnetization coil	[2]	Main coil

(4) Detection of rotation of the heating roller assy

- The heating roller assy is rotated while it is being heated to ensure that the entire periphery of the fusing belt reaches an adequate temperature.
- If the heating roller assy does not rotate while the IH coil unit (main coil) is energized, the temperature of the entire periphery of the fusing belt cannot be measured and thus proper temperature control cannot be provided. At this time, only the half surface of the fusing belt is heated. If the main coil is energized with the heating roller assy remaining stationary, the roller can be damaged.

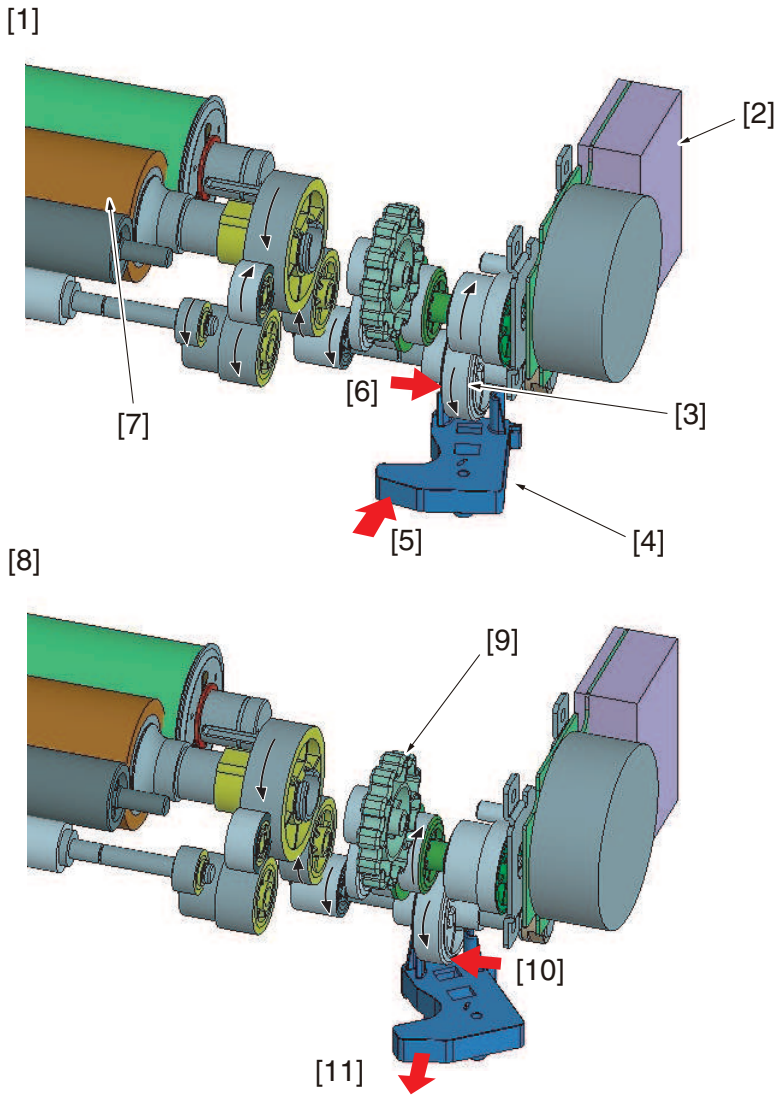
- Rotation of the heating roller results in the cylinder actuator being rotated.
- As the heating roller rotation sensor alternates between unblocked and blocked states at regular intervals, the machine determines that the heating roller assy is rotating.
- If the heating roller rotation sensor remains unblocked or blocked for a predetermined period of time during printing, the machine determines that a paper misfeed occurs at the exit, displaying a corresponding message on the control panel.
- If the heating roller rotation sensor remains unblocked or blocked for a predetermined period of time during a warm-up cycle, standby state, or any other timing than a print cycle, the machine displays the malfunction code “C3102: Heating roller failure to turn” on the control panel.



[1]	Heating roller rotation sensor (PS37)	[2]	Cylinder actuator
[3]	Heating roller assy	-	-

14.3.2 Fusing drive release mechanism

- At the fusing drive position, transmit the driving force of the fusing motor to the fusing pressure roller by a fusing drive release gear.
- Opening the right door places the fusing drive release lever in the fusing drive release position.
- With the fusing drive release lever in the fusing drive release position, the fusing drive release gear is disconnected from the fusing motor and, instead, connected to the jam removal dial.
- If a paper misfeed occurs in the fusing section, opening the right door allows the jam removal dial to be used for removing the misfed paper.



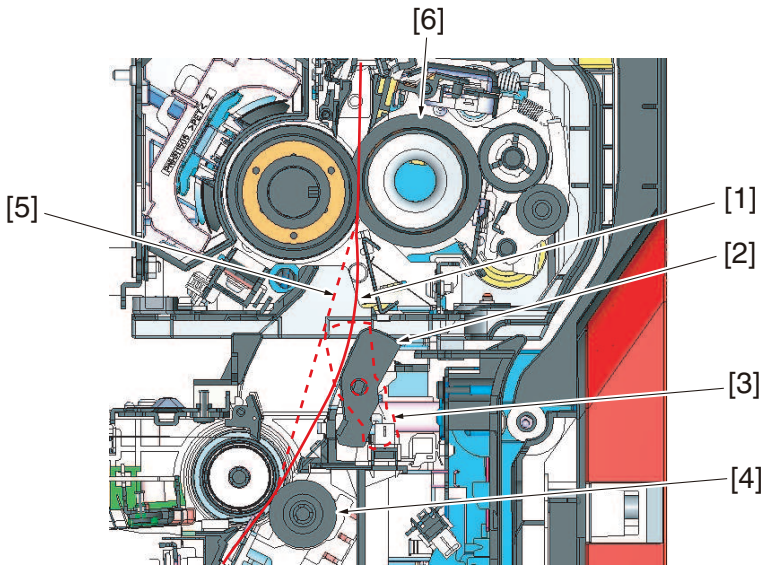
[1]	Fusing drive position	[2]	Fusing motor (M3)
[3]	Fusing drive release gear	[4]	Fusing drive release lever
[5]	Right door close position	[6]	Connected to fusing motor
[7]	Fusing pressure roller	[8]	Fusing drive release position
[9]	Jam removal dial	[10]	Connected to jam removal dial
[11]	Right door open position	-	-

14.3.3 Fusing speed correction

(1) Fusing loop control

- To prevent double transferred images and brush effects that occur due to a difference in speed between paper transport during image transfer and fusing, a loop is formed in the paper between the 2nd transfer and fusing sections.
- The fusing loop sensor detects the length of the loop formed in the paper between the 2nd transfer section and the fusing pressure roller.
- The fusing motor increases or decreases the fusing speed according to the length of loop in the paper, thereby ensuring that the length of loop falls within a predetermined range.

Fusing loop sensor	Loop amount	Fussing speed
Unblocking	Large	Speed-up
Blocking	Small	Slowdown



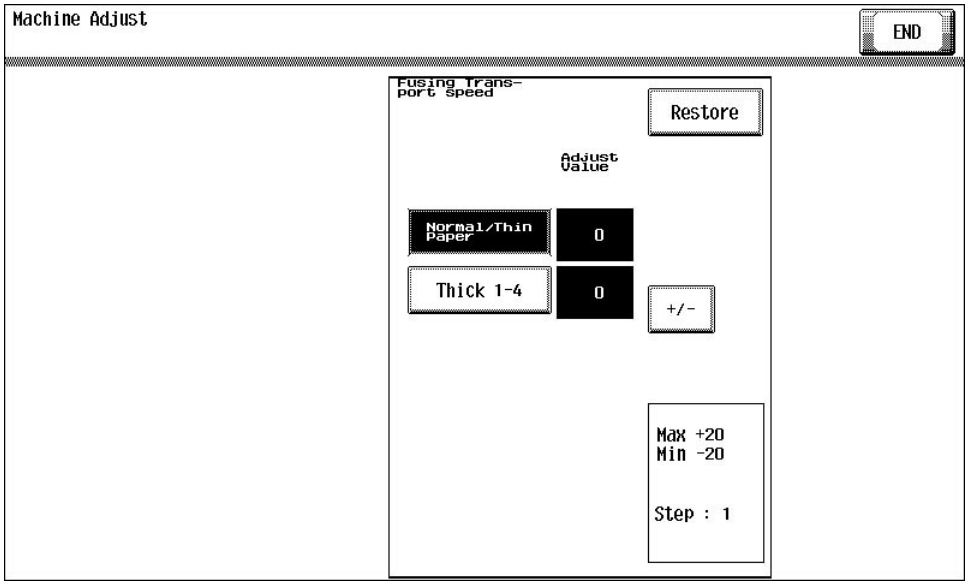
[1]	Loop amount: large	[2]	Actuator
[3]	Fusing loop sensor (PS2)	[4]	2nd transfer roller
[5]	Loop amount: small	[6]	Fusing pressure roller

(a) Operation timing

- It starts controlling when the front-edge of the paper reaches to the predetermined position before the fusing roller.
- The fusing speed is decelerated so that a loop is formed in the paper between the 2nd transfer roller and the fusing roller.
- When the paper loop amount is large, the fusing loop sensor is unblocked, and the fusing speed is increased.
- When the paper loop amount is small, the fusing loop sensor is blocked, and the fusing speed is decreased.
- The fusing speed is increased or decreased as necessary to make sure that the paper loop amount falls within a predetermined range, thereby absorbing a difference between the fusing speed and image transfer speed.
- The fusing loop control will finish after the trailing of the paper passes the 2nd transfer roller.

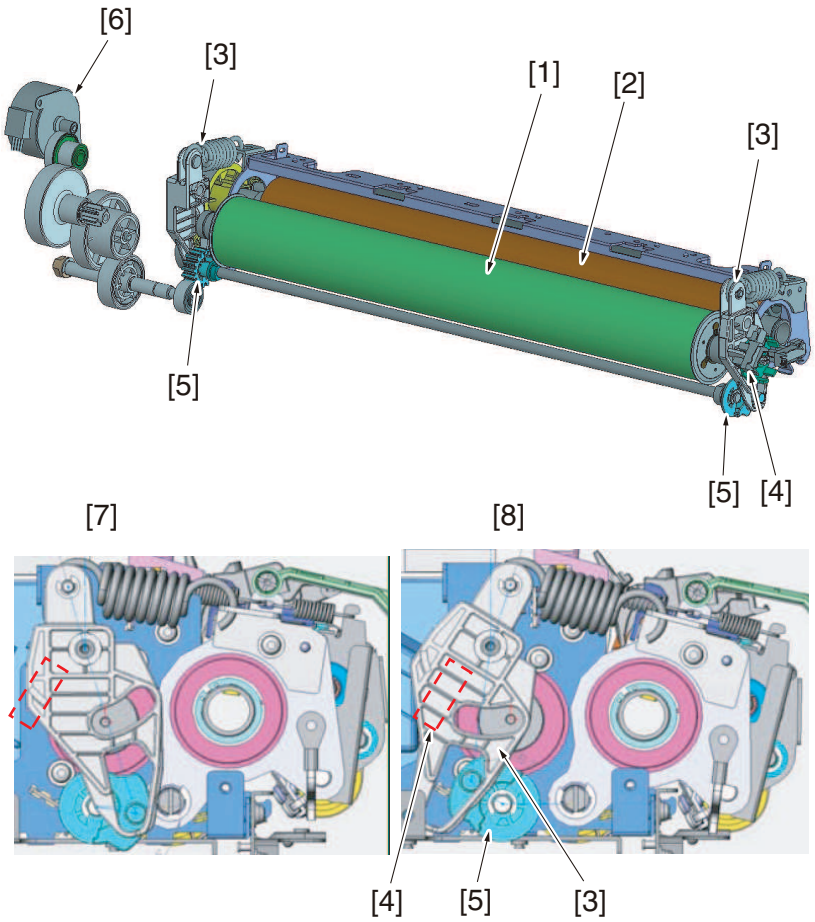
(b) Fusing speed adjustment

- If double transferred images or brush effects occur due to inadequate paper loop before fusing, adjust the fusing speed using [Service Mode] -> [Machine] -> [Fusing transport speed].



14.3.4 Fusing pressure/retraction control

- To maintain durability of the fusing belt, the fusing pressure roller is retracted *1 from the fusing belt during any time other than a print cycle. (The roller is, however, retracted during a print cycle using envelopes.)
  *1: The fusing pressure roller does not completely retract from the fusing belt but is slightly pressed to the fusing belt.
- The fusing pressure roller is pressed against, and retracted from, the fusing belt by rotating the pressure cam through forward or backward rotation of the fusing pressure motor.
- The fusing pressure home sensor detects the fusing pressure roller at its pressure position.
- The position at which the fusing pressure roller is retracted is controlled by the period of time (number of pulses) through which the fusing pressure motor is rotated.
- When there is no change in the output of the fusing pressure home sensor even after the lapse of a predetermined period of time after the fusing pressure motor has started rotating, the machine determines that there is a pressure/retraction fault and displays the “Trouble code C3101: Fusing roller separation failure” message.



[1]	Fusing belt	[2]	Fusing pressure roller
[3]	Pressure lever	[4]	Fusing pressure home sensor (PS38)
[5]	Pressure cam	[6]	Fusing pressure motor (M11)
[7]	Pressure position	[8]	Release position

(1) Operation timing

Condition		Fusing pressure roller position
Warm-up	At the start of a warm-up cycle	Retraction (bizhub C558)
		Retraction and pressure (bizhub C658)
Pre-standby	At the start of the pre-standby	Pressure
Standby	At the start of the standby	Retraction
Printing	For envelopes	Retraction
	For paper types other than envelopes	Pressure
When printing the multi jobs	When current printing is for other than envelopes and the next job is for the envelopes.	Pressure -> Retraction *1
	When current printing is for the envelopes and the next job is for other than envelopes.	Retraction -> Pressure *1
Energy save mode (lower power mode, sleep mode)		Retraction
When a malfunction or misfeed occurs		Retraction
When the fusing heater lamp is turned OFF (a door opened, a malfunction occurs, or other factors.)		Stop

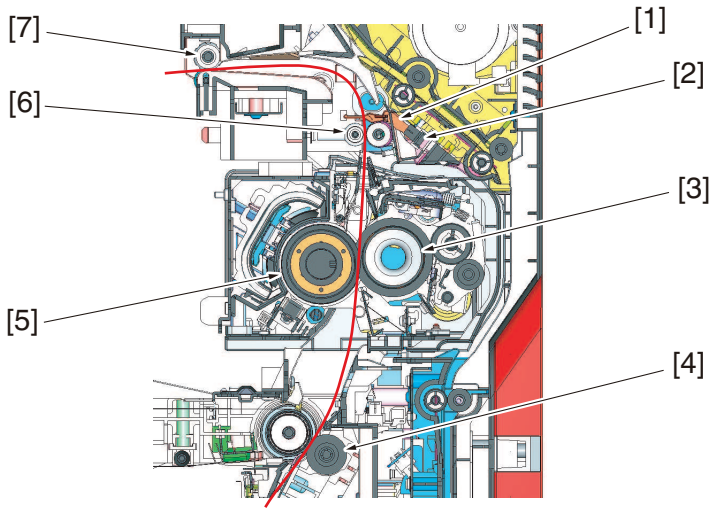
- *1: Pressure/retraction will be conducted after the currently printed paper passes between the fusing belt and the fusing pressure roller. The timing for the next paper to be fed will be delayed during the pressure/retraction and keep the certain period of time between feeding the papers.

14.3.5 Soaking roller pressurization/release control

- The cleaning roller collects paper dust and toner that has adhered to the fusing pressure roller via the soaking roller. However, sometimes not all paper dust or toner is collected from the fusing pressure roller when the fusing pressure roller and soaking roller are always pressurized.
- A pressurization/release mechanism has been provided to the soaking roller to prevent the fusing pressure roller from becoming dirty.
- The soaking roller pressurization/release control releases the roller at start of printing, and pressurizes the soaking roller at end of printing.
- The release lever operates when the soaking roller pressure solenoid is turned ON to separate the soaking roller.

14.3.6 Fusing paper transport control

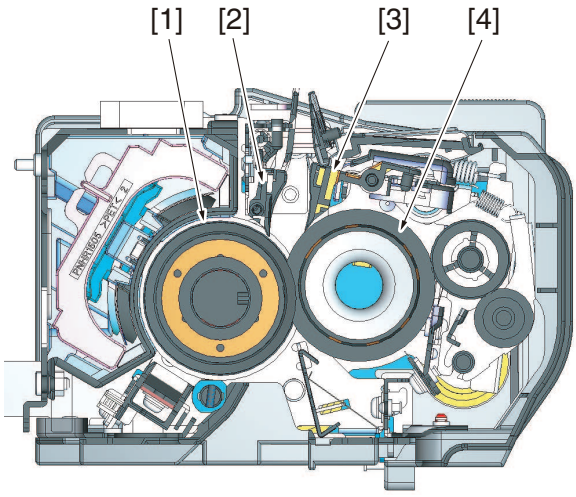
- The 2nd transfer roller transports paper onto the fusing unit.
- The fusing unit uses the fusing motor to drive the fusing pressure roller, thereby transporting paper onto the exit/reverse section.
- Fusing motor speed control is completed before the paper enters the fusing unit.
- The paper fed into the paper exit/reverse section is detected by the paper exit sensor before being transported by the paper exit roller.
- The fusing motor is deenergized after the last sheet of paper is fed into the finisher or out into the exit tray.



[1]	Actuator	[2]	Paper exit sensor (PS3)
[3]	Fusing pressure roller	[4]	2nd transfer roller
[5]	Fusing roller	[6]	Exit tray front roller
[7]	Exit roller	-	-

14.3.7 Paper separation mechanism

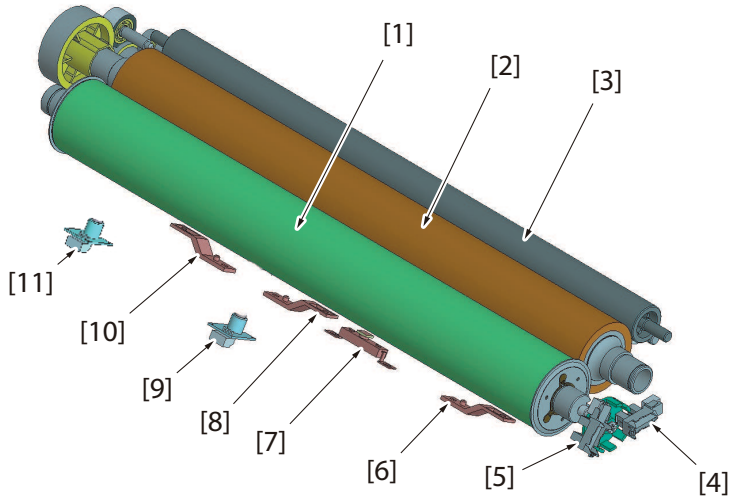
- Paper separator claws are provided on the fusing pressure roller side and the fusing belt side in order to separate the sheet of paper reliably after the fusing process.
- Three contact type paper separator claws are installed on the fusing pressure roller side.
- Five noncontact type paper separator claws are installed on the fusing belt side.



[1]	Fusing belt	[2]	Paper separator claws (noncontact type)
[3]	Paper separator claws (contact type)	[4]	Fusing pressure roller

14.3.8 Fusing temperature control

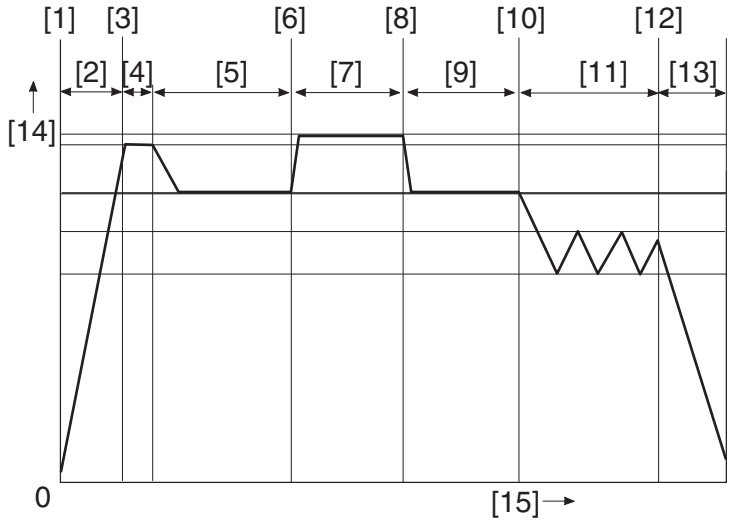
- The surface temperature of the fusing belt is detected to control the amount of the heat of the IH coil in order to maintain the appropriate fusing temperature.



[1]	Heating roller assy	[2]	Fusing pressure roller
[3]	Soaking roller	[4]	Heating roller rotation sensor (PS37)
[5]	Fusing pressure home sensor (PS38)	[6]	Heating roller thermistor1 (TH1)
[7]	Heating roller thermostat (TS1)	[8]	Heating roller thermistor3 (TH3)
[9]	Heating roller temperature sensor1 (TEMS/1) (Fixed at the main body)	[10]	Heating roller thermistor2 (TH2)
[11]	Heating roller temperature sensor2 (TEMS/2) (Fixed at the main body) *	-	-

- *: Equipped to bizhub C658 only

(1) Temperature control chart



[1]	Main power switch ON	[2]	Warm-up
[3]	Print is available	[4]	Pre-standby (3 seconds)
[5]	Standby	[6]	Start key ON
[7]	Printing (plain/color)	[8]	End of print
[9]	Standby	[10]	Start of low power mode
[11]	Low power mode	[12]	Start of sleep mode
[13]	Sleep mode	[14]	Temperature
[15]	Time	-	-

(2) IH coil control

- Electric energy of the IH coil is controlled so that the temperature of the fusing belt falls within a predetermined temperature range.
- The temperature of the fusing belt is measured with the heating roller temperature sensor to thereby determine a possible change in the temperature (increase or decrease).
- The following types of control are available for the control of the electric energy of the IH coil.

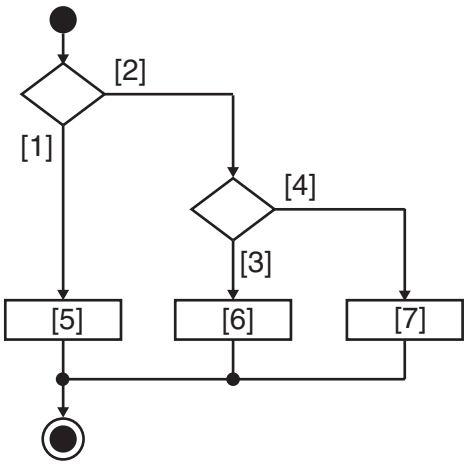
1. Fixed control: The electric energy of the IH coil is controlled with a predetermined value; the control is performed for temperature control during warm-up.
2. PID control: The electric energy of the IH coil is controlled through a combination of the P control, I control, and D control; Used for temperature control in the normal standby state, during a print cycle, and in the low power mode.
3. P control: The electric energy of the IH coil is controlled according to the difference between a target temperature and a detected temperature; used for temperature control in the printing, standby, low power, pre-standby state, and before printing.
4. I control: Temperature errors arising from individual variability in the IH coil and fusing unit are corrected; not to be performed individually.
5. D control: The electric energy of the IH coil is corrected to respond to sudden changes in temperature; not to be performed individually.

(3) Fusing temperature control during warm-up

- To prevent image fixability from being degraded due to environmental changes when the main power switch is turned ON, three different warm-up modes are incorporated for fusing temperature control.
- The warm-up mode is performed “at low temperatures”, “at ordinary temperatures”, or “under high humidity condition”.
- In the warm-up mode under high humidity condition, the warm-up time is extended to prevent paper from curling and the difference in temperature between the fusing belt and fusing pressure roller is minimized.
- When the temperature of the fusing belt reaches the warm-up completion temperature, control is passed onto the pre-standby process.
- Printing then starts if there is a print request. The system transitions to the pre-standby temperature control if there is no print request.
- If the fusing pressure roller is pressed, the fusing pressure motor turns on to release the fusing pressure roller.

Warm up mode	Environment	
	Paper temperature	Machine interior humidity (absolute humidity *1)
Warm-up at low temperatures	18 °C or less	Not judged by absolute humidity
Warm-up at ordinary temperatures	More than 18 °C	Less than a predetermined value
Warm-up under high humidity condition	More than 18 °C	Predetermined value or more

- *1: Absolute humidity: water content contained in the air (1 m 3) as steam regardless of the temperature



[1]	Machine interior paper temperature 18°C or less	[2]	Machine interior paper temperature exceeding 18°C
[3]	Absolute humidity, specified value or more	[4]	Absolute humidity, less than the specified value
[5]	Warm-up at low temperatures	[6]	Warm-up under high humidity condition
[7]	Warm-up at ordinary temperatures	-	-

(4) Temperature control during stand-by

- If no print request is received after the temperature control in the pre-standby state is started, control is passed onto the standby process.
- When a predetermined amount of time elapses after the pre-standby control starts, temperature control is performed through standby control.
- Within a specified time after standby temperature control starts, the target temperature is maintained for each mode in low-temperature, normal, and high-humid state.
- The standby temperature control ensures that the temperature of fusing belt in the standby state is not decreased.

* Counted period for standby control includes the printing time.

(5) Temperature control during the print cycle

- Temperature control is provided in order to keep optimum fusing performance with various factors, such as the type of paper, print mode, paper temperature*1, use of paper of small size, decreased temperature during paper passage, and warm-up carried out with a cool fusing unit.
  - *1: The paper temperature is used as data to control the fusing temperature. The paper temperature sensor that is installed in the paper feed section measures this temperature as the "Internal paper feed section temperature".

(6) Temperature control under low power mode

- The temperature of the fusing belt is decreased to thereby reduce power consumption during the low power mode.

- When the fusing pressure roller is in the pressed state, the fusing pressure motor turns ON to release the pressure.
- The heating roller assy is rotated by the fusing motor at the same time that the IH coil is energized and stopped when the IH coil is deenergized. The speed of the heating roller assy at this time is lower than that during a print cycle. The rotation speed at this time is lower than the rotation speed used for printing.
- When the temperature of the fusing belt is decreased to the starting temperature of the low power mode temperature control, the IH coil and the fusing motor are energized; when the temperature exceeds the ending temperature, the IH coil and the fusing motor are deenergized.
- During the low power mode, ON/OFF control is repeated between the starting and ending temperatures of the low power consumption control.

(7) Temperature control in sleep mode

- The main coil and demagnetization coil are deenergized to stop heating the fusing belt, thereby reducing power consumption in the sleep mode.
- When the fusing motor stops running, all rollers will stop rotating.
- Sleep mode includes two types of control, which is determined depending on the time that has elapsed since printing has completed. This control includes the engine ON sleep and the engine OFF sleep control.
- Engine ON sleep control is used when a sleep mode start instruction is received less than 1 minute after a printing has completed.
  - Any running fans continue driving, but fusing temperature control is stopped.
- Engine OFF sleep control is used when a sleep mode start instruction is received 1 minute or more after a printing has completed.
- In the sleep mode, the fusing belt temperature may be decreased down to room temperature because the fusing belt is not heated. A maximum time equivalent to the warm-up time may be required before the fusing belt temperature is increased to the print enable temperature from the room temperature.

14.3.9 Protection from abnormal temperatures

- The machine provides protection against abnormally high temperature of the fusing unit in the following three steps.

(1) Soft protection

- When the temperature higher than the control range at heating roller assy is detected more than 1 second, the temperature is judged to be abnormally high, and the trouble code appears.
- When the trouble code is displayed, printing will be prohibited.

Roller name	Sensor name: symbol	Trouble code	
Heating roller assy	Heating roller temperature sensor: TEMS	C3725	Fusing abnormally high temperature detection (Center of the heating side)
	Heating roller thermistor2: TH2	C3726	Fusing abnormally high temperature detection (Middle of the heating side)
	Heating roller thermistor1: TH1	C3722	Fusing abnormally high temperature detection (Edge of the heating side)

(2) Hard protection

- Next level is provided when the level 1 cannot detect due to CPU overrun.
- The heater relay, through the printer control board, is turned OFF in the second level operation to block the power supply to the IH coil.
- When the controlled temperature of heating roller assy is detected higher than the predetermined value, the temperature is judged to be abnormally high, and the trouble code appears.
- Through these control procedures, the power supply to the IH coil can be shut down before the thermostat is activated in the third level. It thereby suppresses damage to the fusing unit itself.

Roller name	Sensor name: symbol	Trouble code	
Heating roller assy	Heating roller temperature sensor: TEMS2	C3725	Fusing abnormally high temperature detection (Center of the heating side)
	Heating roller thermistor1: TH1		
	Heating roller thermistor2: TH2	C3726	Fusing abnormally high temperature detection (Middle of the heating side)
	Heating roller thermistor3: TH3	C3722	Fusing abnormally high temperature detection (Edge of the heating side)

(3) Excessive rise protection

- If the abnormal high temperature of soft protection/hard protection cannot be detected due to a faulty temperature sensor or thermistor, thermostat blocks the power supply to the IH coil.
- The thermostat rating is 210 degrees centigrade for the heating roller thermostat. The ratings do not, represent the actual surface temperature of the fusing belt, since the thermostats are installed in a non-contact with respect to heating roller assy.

14.3.10 IH power supply control

(1) IH power supply abnormal temperature detection

- The IH power supply unit includes a temperature fuse. This fuse prevents IH power supply troubles due to increased unit internal temperature.
- The IH power supply unit includes a thermistor for monitoring the unit internal temperature. Control starts to lower the temperature when the unit internal temperature has increased.
- Details of high temperature detection control

Fault name	Mode	Control contents	Code
High temperature 1	Printing	Productivity decreases from 100% to 50%.	Do Not Display
		Productivity returns to 100% when a temperature of 90 degree is detected for at least 30 seconds.	

Fault name	Mode	Control contents	Code	
	Standby	The rotation speed of the IH power supply cooling fan is increased from 50% to 100%.		
		The speed returns to 50% when a temperature of 90 degree is detected for at least 30 seconds.		
High temperature 2	All modes	A trouble code appears.	C3B02	IH malfunction (CPU)

(2) Abnormal power supply input detection

- The IH power supply unit reduces power to the IH coil when the voltage input into the IH power supply has decreased. When capacity of fusing cannot be maintained due to reduced IH coil power, PPM control is implemented to reduce print productivity from 100% to 40% in stages.
- The IH power supply unit displays a trouble code when the input power or voltage values are abnormal.

Fault name	Detection method	Control contents	Code	
Input power abnormal	Input current or power has exceeded the upper limit value.	A trouble code appears.	C3B07	IH input power error
	Input current or power has fallen below the lower limit value.			
Input voltage abnormal	The input voltage has exceeded the upper limit value.	A trouble code appears.	C3B08	IH input voltage error
	The input voltage has fallen below the lower limit value.			

14.3.11 Temperature sensor control

- A non-contact type thermopile sensor is used for heating roller temperature sensor (hereinafter referred to as “temperature sensor”). The temperature sensor detects the temperature of the fusing belt through infrared rays and controls the surface temperature.
- The temperature sensor is provided with a lens. For its structural reason, therefore, the temperature sensor can be dirtied by dew condensation formed or foreign matter deposited on the lens.
- The temperature sensor, if contaminated with dew drops or dirt on the lens, becomes unable to detect the temperature accurately, since the contaminants blocks the infrared rays that are otherwise detected by the sensor.
- If temperature control is provided under such conditions, the temperature sensor detects a temperature that is lower than the actual temperature of the fusing belt. Then, the fusing belt temperature is controlled based on a temperature higher than the target one.

(1) Detection of condensation on the heating roller temperature sensor

- The control of detection of condensation on the heating roller temperature sensor is to determine degradation of detection accuracy of the temperature sensor caused by condensation or dirt.
- When the difference in temperature between that detected by heating roller thermistor3 and that detected by heating roller temperature sensor is equal to, or more than, a specified value and that condition lasts for predetermined period of time or more, the machine determines that the heating roller temperature sensor lens has condensation on it.
- When condensation on the temperature sensor is detected and the control is switched to “alternative temperature control”, the machine displays the corresponding P code “P-32 Heating roller temperature sensor temperature detection failure” on the control panel.

(2) Detection of contamination on the heating roller temperature sensor

- The contamination detection control is to determine degradation of detection accuracy of the heating roller temperature sensor caused by contamination.
- The contamination detection control is performed only in the standby state. No control is provided during the alternative temperature control initiated by condensation of the temperature sensor.
- If contamination of the lens of the heating roller temperature sensor is detected, the machine displays the corresponding malfunction code “C-392A heating roller temperature sensor contamination (Main of the heating roller)” on the control panel. It then shuts down the circuit to the main coil and terminates fusing unit temperature control.
- If, after the start of the contamination detection control, the difference in temperature between that detected by heating roller thermistor3 and that detected by heating roller temperature sensor is equal to, or more than, a specified value and that condition lasts for 10 min. or more, the machine determines that the heating roller temperature sensor lens is contaminated.
- The contamination detection control is terminated if, at any timing within 10 min. after the contamination detection control has been started, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor is equal to, or less than, a specified value.
- The contamination detection control is terminated if the machine enters any mode other than the current one, including the warm-up or the low power mode as initiated by the start of a print cycle or restart.

(3) Heating roller alternative temperature control

- If condensation on the heating roller temperature sensor is detected, the heating roller temperature control is provided based on the temperature detected by the heating roller thermistor3, instead of that detected by the heating roller temperature sensor. This control is referred to as the heating roller alternative temperature control.
- When the control is switched to the alternative temperature control, the machine displays the corresponding P code “P-32 Heating roller temperature sensor temperature detection failure” on the control panel.
- If the difference in temperature between that detected by heating roller thermistor3 and that detected by heating roller temperature sensor becomes less than a specified value during the alternative temperature control, the machine determines that condensation on the heating roller temperature sensor has been eliminated and resumes the temperature control based on the temperature detected by the heating roller temperature sensor.
- If the difference in temperature between that detected by heating roller thermistor3 and that detected by heating roller temperature sensor is not improved even after the lapse of 10 min. after the alternative temperature control has been initiated, the machine determines that the cause is not condensation, but contamination, on the lens and terminates the alternative temperature control.

- If a print job is received during the alternative temperature control, control is performed according to the settings made in “Enhanced Security” of “Service Mode”. Reference: [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW] -> [Switch No. 4/Fusing unit alternative temperature control]

(4) Sensor disconnection detection control

- If the temperature of the temperature sensor or thermistor fails to reach the specified temperature in the given period after the warm-up started, the sensor is judged to have disconnection, and the trouble code will appear.

Roller name	Sensor name: symbol	Trouble code	
Heating roller assy	Heating roller temperature sensor: TEMS	C3925	Fusing sensor wire breaks detection (Center of the heating side)
	Heating roller thermistor2: TH2	C3926	Fusing sensor wire breaks detection (Middle of the heating side)
	Heating roller thermistor1: TH1	C3922	Fusing sensor wire breaks detection (Edge of the heating side)

14.3.12 Fusing PPM control

(1) PPM control

- To achieve the intended level of fixability of printed images, the PPM control reduces the number of printed pages per minute by widening the distance between sheets of paper.

PPM mode	Control execution conditions	Purpose	Specific controls	Print productivity *1
Low temperature environment mode	Room temperature at the start of the print cycle is 18°C or less	To achieve the intended level of fixability under low temperature environment	To prevent fixability from being degraded in a multi-print cycle, paper-to-paper distance is widened to thereby limit a decrease in the fusing temperature.	100% 90% 80% 70%: default value 60% 50%
High humidity environment mode *2	Environmental humidity at the start of the print cycle is a predetermined value or more	To suppress occurrence of paper curl under high humidity environment	Paper-to-paper distance is widened in a multi-print cycle run under high humidity environment so as to prevent paper from curling, thereby achieving a required fusing temperature.	100%: default value 70% 50%
Reduced power supply mode	Only an insufficient power is supplied to the IH coil, resulting in a fusing temperature lower than a predetermined value	To achieve the intended level of fixability under low power supply condition	To prevent fixability from being degraded in a multi-print cycle, paper-to-paper distance is widened to thereby limit a decrease in the fusing temperature.	70%: default value 50%
Thin paper mode	“100%” is selected for “PPM Control Choice” of the service mode	To increase the print productivity of thin paper and recycled paper. To increase productivity during printing using thin paper. * The choice of 100% may result in paper curling.	Paper-to-paper distance is narrowed to thereby increase productivity.	100% 70%: default value *4
Low-power Support Selection *3	Where the DipSW setting is set to "OFF" (prioritizing productivity)	To increase productivity when finishers are installed. The choice of 100% may result in warm up time lengthening.	Paper-to-paper distance is narrowed to thereby increase productivity.	100% 70%: default value

- *1: Exemplary calculation of print speed: If 55 ppm can be achieved at a print productivity of 100% on A4 plain paper, a change in print productivity to 90% results in 49.5 ppm.
- *2: Execution of the control for the high humidity environment mode can be prohibited when "No. 5 PPM control (high humidity environment mode) prohibited" is turned ON in [Service Mode] -> [Enhanced Security] -> [Engine FW DIP SW].
- *3: By setting the [Service Mode] -> [Security Selection] -> [Engine FW Dip SW] "No. 11: Low Power Support Selection" to "ON", the low power support selection can prohibit the execution of controls.
- *4: For recycled paper, the print productivity will be set to 70% when “Mode 3” is selected for warm-up choice. For thin paper, the print productivity will be set to 70% regardless of the mode setting for warm-up choice.

14.3.13 Fusing unit new article detection

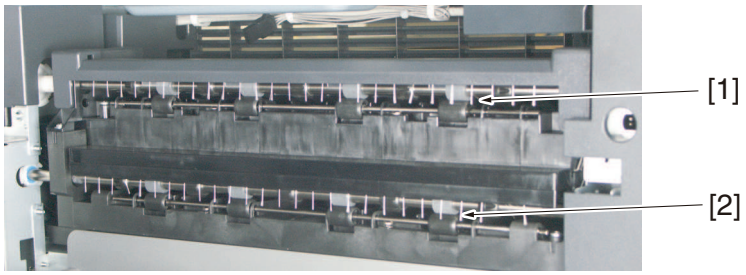
- The fusing unit is not provided with any new article detection mechanism. If the fusing unit is replaced with a new one, therefore, “New Release” of “Fusing Unit” must be performed in [Counter] -> [Life] of the Service Mode.

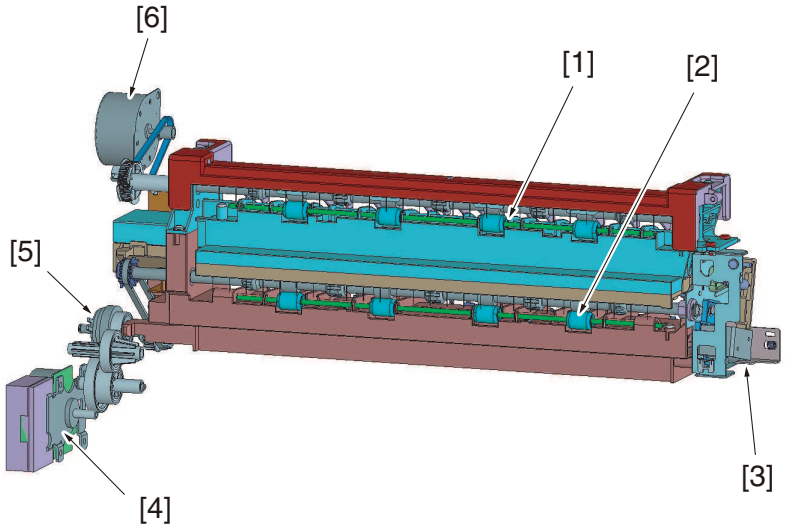
NOTE

- **For the life of the fusing unit, refer to F.6.1 Consumable/part replacement time (bizhub C368/C308/C258) and F.6.2 Consumable/part replacement time (bizhub C658/C558/C458).**

15. PAPER EXIT/REVERSE SECTION

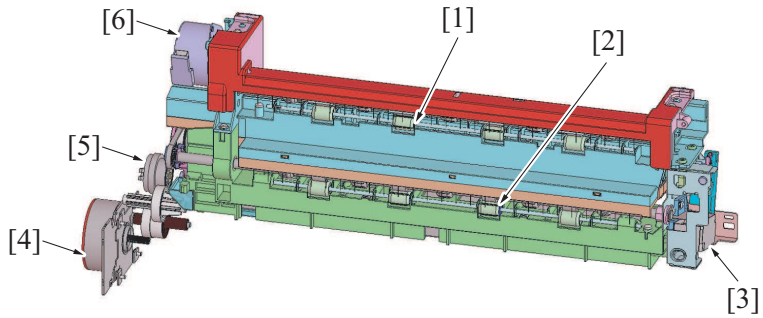
15.1 Configuration (bizhub C368/C308/C258)





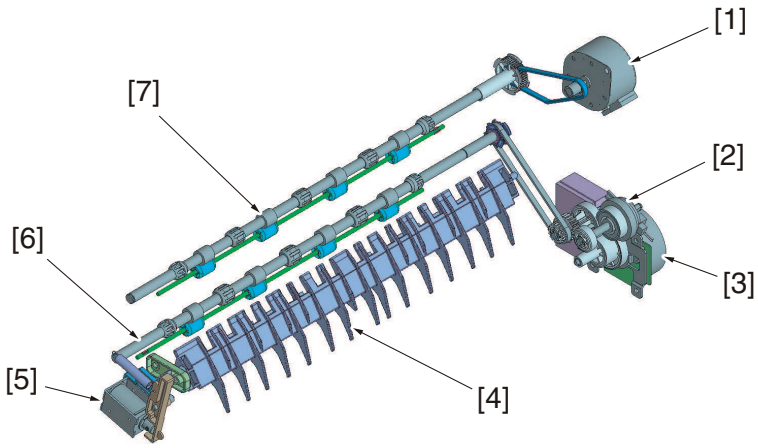
[1]	Reverse roller	[2]	Paper exit roller
[3]	Gate switch solenoid (SD3)	[4]	Fusing motor (M3)
[5]	Paper exit clutch (CL8)	[6]	Switchback motor (M4)

15.2 Configuration (bizhub C658/C558/C458)



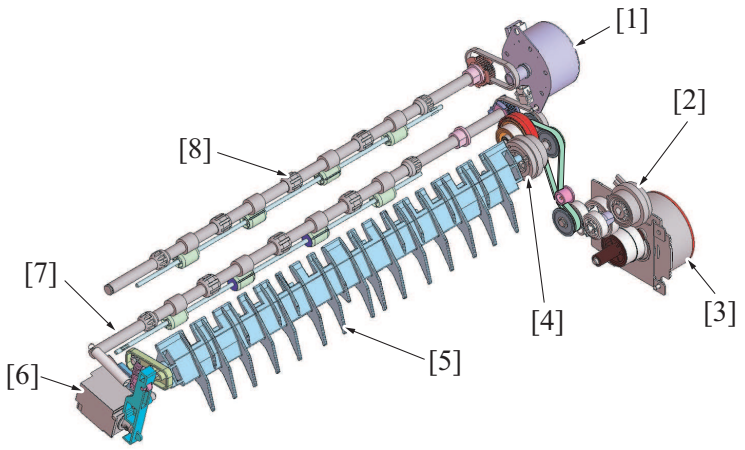
[1]	Reverse roller	[2]	Paper exit roller
[3]	Gate switch solenoid (SD3)	[4]	Fusing motor (M3)
[5]	Paper exit clutch (CL8)	[6]	Switchback motor (M4)

15.3 Drive (bizhub C368/C308/C258)



[1]	Switchback motor (M4)	[2]	Paper exit clutch (CL8)
[3]	Fusing motor (M3)	[4]	Paper exit/reverse switch gate
[5]	Gate switch solenoid (SD3)	[6]	Paper exit roller
[7]	Reverse roller	-	-

15.4 Drive (bizhub C658/C558/C458)



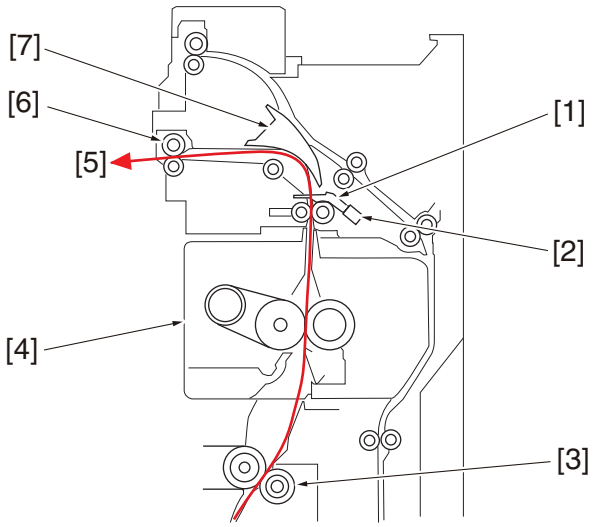
[1]	Switchback motor (M4)	[2]	Paper exit clutch (CL8)
[3]	Fusing motor (M3)	[4]	Paper exit deceleration clutch (CL9)
[5]	Paper exit/reverse switch gate	[6]	Gate switch solenoid (SD3)
[7]	Paper exit roller	[8]	Reverse roller

15.5 Operation

15.5.1 Transport control

(1) Paper exit by paper exit roller

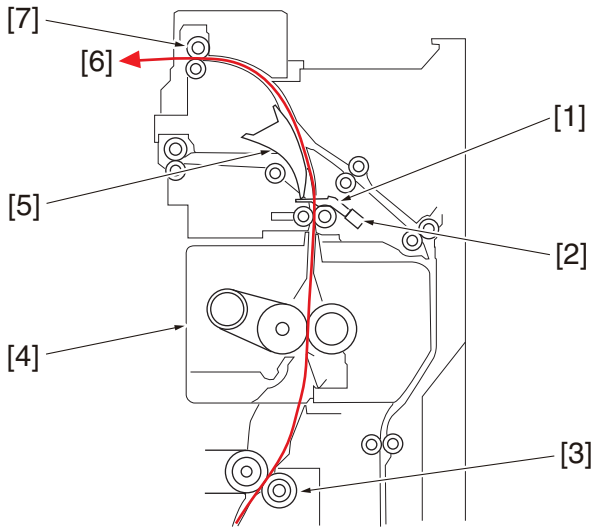
- If the paper is fed out by way of the paper exit roller, the paper exit roller is rotated forward to transport the paper.
- The initial position of the paper exit/reverse switch gate establishes a paper path through the paper exit roller, so that its position is not changed.
- The paper exit roller is driven by controlling rotation of the fusing motor with the paper exit clutch.
- The paper exit clutch is energized at timing at which the leading edge of the paper enters the fusing unit.
- The paper exit clutch is deenergized when the paper is fed a predetermined distance after the paper exit roller after the paper exit sensor has detected the trailing edge of the paper.



[1]	Actuator	[2]	Paper exit sensor (PS3)
[3]	2nd transfer roller	[4]	Fusing unit
[5]	Transported to paper exit tray or finisher	[6]	Paper exit roller
[7]	Paper exit/reverse switch gate: solenoid OFF position	-	-

(2) Paper exit by reverse roller

- The paper is fed from the reverse roller to the paper exit tray, only if RU-513/JS-506 capable of feeding paper out through the reverse roller is mounted.
- When the paper is to be fed out via the reverse roller, the switchback motor is rotated forward to thereby transport the paper.
- The gate switch solenoid is energized in order to establish a paper path through the reverse roller by changing the position of the paper exit/reverse switch gate.
- The reverse roller is started at timing at which the leading edge of the paper enters the paper exit/reverse section.
- The reverse roller is stopped when the paper is fed a predetermined distance after the reverse roller after the paper exit sensor has detected the trailing edge of the paper.

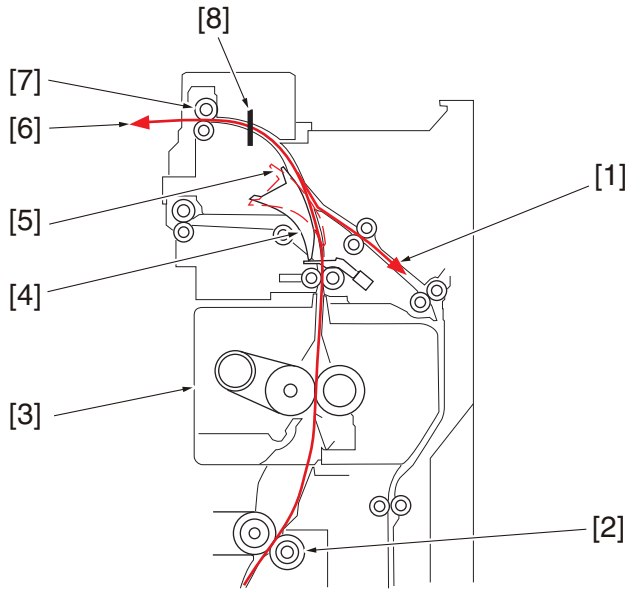


[1]	Actuator	[2]	Paper exit sensor (PS3)
[3]	2nd transfer roller	[4]	Fusing unit
[5]	Paper exit/reverse switch gate: solenoid ON position	[6]	Paper exit to paper exit tray
[7]	Reverse roller	-	-

(3) Duplex section transport

- When the paper is to be fed into the duplex section, the reverse roller is rotated forward to transport the paper to the reverse position and then rotated backward, thereby transporting the paper onto the duplex section.
- Until the paper is transported up to the reverse stop position, the gate switch solenoid is energized to place the paper exit/reverse switch gate in a position at which the paper path through the reverse roller is established.
- When the paper reaches the reverse stop position, the paper exit/reverse switch gate returns to its original position to thereby prevent the paper from moving backward into the fusing section.
- The reverse roller is started to rotate forward at timing at which the leading edge of the paper enters the paper exit/reverse section.

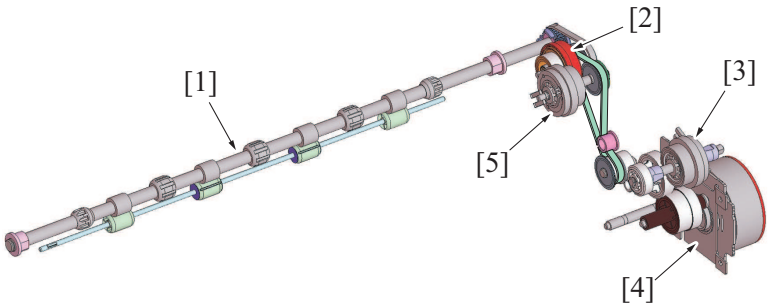
- The reverse roller is stopped from forward rotation at timing at which the paper reaches the reverse stop position after the paper exit sensor has detected the trailing edge of the paper.
- The reverse roller is started to rotate backward at timing at which the preceding paper moves past a predetermined position of the duplex section.
- The reverse roller is stopped from backward rotation at timing at which the trailing edge of the paper enters the duplex section.



[1]	Transporting to duplex section	[2]	2nd transfer roller
[3]	Fusing unit	[4]	Paper exit/reverse switch gate: solenoid ON position
[5]	Paper exit/reverse switch gate: solenoid OFF position	[6]	Transporting to reverse stop position
[7]	Reverse roller	[8]	Reverse stop position

15.5.2 Paper exit roller speed reduction control (C658/C558/C458)

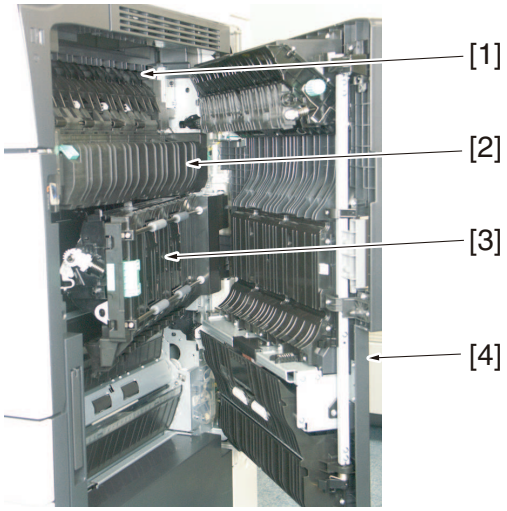
- If the discharge speed at the same speed as process speed is too fast, paper will be discharged forcefully and unevenly in the paper exit tray.
- Speed reduction control is implemented on the paper exit roller to prevent unevenness in paper.
- The fusing motor and paper exit clutch drives the transport roller. However, drive power is transferred to the reduction gear when paper exit deceleration clutch is turned ON in the drive state to reduce transport roller speed.
- The paper exit roller speed reduction control is performed only when normal paper is discharged.



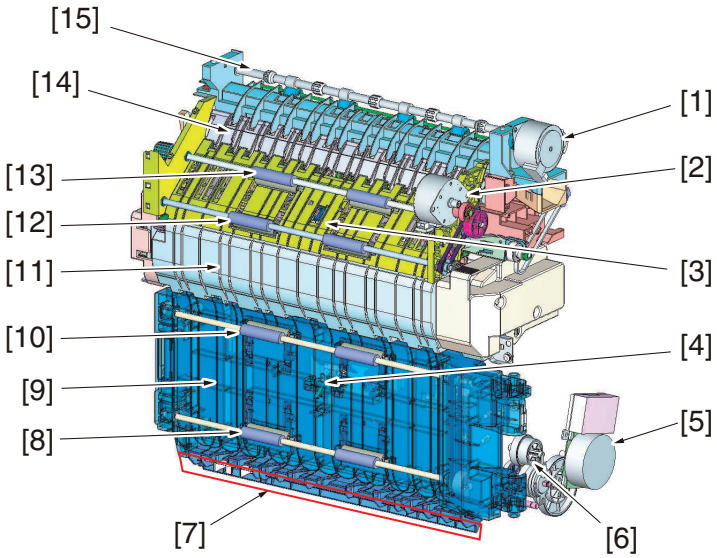
[1]	Paper exit roller	[2]	Reduction gear
[3]	Paper exit clutch (CL8)	[4]	Fusing motor (M3)
[5]	Paper exit deceleration clutch (CL9)	-	-

16. DUPLEX SECTION

16.1 Configuration (bizhub C368/C308/C258)

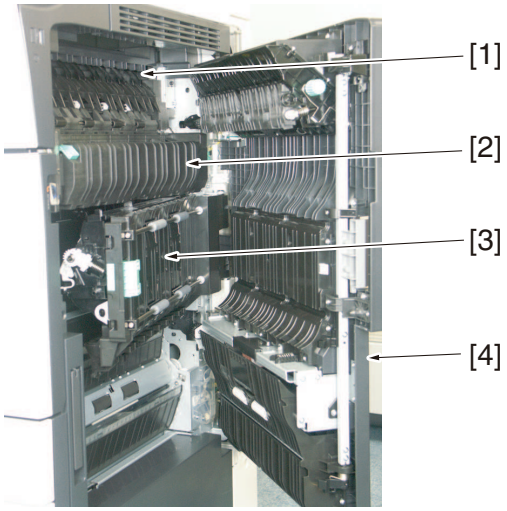


[1]	Paper exit/reverse switch gate	[2]	Fusing unit
[3]	Regist unit (Duplex section)	[4]	Right door

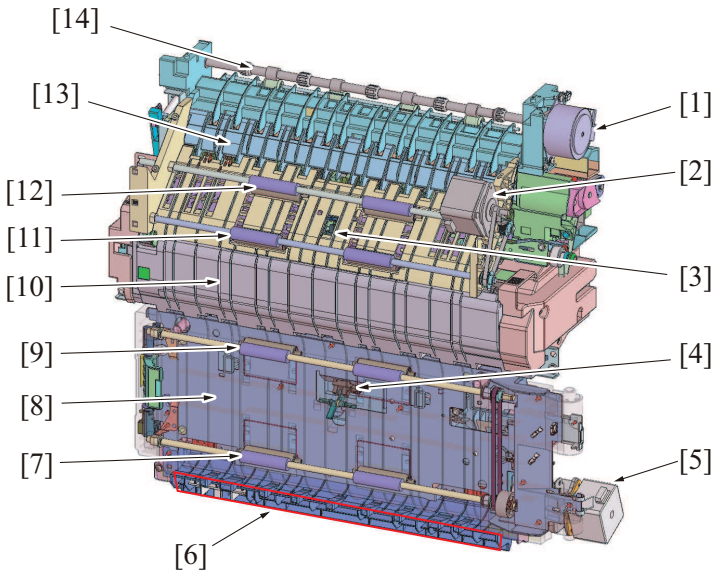


[1]	Switchback motor (M4)	[2]	ADU transport motor (M5)
[3]	ADU paper passage sensor1 (PS40)	[4]	ADU paper passage sensor2 (PS41)
[5]	Transport motor (M1)	[6]	ADU transport clutch (CL6)
[7]	Duplex pre-registration section	[8]	ADU transport roller 4
[9]	Regist unit (Duplex section)	[10]	ADU transport roller 3
[11]	Fusing unit	[12]	ADU transport roller 2
[13]	ADU transport roller 1	[14]	Paper exit/reverse switch gate
[15]	Reverse roller	-	-

16.2 Configuration (bizhub C658/C558/C458)

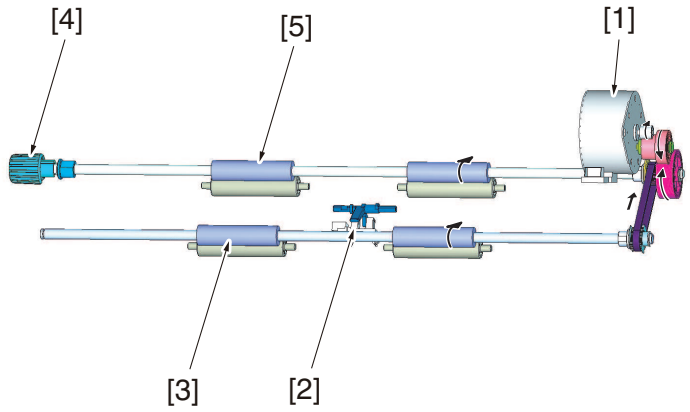


[1]	Paper exit/reverse switch gate	[2]	Fusing unit
[3]	Regist unit (Duplex section)	[4]	Right door

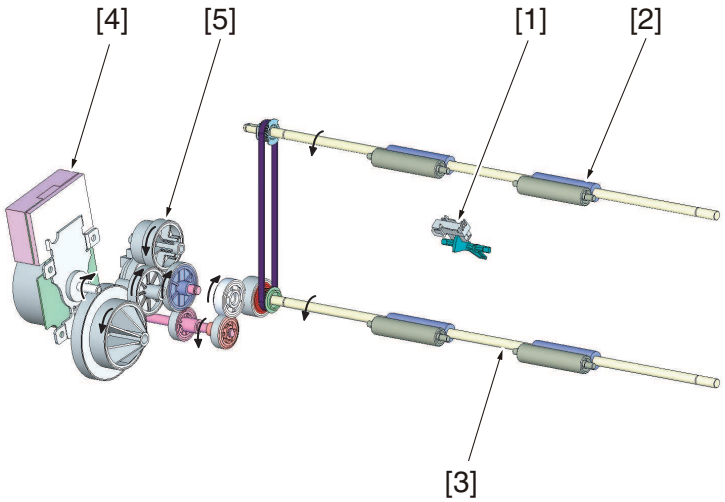


[1]	Switchback motor (M4)	[2]	ADU transport motor1 (M5)
[3]	ADU paper passage sensor1 (PS40)	[4]	ADU paper passage sensor2 (PS41)
[5]	ADU transport motor2 (M26)	[6]	Duplex pre-registration section
[7]	ADU transport roller 4	[8]	Regist unit (duplex section)
[9]	ADU transport roller 3	[10]	Fusing unit
[11]	ADU transport roller 2	[12]	ADU transport roller 1
[13]	Paper exit/reverse switch gate	[14]	Reverse roller

16.3 Drive (bizhub C368/C308/C258)

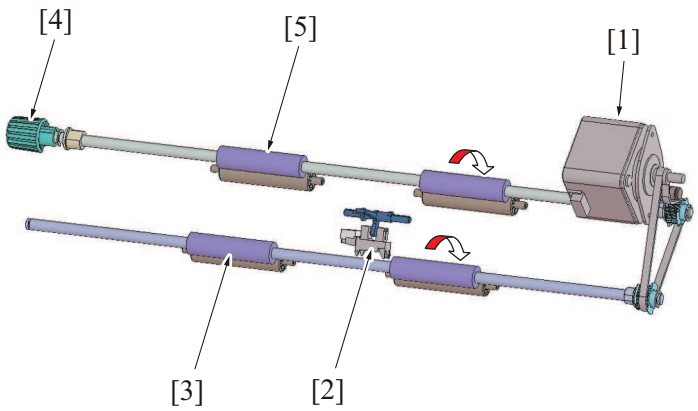


[1]	ADU transport motor (M5)	[2]	ADU paper passage sensor1 (PS40)
[3]	ADU transport roller 2	[4]	Jam removal dial
[5]	ADU transport roller 1	-	-

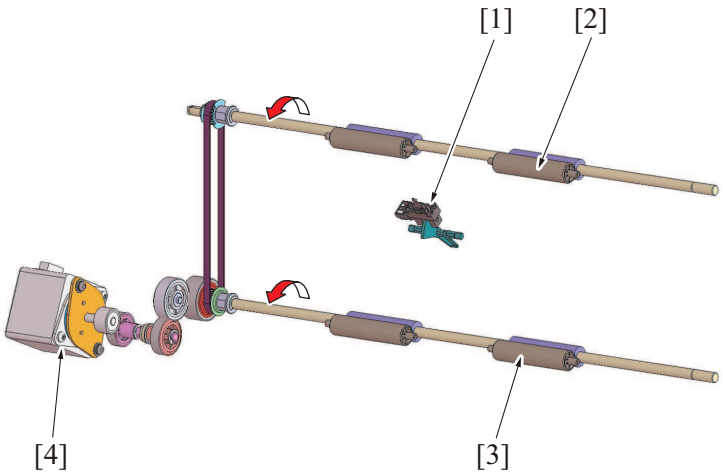


[1]	ADU paper passage sensor2 (PS41)	[2]	ADU transport roller 3
[3]	ADU transport roller 4	[4]	Transport motor (M1)
[5]	ADU transport clutch (CL6)	-	-

16.4 Drive (bizhub C658/C558/C458)



[1]	ADU transport motor1 (M5)	[2]	ADU paper passage sensor1 (PS40)
[3]	ADU transport roller 2	[4]	Jam removal dial
[5]	ADU transport roller 1	-	-

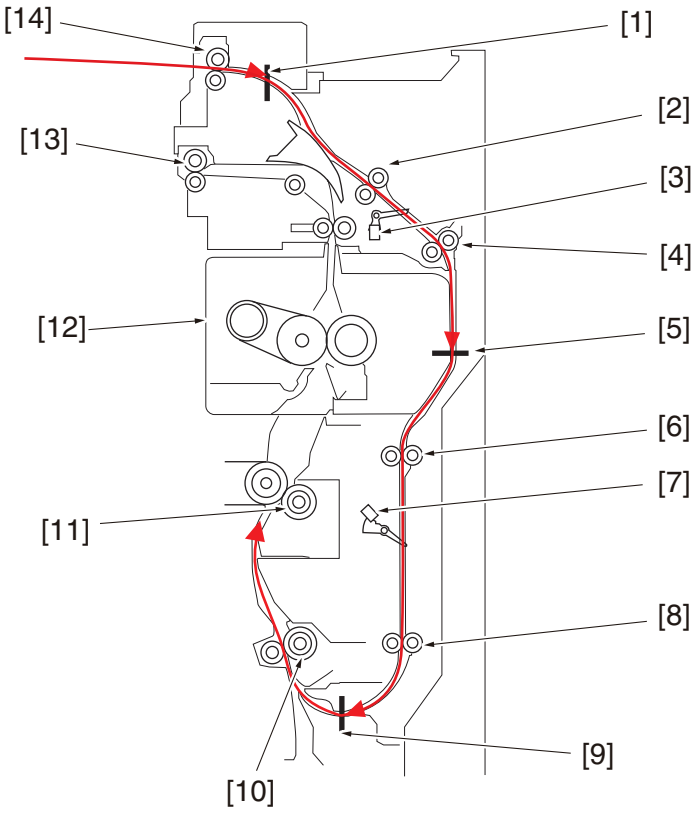


[1]	ADU paper passage sensor2 (PS41)	[2]	ADU transport roller 3
[3]	ADU transport roller 4	[4]	ADU transport motor2 (M26)

16.5 Operation

16.5.1 Paper transport control

- In duplex transportation, the paper transported from the reverse roller is transported to the internal duplex section by the ADU transport roller1 and ADU transport roller2.
- In duplex pre-registration, the paper is conveyed to the registration roller at the vertical transport section by the ADU transport roller3 and ADU transport roller4.



[1]	Stop position 1	[2]	ADU transport roller 1
[3]	ADU paper passage sensor1 (PS40)	[4]	ADU transport roller 2
[5]	Stop position 2	[6]	ADU transport roller 3
[7]	ADU paper passage sensor2 (PS41)	[8]	ADU transport roller 4
[9]	Stop position 3	[10]	Registration roller

[11]	2nd transfer roller	[12]	Fusing unit
[13]	Paper exit roller	[14]	Reverse roller

(1) Transport roller control

- The ADU transport motor drives the ADU transport roller1 and ADU transport roller2.
- The ADU transport roller3 and ADU transport roller4 are driven by controlling rotation of the transport motor with the ADU transport clutch. (bizhub C368/C308/C258)
- The ADU transport motor2 drives the ADU transport roller3 and ADU transport roller4. (bizhub C658/C558/C458)

(2) Paper entrance control (bizhub C368/C308/C258)

- The switchback motor at the paper exit/reverse section is deenergized to stop transport of the paper temporarily. (stop position 1) The switchback motor thereafter rotates in reverse to transport the paper into the duplex section.
- At the same time of backward rotation of the switchback motor, the ADU transport motor is energized and the ADU transport roller1 and ADU transport roller2 start rotating.
- The ADU paper passage sensor1 located downstream of the ADU transport roller1 detects the leading edge of the paper transported to the duplex section.
- If a preceding sheet of paper being transported through the duplex section is yet to reach a predetermined position downstream of the registration roller, the ADU transport motor is deenergized to stop transport of the paper temporarily. (stop position 2)
- When the advanced sheet of paper moves past the specified position, ADU transport motor1 is energized to resume the transport of paper.
- If the ADU paper passage sensor2 does not detect the leading edge of the paper even after the lapse of a predetermined period of time after the ADU paper passage sensor1 has detected the leading edge of the paper, the machine determines that a paper misfeed occurs at the duplex transport part.
- When the leading edge of the paper reaches the specified position, ADU transport clutch is energized and ADU transport roller 3 and ADU transport roller 4 transports paper.
- ADU paper passage sensor2 detects the leading edge of the paper.
- When the paper moves past ADU transport roller 4 and reaches the specified position, ADU transport clutch is deenergized to stop the transport of the paper temporarily (stop position 3).

(3) Paper entrance control (bizhub C658/C558/C458)

- The switchback motor at the paper exit section is deenergized to stop transport of the paper temporarily (stop position 1). The switchback motor thereafter rotates in reverse to transport the paper into the duplex section.
- When the switchback motor starts reverse rotation, ADU transport motor1 is energized and ADU transport roller 1 and ADU transport roller 2 transports the paper.
- The ADU paper passage sensor1 located downstream of the ADU transport roller1 detects the leading edge of the paper transported to the duplex section.
- If a preceding sheet of paper being transported through the duplex section is yet to reach a predetermined position downstream of the registration roller, the ADU transport motor1 is deenergized to stop transport of the paper temporarily. (stop position 2)
- When the advanced sheet of paper moves past the specified position, ADU transport motor1 is energized to resume the transport of paper.
- If ADU paper passage sensor2 is unable to detect the leading edge of the paper even after the lapse of a predetermined period of time after ADU paper passage sensor1 has detected the leading edge of the paper, the machine determines that a paper misfeed occurs at the duplex transport part.
- When the leading edge of the paper reaches the specified position, ADU transport motor2 is energized and ADU transport roller 3 and ADU transport roller 4 transports paper.
- ADU paper passage sensor2 detects the leading edge of the paper.
- When the paper moves past ADU transport roller 4 and reaches the specified position, ADU transport motor2 is deenergized to stop the transport of the paper temporarily (stop position 3).

(4) Duplex paper feed control

- At predetermined paper feed timing, the ADU transport clutch is energized to resume the transport of the paper. ADU transport motor1 is also energized if it has been deenergized. (bizhub C368/C308/C258)
- At predetermined paper feed timing, the ADU transport motor2 is energized to resume the transport of the paper. ADU transport motor1 is also energized if it has been deenergized. (bizhub C658/C558/C458)
- The paper is fed from ADU transport roller 4 onto the registration roller at the vertical transport part.

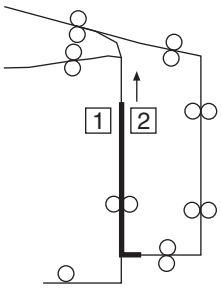
16.5.2 Duplex circulation control

- The duplex circulation control is performed differently according to the length of the paper path direction.

Length of paper in the feed direction	Duplex circulation control
458 mm or less	One-sheet circulation operation
432 mm or less	Two-sheet circulation operation
216 mm or less	Three-sheet circulation operation

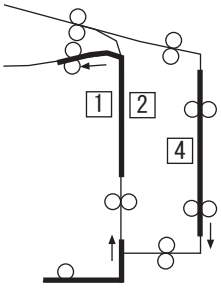
(1) One-sheet circulation operation

- After the second side is printed for each sheet, the paper is transported to the duplex pre-registration section. After the first side is printed, the paper is then discharged outside of the machine.



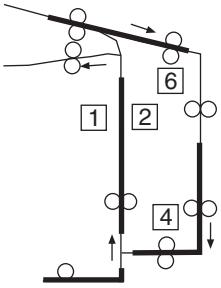
(2) Two-sheet circulation operation

- The sheet having the first side being printed and the sheet having the second side being printed are transported alternately.



(3) Three-sheet circulation operation

- The sheet having the first side being printed and the sheet having the second side being printed are transported alternately. A third sheet is stored in the machine during printing the other sheets.

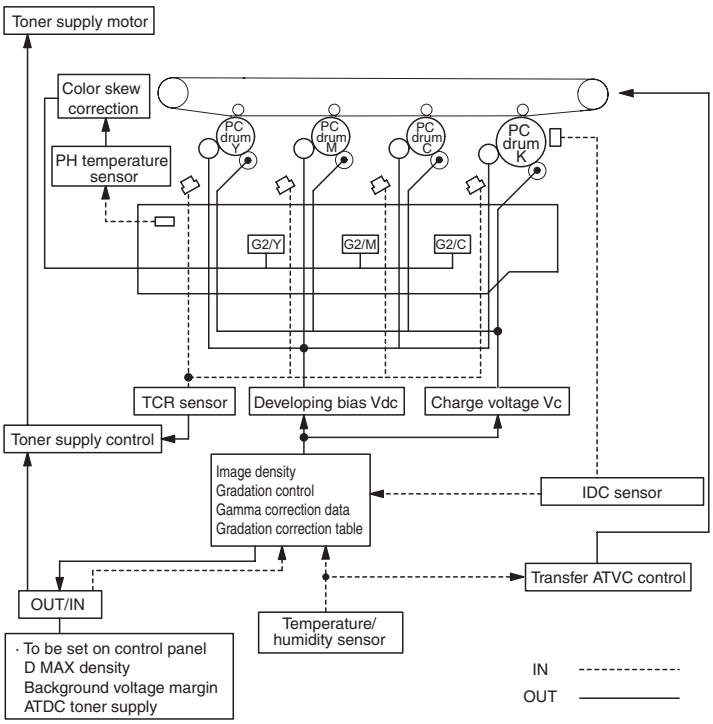


17. IMAGE STABILIZATION CONTROL

17.1 Overview

- The machine provides the following image stabilization control to ensure stabilized copy image.

Purpose	Control	Control means
To stabilize image density To stabilize gradation	IDC sensor adjustment control Max. density adjustment control LD intensity adjustment control Registration control (color shift correction) Gamma correction control	IDC sensor Temperature/humidity sensor PH temperature sensor
To stabilize toner density	TCR control (Y, M, C, K)	TCR sensor
To stabilize image transfer	Transfer output control Transfer ATVC	Temperature/humidity sensor



17.2 Description of control

17.2.1 IDC sensor adjustment control

- Controls changes in characteristics due to change with time and contamination of the transfer belt and IDC sensor, part-to-part variations in the sensors, and change of environment.
- The intensity (current value) of the IDC sensor is adjusted on the surface of the transfer belt, on which no toner sticks (background level).

17.2.2 Max. density adjustment control

- The developing bias (Vdc) is adjusted to control changes in the solid density resulting from variations in developing characteristics and IDC sensor intensity, variations in sensitivity of the photo conductor, and changes in the environment, durability, and the amount of charge in toner.
- Patterns are produced on the surface of the transfer belt and the IDC sensor detects the amount of toner sticking to them.
- Referring to the detected data and the environment data taken by the temperature/ humidity sensors, the developing bias value that results in the appropriate maximum density is calculated and stored in memory.
- Thereafter, the grid voltage (Vg) value, including the background margin adjustment value, is calculated and stored in memory.

17.2.3 LD intensity adjustment control

- It adjusts the variation in reproducibility of the thin line and the reverse outline, which is resulting from the variations in electrostatic characteristics of the photo conductor, developing characteristics and transfer characteristics in terms of individual difference, environment and durability, to make it the target level.
- It produces detection patterns on the surface of the transfer belt with the given level of LD intensity and detects the output value of IDC sensor.
- LD intensity is calculated from the detected IDC sensor data.

17.2.4 Color registration control (color shift correction)

- Color shift occurs on the tandem engine including image forming units for each color, due to the variations in internal parts and mounting accuracies. The color registration control system automatically detects color shift and correct color shift in the main and sub scanning directions.
- The color shift is detected as follows. A pattern is produced at each of front and rear ends of the transfer belt. The IDC sensors at the front and rear ends read respective patterns to thereby calculate and store color shift amounts in the sub scanning and main scanning directions.
- From data readings, the machine calculates how much the position of each of the different colors should be corrected. Based on the calculated data, the machine controls each dot during image output, thereby correcting the color shift amount.

17.2.5 Gamma correction control

- The gamma correction value is adjusted to correct changes in gamma characteristics to a linear one. The changes in gamma characteristics are caused with variations in the photo conductor sensitivity, developing characteristics, durability, environment, and parts variations in manufacturing.
- It produces gradation patterns on the transfer belt and calculates gradation characteristics output by the current engine with the IDC sensor.
- An optimum gamma correction value is determined for each color by calculating gamma correction data from the detected data of each of the colors of C, M, Y, and K.

17.3 Control contents (bizhub C368/C308/C258)

17.3.1 Image stabilization type (mode)

- Six different modes of image stabilization are available.
- A specific mode is selected according to the environmental conditions and print requirements, thereby achieving stabilized image at all times.

Stabilization type	Contents
Mode 1 (initialization and image stabilization)	Executed when “Initialize + Image Stabilization” is selected from the control panel.
Mode 1 (long image stabilization)	Executed mainly when there is a change in environmental condition.
Mode 2 (short image stabilization)	Executed mainly after the main power switch is turned ON.
Mode 3 (gamma correction + color registration control)	Executed when the count of the number of printed pages during a print cycle reaches 400 and there is a change in machine interior temperature.
Mode 4 (color registration control)	Executed when there is a change in machine interior temperature.
Mode 5 (monochrome, long image stabilization)	Dedicated to monochrome and executed when there is a change in environmental condition.
Mode 6 (monochrome, short image stabilization)	Dedicated to monochrome and executed when the number of printed pages during a print cycle reaches 1000 or there is a change in machine interior temperature

17.3.2 Control sequence by mode

- A different control sequence applies according to the mode of image stabilization.
- Control is performed in the specified sequence for each mode.

Sequence	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5 *4	Mode 6 *4
1	IDC sensor adjustment	IDC sensor detection *1	IDC sensor detection *1	IDC sensor detection *1	IDC sensor adjustment	IDC sensor detection
2	Dmax density adjustment	Dmax density adjustment	Color registration adjustment *2	Color registration adjustment *2	Dmax density adjustment	Dmax density adjustment
3	LD light intensity adjustment	Color registration adjustment *2	Gamma correction *3	-	LD light intensity adjustment	-
4	Color registration adjustment	Gamma correction *3	-	-	Gamma correction *3	-
5	Dmax density adjustment	-	-	-	-	-
6	LD light intensity adjustment	-	-	-	-	-
7	Gamma correction	-	-	-	-	-

- *1: The IDC sensor uses the output value calculated in the last IDC registration sensor adjustment and check that the value measured on the surface of the transfer belt (background level) is within the specified range. If the measured value is out of the specified range, mode 1 is used when the next image stabilization is carried out.
- *2: Unlike the color registration adjustment of mode 1, simplified color registration control is performed.
- *3: Unlike the gamma correction of mode 1, simplified gamma correction control is performed.
- *4: Monochrome-only mode

17.4 Control contents (bizhub C658/C558/C458)

17.4.1 Image stabilization type (mode)

- Seven different modes of image stabilization are available.
- A specific mode is selected according to the environmental conditions and print requirements, thereby achieving stabilized image at all times.

Stabilization type	Contents
Mode 1 (initialization and image stabilization)	Executed when “Initialize + Image Stabilization” is selected from the control panel.
Mode 1 (long image stabilization)	Executed mainly when there is a change in environmental condition.
Mode 2 (short image stabilization)	Executed mainly after the main power switch is turned ON.
Mode 3 (gamma correction + color registration control)	Executed when the count of the number of printed pages during a print cycle reaches 400 and there is a change in machine interior temperature.
Mode 4 (color registration control)	Executed when there is a change in machine interior temperature.
Mode 5 (monochrome, long image stabilization)	Dedicated to monochrome and executed when there is a change in environmental condition.
Mode 6 (monochrome, short image stabilization)	Dedicated to monochrome and executed when the number of printed pages during a print cycle reaches 1000 or there is a change in machine interior temperature.
Mode 7 (monochrome, gamma image stabilization)	Dedicated to monochrome and executed during or after a print cycle.

17.4.2 Control sequence by mode

- A different control sequence applies according to the mode of image stabilization.
- Control is performed in the specified sequence for each mode.

Sequence	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5 *3	Mode 6 *3	Mode 7 *3
1	IDC sensor adjustment	IDC sensor detection *1	IDC sensor detection *1	IDC sensor detection *1	IDC sensor adjustment	IDC sensor detection	IDC sensor detection
2	Dmax density adjustment	Dmax density adjustment	Color registration adjustment *2	Color registration adjustment *2	Dmax density adjustment	Dmax density adjustment	Gamma correction
3	LD light intensity adjustment	Color registration adjustment *2	Gamma correction	-	LD light intensity adjustment	LD light intensity adjustment	-
4	Color registration adjustment	LD light intensity adjustment	-	-	Dmax density adjustment	Gamma correction	-
5	Dmax density adjustment	Gamma correction	-	-	LD light intensity adjustment	-	-
6	LD light intensity adjustment	-	-	-	Gamma correction	-	-
7	Gamma correction	-	-	-	-	-	-

- *1: The IDC sensor uses the output value calculated in the last IDC registration sensor adjustment and checks that the value measured on the surface of the transfer belt (background level) is within the specified range. If the measured value is out of the specified range, mode 1 is used when the next image stabilization is carried out.
- *2: Unlike the color registration adjustment of mode 1, simplified color registration control is performed.
- *3: Monochrome-only mode

17.5 Operation timing

17.5.1 Predrive operation

- The following describe the stabilization operations executed when, for example, the main power switch is turned ON, the sleep mode is canceled, the front door is closed, or a malfunction is reset.

Mode	Operation condition	Image stabilization setting
Mode 1	• A new drum unit or a new developing unit is detected. • A new transfer belt is detected. • The machine recovers from a toner empty condition. • While a warning code is being displayed.	• Not specified
	• In the last image stabilization, the value of IDC sensor detection was out of the specified range. • A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence) • The count of the number of printed pages is 10,000 as counted from the last LD adjustment. • After skew adjustment reset (service mode).	• Standard or Color priority selection
Mode 2	• A Dmax adjustment request is received as a result of the last gamma correction. • The count of the number of printed pages after the gamma adjustment is 400 or more. • Information is provided indicating that the last stabilization control was discontinued. • There is a change in temperature after the lapse of a predetermined period of time after a developing drive stop.	• Standard or Color priority selection

Mode	Operation condition	Image stabilization setting
	• The stabilization is executed when the main power switch is turned ON even without the operating condition	• Only Color priority selection
Mode 4	• There is a change of a predetermined value or more in temperature after the color registration adjustment (when exiting from the sleep mode).	• Only Color priority selection
Mode 5	• In the last image stabilization, the value of IDC sensor detection was out of the specified range. • A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence) • The count of the number of printed pages is 10,000 as counted from the last LD adjustment. • A predetermined period of time or more elapses after a developing drive stop.	• Only Black priority selection
Mode 6	• A Dmax adjustment request is received as a result of the last gamma correction. • The count of the number of printed pages after the gamma adjustment is 1000 or more. • Information is provided indicating that the last stabilization control was discontinued.	• Only Black priority selection

(1) Stabilization mode setting

- Optimum image stabilization control can be selected using the administrator mode or service mode according to user's use condition.
- Three options available are the standard, color priority, and black priority modes.
- Mode of image stabilization setting is provided to maintain image quality and achieve the following purposes.
  1. To reduce frequency at which the stabilization control is performed in order to reduce cost per print for users who have a low print volume and low color ratio
  2. To shorten time between when the machine is turned ON and when it is ready for printing
  3. To maintain convenience for users having a high color frequency

Mode	Control
Standard	• Color stabilization is executed if image adjustments are necessary for color print or black print during predrive.
Color priority	• Color stabilization is executed if image adjustments are necessary for color print or black print during predrive. • Stabilization is executed unconditionally when the main power switch is turned ON. Warm-up time takes about 60 sec. when the main power switch is turned ON.
Black priority	• Black stabilization is executed if image adjustments are necessary for black print during predrive. • Color stabilization is executed before color print if image adjustments are necessary for color print.

17.5.2 During a print cycle (bizhub C368/C308/C258)

- When the stabilization execution condition is met during printing, a specific image stabilization mode according to the condition is selected and executed.

Operating conditions						Stabilization (mode)	Operation timing during print
Stabilization execution condition *1	Dmax adjustment request based on last gamma correction result	Print count after gamma correction	Change of a predetermined value or more in temperature after last stabilization *2	The number of pages yet to be printed of the current print job	Print count after last stabilization *3		
Any of the conditions is met	-	-	Change	A predetermined number of pages or more	-	Mode 1 is executed	Executed by interrupting the print cycle
				Less than a predetermined number of pages			Executed after a print cycle
				-	800 to 1000 sheets		Executed by interrupting the print cycle
				-	400 sheets or more		Executed after a print cycle
None of the conditions is met	Yes		Change	A predetermined number of pages or more	-	Mode 2 is executed	Executed by interrupting the print cycle
				Less than a predetermined number of pages			Executed after a print cycle

				-	800 to 1000 sheets		Executed by interrupting the print cycle
				-	400 sheets or more		Executed after a print cycle
	No	400 sheets or more	Change	A predetermined number of pages or more	-	Mode 3 is executed	Executed by interrupting the print cycle
				Less than a predetermined number of pages			Executed after a print cycle
				-	800 to 1000 sheets		Executed by interrupting the print cycle
				-	400 sheets or more		Executed after a print cycle
		400 sheets or less	Change	A predetermined number of pages or more	-	Mode 4 is executed	Executed by interrupting the print cycle
				Less than a predetermined number of pages			Executed after a print cycle
	Yes *4	-	-	-	-	Mode 5 is executed	Executed by interrupting the print cycle
	-	1000 sheets or more *5	-	-	-	Mode 6 is executed	

- *1: Stabilization execution condition:
  - In the last image stabilization, the value of IDC sensor detection was out of the specified range.
  - The last malfunction code occurs.
  - A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence)
  - The count of the number of printed pages is 10,000 as counted from the last LD adjustment.
- *2: Detected by both the PH temperature sensor and temperature/humidity sensor
- *3: Counting method of printed pages

Paper length	Count	
	Color mode	Monochrome mode
216 mm or less	2	1
Over 216 mm	4	2

- *4: Dmax adjustment request during monochrome printing
- *5: Monochrome print count value

17.5.3 During a print cycle (bizhub C658/C558/C458)

- When the stabilization execution condition is met during printing, a specific image stabilization mode according to the condition is selected and executed.

(1) During a color print cycle

Operating conditions							Stabilization (mode)	Operation timing during print
Stabilization execution condition *1	Print count after Dmax adjustment	Print count after gamma correction	Stabilization execution condition *2	Change of a predetermined value or more in temperature after last stabilization *3	The number of pages yet to be printed of the current print job	Print count after last stabilization *4		
Any of the conditions is met	-	-	-	Change	A predetermined number of pages or more	-	Mode 1 is executed	Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle
				-	-	800 to 1000 sheets		Executed by interrupting the print cycle

Operating conditions							Stabilization (mode)	Operation timing during print
Stabilization execution condition *1	Print count after Dmax adjustment	Print count after gamma correction	Stabilization execution condition *2	Change of a predetermined value or more in temperature after last stabilization *3	The number of pages yet to be printed of the current print job	Print count after last stabilization *4		
					-	400 sheets or more		Executed after a print cycle
None of the conditions is met	800 sheets or more		Any of the conditions is met	Change	A predetermined number of pages or more	-		Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle
				-	-	800 to 1000 sheets		Executed by interrupting the print cycle
					-	400 sheets or more		Executed after a print cycle
			None of the conditions is met	Change	A predetermined number of pages or more	-	Mode 2 is executed	Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle
				-	-	800 to 1000 sheets		Executed by interrupting the print cycle
					-	400 sheets or more		Executed after a print cycle
None of the conditions is met	800 sheets or less	400 sheets or more	Any of the conditions is met	Change	A predetermined number of pages or more	-	Mode 1 is executed	Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle
				-	-	800 to 1000 sheets		Executed by interrupting the print cycle
					-	400 sheets or more		Executed after a print cycle
			None of the conditions is met	Change	A predetermined number of pages or more	-	Mode 3 is executed	Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle
				-	-	800 to 1000 sheets		Executed by interrupting the print cycle
					-	400 sheets or more		Executed after a print cycle
		400 sheets or less	-	Change	A predetermined number of pages or more	-	Mode 4 is executed	Executed by interrupting the print cycle
					Less than a predetermined number of pages			Executed after a print cycle

- *1: Stabilization execution condition:
  - A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence)
  - The count of the number of printed pages is 10,000 as counted from the last LD adjustment.
- *2: Stabilization execution condition:
  - In the last image stabilization, the value of IDC sensor detection was out of the specified range.
  - The last malfunction code occurs.
- *3: Detected by both the PH temperature sensor and temperature/humidity sensor
- *4: Counting method of printed pages

Paper length	Count	
	Color mode	Monochrome mode
216 mm or less	2	1
Over 216 mm	4	2

(2) During a monochrome print cycle

Stabilization execution condition *1	Print count after gamma correction	Stabilization execution condition *2	Stabilization (mode)	Operation timing during print
Any of the conditions is met	-	-	Mode 5	Executed by interrupting the print cycle
None of the conditions is met	400 sheets or more	Any of the conditions is met	Mode 5	Executed by interrupting the print cycle
		None of the conditions is met	Mode 6	Executed by interrupting the print cycle

- *1: Stabilization execution condition:
  - A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence)
  - The count of the number of printed pages is 10,000 as counted from the last LD adjustment.
- *2: Stabilization execution condition:
  - In the last image stabilization, the value of IDC sensor detection was out of the specified range.
  - The last malfunction code occurs.

17.5.4 Service Mode

- Types (modes) of image stabilization to be executed with the menu of the service mode will be described.

(1) Gradation Adjust ([Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust])

Type (mode) of image stabilization to be executed	Mode 2

(2) Stabilizer ([Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer])

Type (mode) of image stabilization to be executed	Initialize+Image Stabilization	Mode 1
	Stabilization Only	Mode 2

17.5.5 Expert Adjustment

- Types (modes) of image stabilization to be executed with the menu of the expert mode will be described.

(1) Gradation Adjustment ([Utility] -> [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [Gradation Adjustment])

Type (mode) of image stabilization to be executed	Mode 2

(2) Image Stabilization ([Utility] -> [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [Image Stabilization])

Type (mode) of image stabilization to be executed	Initialize+Image Stabilization	Mode 1
	Stabilization Only	Mode 2

17.5.6 Stabilization time (bizhub C368/C308/C258)

Type		Time
Mode 1	bizhub C368	Approx. 35 sec.
	bizhub C308/C258	Approx. 39 sec.
Other than the above		Approx. 20 sec. or less

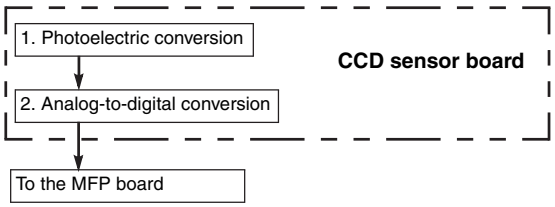
17.5.7 Stabilization time (bizhub C658/C558/C458)

Type		Time
Mode 1	bizhub C658	Approx. 23 sec.
	bizhub C558	Approx. 25 sec.
	bizhub C458	Approx. 29 sec.
Other than the above	bizhub C658	Approx. 23 sec. or less
	bizhub C558	Approx. 25 sec. or less
	bizhub C458	Approx. 29 sec. or less

18. IMAGE PROCESSING

18.1 Scanner section image processing block diagram

18.1.1 Processing flow



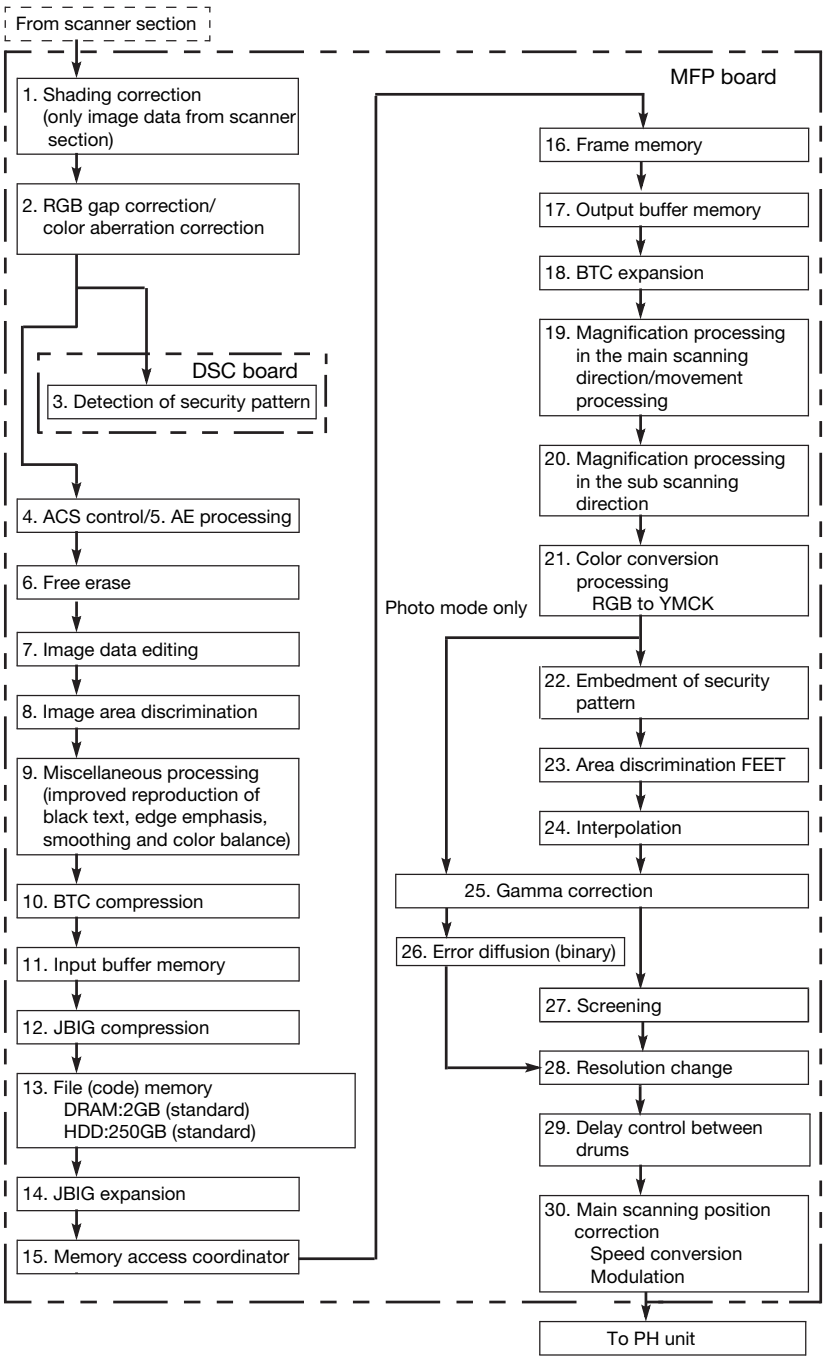
18.1.2 Detail

The following detail the image processing operations performed by the scanner section.

1. A reduction type CCD sensor is used to read the light reflected off the original and convert the optical data to a corresponding electric signal. To make data processing faster, data transfer and output are done through two channels, one for even-numbered pixels and the other for odd-numbered pixels.
2. The odd and even analog signals output from the CCD sensor chips are synthesized to form a single string of signal data which is in turn converted to 10-bit digital signals (1024 gradation levels).
3. The image data is transmitted to MFP board on the write section through the interface cable.

18.2 Write section image processing block diagram

18.2.1 Processing flow



18.2.2 Detail

The following detail the image processing operations performed by MFP board on the Write section.

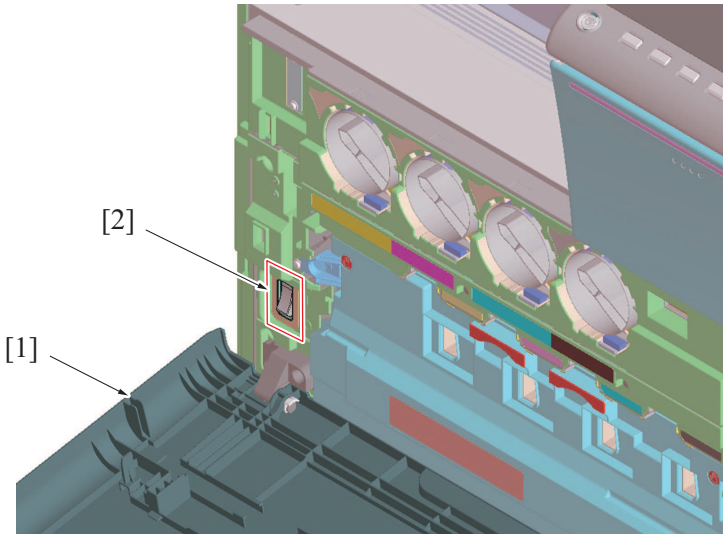
1. Correct variations in reading caused by pixel-to-pixel variations in sensitivity of the CCD sensor and uneven light distribution by the exposure LED. A peak-hold-type shading correction is performed, in which the maximum value of two or more readings of two or more lines is taken to prevent effect due to dust or dirt on the shading sheet. (only image data from scanner section)
2. To correct differences in the position of each chip of CCD sensors R, G, and B, FIFO memory is adopted to match the output timing. Also correct color aberration of the lens.
3. The security pattern created during printing on this machine is detected and copying is enabled or disabled through a password. (when security kit SC-508 is mounted)
4. The scanning area is divided into multiple blocks. The ratio of color or monochrome is calculated for each of these blocks. The machine then determines whether the entire original is colored or monochrome.
5. A histogram of lightness for AE processing is generated. The AE level of the document is determined based on this histogram and AE processing is performed.
6. If outer document elimination is selected from the control panel, document area determination processing is performed for each line within the document area data acquired during prescan. Then, the START and END positions of the document area in the main scanning direction are detected and the area outside the START and END positions is erased as the outside-the-document area.
7. R, G, and B data are then converted to value and color component data for adjustments of saturation, lightness, and hue.
8. Each image area, whether it is a color edge area, black edge area, dot area, or a continuous gradation area, is discriminated.
9. Other types of processing performed are the improved reproduction of black text, edge emphasis, smoothing and color balance.
10. Each image data of R, G, and B is compressed to reduce the consumption of data capacity.

11. Temporarily stores the BTC-compressed image data.
12. The stored image data is compressed in the JBIG (Joint bi-level image experts group) format.
13. Each image data of R, G, and B in the copy, print, scan, and fax mode is stored. In PS printing, multi-valued data of Y, M, C, and K is stored.
14. The image data read from the file memory is uncompressed through a method in a reverse way of JBIG compression. At this time, image rotating or sorting processing is conducted.
15. JBIG image data are expanded in the frame memory.
16. Each image data of R, G, and B is stored in frame memory.
17. Temporarily stores the image data output from the frame memory.
18. The image data is expanded through a method opposite to that used in the BTC compression.
19. FIFO memory is used to enlarge or reduce images in the main scanning direction. The image is enlarged by increasing the number of data readings and reduced by decreasing the number of data readings.
20. Reduction processing is conducted in sub scanning direction. No processing is done at same size or zoom, but at reduction, the lines are thinned out.
21. The R, G, and B data is converted to the Y, M, C, and K density data. Also, the masking processing, which compensates for the deviation in the spectral reflection characteristics of the toner, and UCR/BP processing are performed on the image data.
22. The security pattern is embedded in the image data. Either enabling copying through a password or unconditionally prohibiting copying can be selected from the control panel for the security pattern to be embedded. (when security kit SC-508 is mounted)
23. Edge of letter and lineal drawing gets area discrimination and FEET processing is conducted according to the discrimination result.
24. When FEET processing is conducted, interpolation is done so that no influence is given to continuous gradation portion.
25. Makes the necessary corrections so that the printed gradations have linear characteristics, since the image density of the input image data is not directly proportional to that of the printed image because of the changing developing and photo conductor characteristics.
26. In photo mode during copying and PC print, the image is processed as multi-valued data (8-bit data). In any mode other than photo, the error diffusion method is employed to process the image as binary (1-bit) data.
27. Creates the density distribution of a predetermined pattern to enable outstanding gradation reproduction.
28. For 1200 dpi writing, the 600 dpi image data is converted to corresponding 1200 dpi image data.
29. Image data of the file memory is developed to the frame memory and output delay control for the interval of photo conductors, Y, M, C, K is conducted.
30. Correct the shear in printing start position in the main scanning direction, which occurs when each PH unit of Y, M, C, K is exposed on the photo conductor. Adjust the processing speed in the board (main scanning) to conform to the input processing speed.

19. POWER SUPPLY SECTION

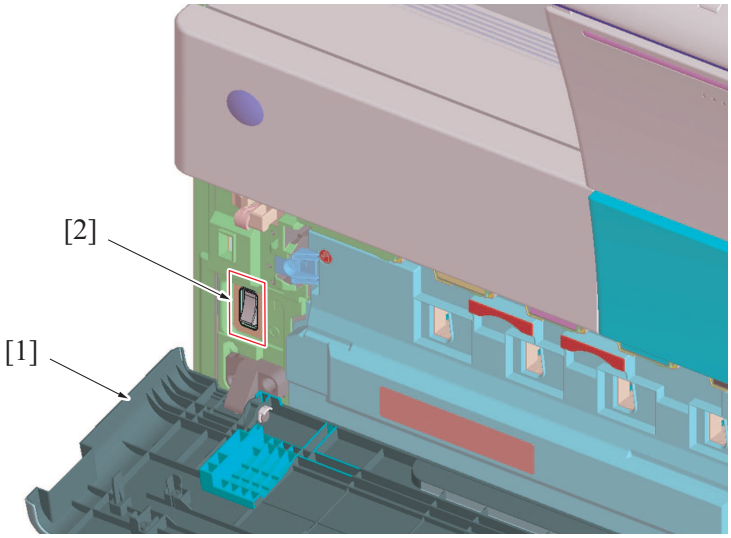
19.1 Main power switch

bizhub C368/C308/C258



[1]	Front door (open position)	[2]	Main power switch

bizhub C658/C558/C458



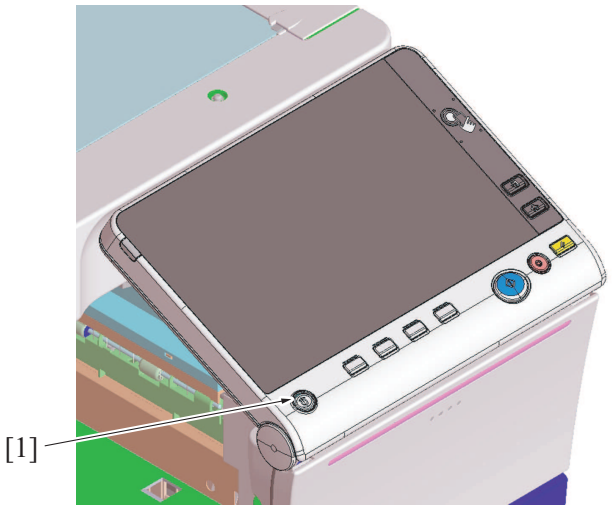
[1]	Lower front door (open position)	[2]	Main power switch

NOTE

- **To turn OFF and ON the main power switch, first turn OFF the main power switch and wait for 10 sec. or more before turning it ON again. If a setting value or values in the service mode are changed, it takes 10 sec. or more to incorporate the setting changes properly in the machine.**

19.2 Power key

19.2.1 Configuration



[1]	Power key	-	-

19.2.2 Operation

(1) Power key functions

- The power key offers two functions, serving as the power save button and the sub-power switch found in conventional models, depending on how long it is held down.
- In the default setting, holding down the power key for a short time sets the machine into the power save mode (low power mode) and holding it down for a long time sets the machine into the sub power OFF mode.
- The mode can be changed from the following: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings].

How long the power key is held down	Default setting	Settings changed by Administrator Settings
Short time	Low power mode *2	Sleep mode *2
		Sub power OFF mode *1
Long time	Sub power OFF mode	ErP auto power off mode *1

- *1: [Utility] -> [Administrator settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Key Setting]
- *2: [Utility] -> [Administrator settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Save Settings]

(2) Status in each mode

Mode		Condition	Power key LED	
Standby		All functions are ready to accept and ready to perform jobs.	Lit up blue	
Power save mode	Low power mode	• Power consumption is limited to a level lower than the standby state with the fusing temperature control minimized. • Reset when a job is received or the machine is operated.	Blinking in blue	
	Sleep mode *2 (Not reduce)	• Power consumption is reduced in low power mode. • Sensors that are used internally are operating.	Blinking in blue	
	Sleep mode *2 (Reduce)	• Power is supplied only to a portion of the MFP board required for receiving a job. • When an original is placed on the scanner, a job is received, or the machine is operated, the system wakes up.		
	Sleep mode *2 (High)	• Power is supplied only to a portion of the MFP board required for receiving a job. • Reset when a job is received or the machine is operated.		

Mode		Condition	Power key LED	
Sub power OFF mode	Sleep mode *3 (Not reduce)	• Power consumption is reduced in low power mode. • Sensors used internally are operating. • Wake-up time is shorter than when "Enabled or High" is selected. • The system wakes up when the sub power is turned on.	Lit up orange	
	Sleep mode *3 (Reduce)	• Power is supplied only to a portion of the MFP board required for receiving a job. • A job can be received, but printing is performed when power is turned ON. • Wake-up time is longer than when "Disabled" is selected.		
	Sleep mode *3 (High)	• Power is supplied only to the MFP board. • A job can be received, but printing is performed when power is turned ON. • Wake-up time is longer than when "Disabled" is selected. • Power is reduced when "Enabled" is selected.		
ErP auto power off mode		• Power consumption to the lowest level. • Reset only by the power key or the weekly timer setting. • No jobs can be received. *1 • The system can also wake up when this machine is equipped with optional upgrade kit UK-212 or UK-215.	Blinking in orange	

- *1: In ErP auto power OFF mode, this machine cannot receive data or faxes, and also it cannot scan or print an original.
- *2: The [Disabled], [Enabled], and [High] options are available from [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode].
- *3: The [Disabled], [Enabled], and [High] options are available in sub power OFF mode from [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode].

(3) Power supply

Power is supplied only to the following portions in the sleep mode and the sub power OFF mode.

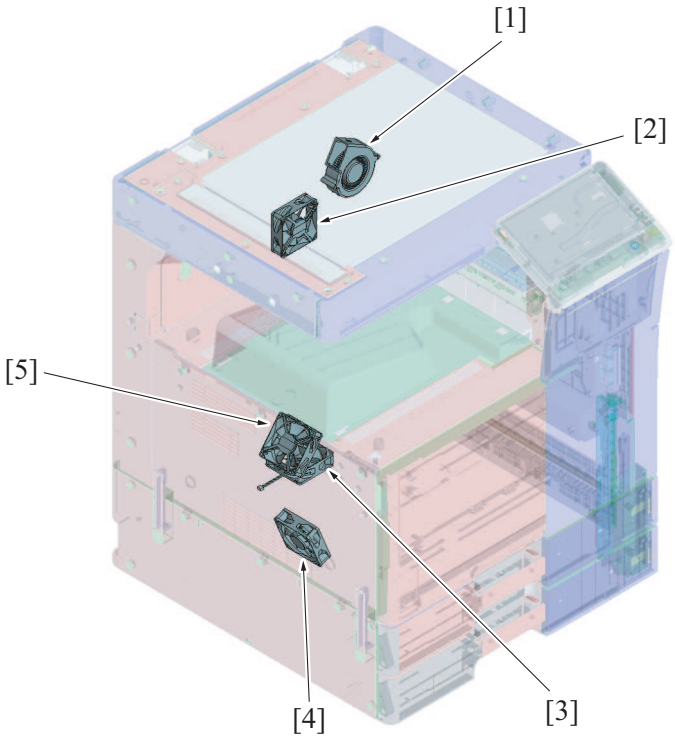
5.1V	• MFP controller • FAX CPU • HDD *2 • USB board
	• Angle sensor *1 • Original cover sensor *1 • Control panel key

- *1: No power is supplied when the following is selected: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Consumption in Sleep Mode] -> [High].
- *2: No power is supplied when either [Enabled] or [High] is selected from: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Consumption in Sleep Mode].

20. FAN CONTROL

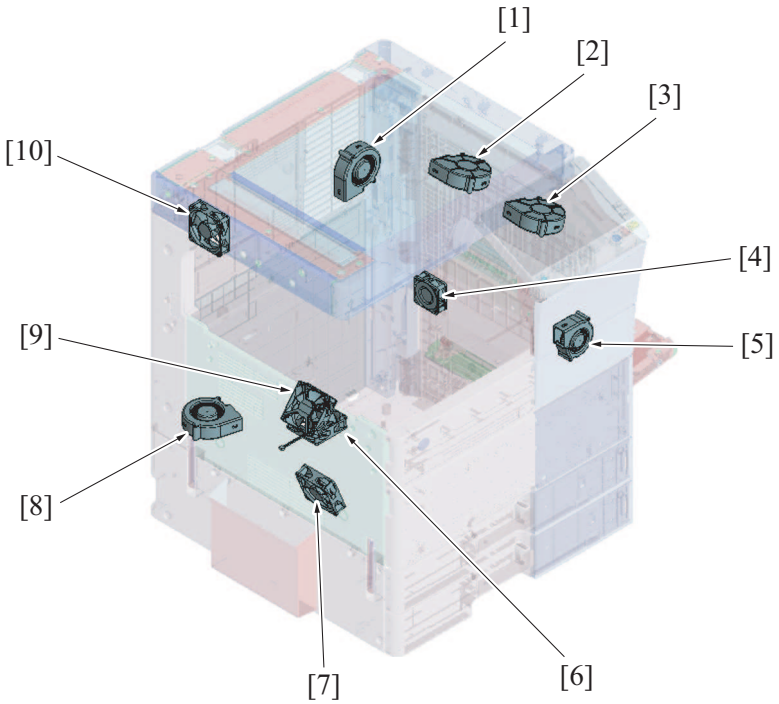
20.1 Configuration

20.1.1 bizhub C368/C308/C258



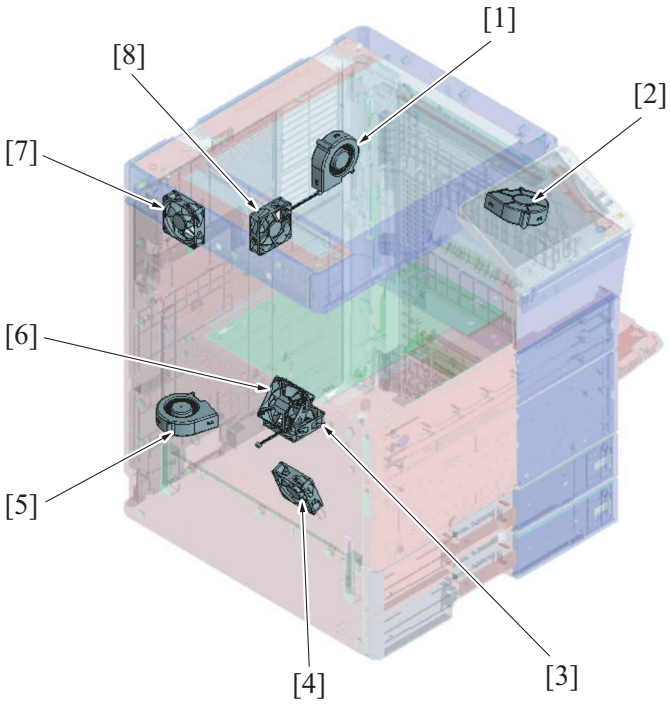
[1]	Paper cooling fan (FM8)	[2]	Toner cartridge cooling fan (FM4)
[3]	Rear side cooling fan (FM3)	[4]	Power supply cooling fan (FM1)
[5]	Transfer belt cleaner cooling fan (FM2)	-	-

20.1.2 bizhub C658/C558



[1]	Paper cooling fan (FM8)	[2]	UFP exhaust fan2 (FM18)
[3]	UFP exhaust fan1 (FM17)	[4]	Toner cartridge cooling fan (FM4)
[5]	IH coil cooling fan (FM7)	[6]	Rear side cooling fan (FM3)
[7]	Power supply cooling fan (FM1)	[8]	Toner suction fan (FM11)
[9]	Transfer belt cleaner cooling fan (FM2)	[10]	Fusing power supply cooling fan (FM12)

20.1.3 bizhub C458



[1]	Paper cooling fan (FM8)	[2]	UFP exhaust fan1 (FM17)
[3]	Rear side cooling fan (FM3)	[4]	Power supply cooling fan (FM1)
[5]	Toner suction fan (FM11)	[6]	Transfer belt cleaner cooling fan (FM2)
[7]	Fusing power supply cooling fan (FM12)	[8]	Toner cartridge cooling fan (FM4)

20.2 Control

Motor name	Control	Control conditions (outline)
Power supply cooling fan (FM1)	Stop	• At paper-jam, in trouble, or when the door is open • When updating the firmware • In standby *2 • In low-power or sleep
	Full speed	• At warm-up • At initial operation, image stabilization, transfer cleaning, function *1 • When printing
Transfer belt cleaner cooling fan (FM2)	Stop	• Other than those below
	Full speed	• At warm-up • At initial operation, image stabilization, transfer cleaning, function *1 • When printing
Rear side cooling fan (FM3)	Stop	• Other than those below
	30% air flow relative to that of full speed	• At paper-jam, in trouble • At warm-up • In low-power • In standby
	Full speed	• When printing • At initial operation, image stabilization, transfer cleaning, function *1
Toner cartridge cooling fan (FM4)	Stop	• Other than those below
	Full speed	• When printing • At initial operation, image stabilization, transfer cleaning, function *1
IH coil cooling fan (FM7)	Stop	• Other than those below
	Half speed	• Standby • During warm-up • At initial operation, image stabilization, transfer cleaning, function *1 • In low-power or sleep
	Full speed	• When printing
Paper cooling fan (FM8) (bizhub C368/C308/C258)	Stop	• When printing and warm-up *4 except
	Full speed	• At warm-up *4 • When printing
Paper cooling fan (FM8) (bizhub C658/C558)	Stop	• Other than those below
	Full speed	• During warm-up

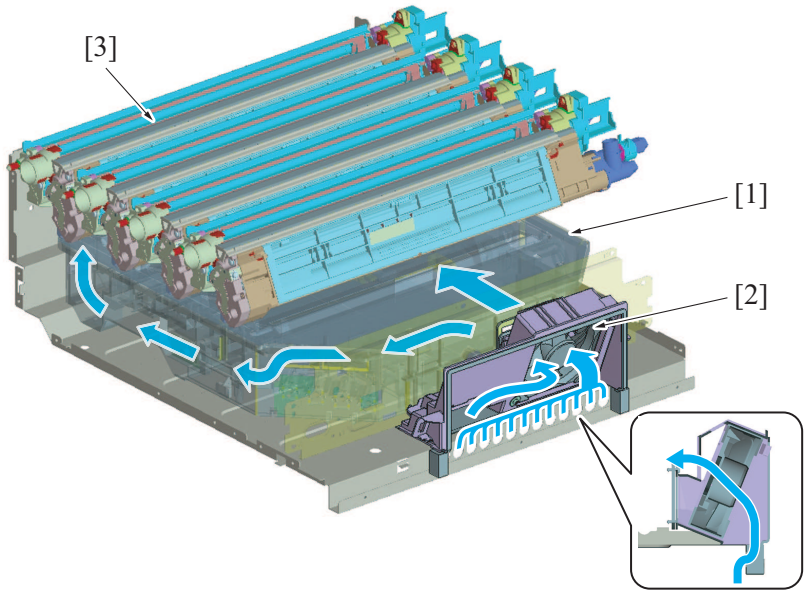
Motor name		Control	Control conditions (outline)
			• Printing • At initial operation, image stabilization, transfer cleaning, function *1
Paper cooling fan (FM8) (bizhub C458)	Not equipped with CU-102	Stop	• Other than those below
		Half speed	• Printing
	Equipped with CU-102	Stop	• Other than those below
		Full speed	• During warm-up • Printing • At initial operation, image stabilization, transfer cleaning, function *1
Toner suction fan (FM11)	bizhub C368/C308/C258	Stop	• Other than those below
		Full speed	• Printing • At initial operation, image stabilization, transfer cleaning, function *1 • Operates at full speed for a predetermined period when the internal temperature rises above a predetermined threshold during standby.
	bizhub C458	Stop	• Other than those below
		30% air flow relative to that of full speed	• Standby • During warm-up • Printing • In low-power or sleep • At paper-jam, in trouble
		Full speed	• At initial operation, image stabilization, transfer cleaning, function *1 • Print utilization exceeds a predetermined threshold • Internal temperature reaches a predetermined threshold
Fusing power supply cooling fan (FM12)		Stop	• Other than those below
		Full speed	• During warm-up • Printing • At initial operation, image stabilization, transfer cleaning, function *1
UFP exhaust fan1 (FM17) UFP exhaust fan1 (FM18) (bizhub C658/C558)		Stop	• Other than those below
		Full speed	• During warm-up • Printing • At initial operation, image stabilization, transfer cleaning, function *1
UFP exhaust fan1 (FM17) (bizhub C458)	Not equipped with CU-102	Stop	• Other than those below
		Full speed	• Print utilization exceeds a predetermined threshold • Internal temperature reaches a predetermined threshold
	Equipped with CU-102	Stop	• Other than those below
		Full speed	• During warm-up • Printing • At initial operation, image stabilization, transfer cleaning, function *1

- *1: Some operations selected in the service mode (Paper path check etc.)
- *2: If the machine enters the “standby” state, the fan motor turns at full speed for predetermined time before stopping.
- *3: Half speed rotation after the lapse of the predetermined period of time of full speed rotation
- *4: Full speed rotation when optional CU-101 is mounted, even during warm-up.

20.3 Operation

20.3.1 Power supply cooling fan

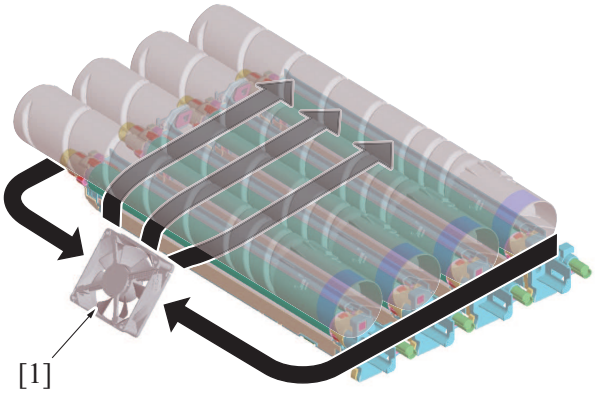
- Draws outside air into the inside of the machine to prevent the temperature around the DC power supply, PH section, developing/drum unit.
- Air is drawn from around the edges of the first paper cassette and sent to each unit via ducts.



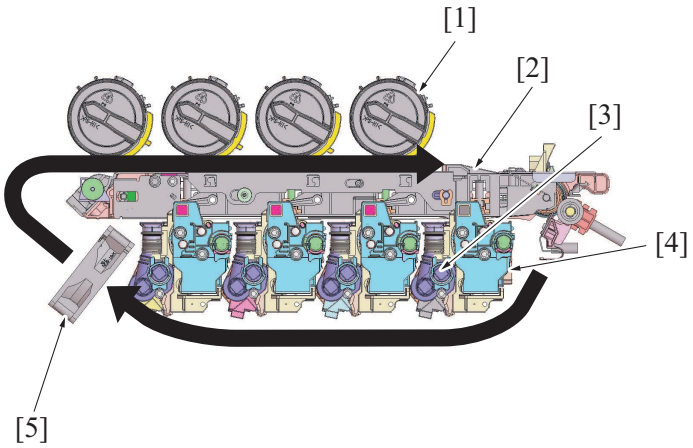
[1]	PH unit	[2]	Power supply cooling fan (FM1)
[3]	Drum/Developing unit	-	-

20.3.2 Transfer belt cleaner cooling fan

- The transfer belt cleaner cooling fan is provided to circulate air through the inside of the machine, so that the areas around the developing unit, drum unit, toner hopper, and the transfer belt unit can be cooled.
- Air around the developing unit and drum unit is drawn in.
- The air drawn in flows between the toner bottle and the transfer belt unit and is blown against the toner bottle/K.



[1]	Transfer belt cleaner cooling fan (FM2)	-	-

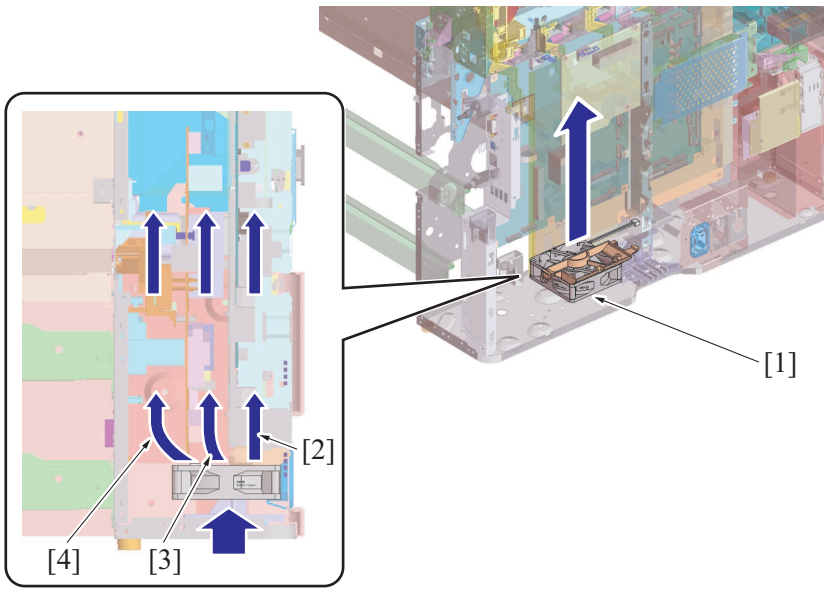


[1]	Toner cartridge/K	[2]	Transfer belt unit

[3]	Developing unit	[4]	Drum unit
[5]	Transfer belt cleaner cooling fan (FM2)	-	-

20.3.3 Rear side cooling fan

- Blows outside air against around the MFP board, high voltage unit, and drive unit to prevent the temperature of the board from rising.
- External air that is drawn from the bottom-rear of the main body and blown to cool the MFP board, high voltage unit, and drive units.

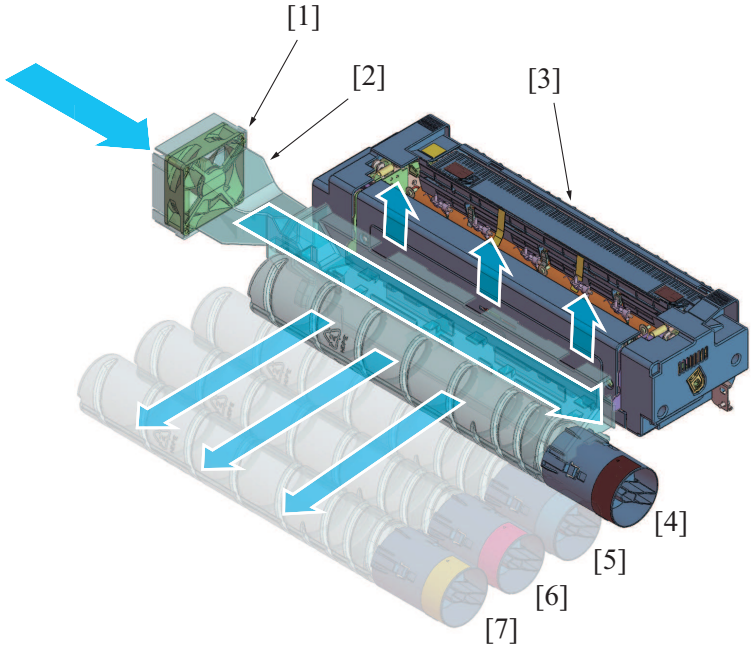


[1]	Rear side cooling fan (FM3)	[2]	Air to the MFP board
[3]	Air supplied to the high voltage unit	[4]	Air to drive units

20.3.4 Toner cartridge cooling fan

(1) bizhub C368/C308/C258

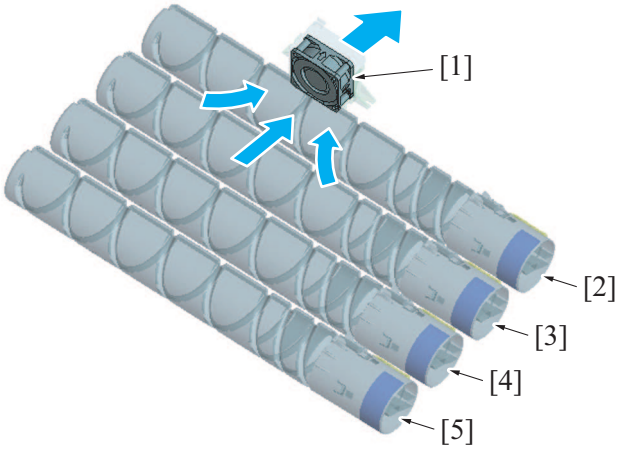
- The machine is equipped with a toner cartridge cooling fan to equipped cooling to the toner cartridge area and the fusing section.
- The toner cartridge cooling fan sucks air from the rear side of the main body and pushes it in between the fusing unit and the toner cartridge/K.
- Creation of air flow between the fusing unit and toner cartridge may make the heat generates from the fusing unit hardly reach the toner cartridge area. This structure limits the increase in temperature of the toner cartridge area.



[1]	Toner cartridge cooling fan (FM4)	[2]	Duct
[3]	Fusing unit	[4]	Toner cartridge/K
[5]	Toner cartridge/C	[6]	Toner cartridge/M
[7]	Toner cartridge/Y	-	-

(2) bizhub C658/C558/C458

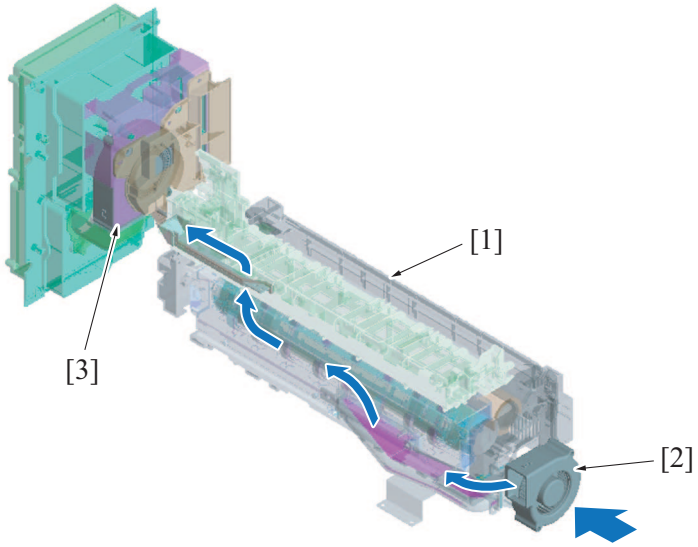
- The machine is equipped with a toner cartridge cooling fan to equipped cooling to the toner cartridge area and the fusing section.
- The toner cartridge cooling fan sucks air from the rear side of the main body and pushes it in between the fusing unit and the toner cartridge/K.
- Creation of air flow between the fusing unit and toner cartridge may make the heat generates from the fusing unit hardly reach the toner cartridge area. This structure limits the increase in temperature of the toner cartridge area.



[1]	Toner cartridge cooling fan (FM4)	[2]	Toner cartridge/K
[3]	Toner cartridge/C	[4]	Toner cartridge/M
[5]	Toner cartridge/Y	-	-

20.3.5 IH coil cooling fan (bizhub C658/C558)

- An IH coil cooling fan is provided to cool the IH coil that heats the heating roller assy.
- Air is drawn from around the front cover of the main body and distributed inside the IH coil unit via the inlet duct.
- Hot air that has passed through the IH coil exhausts from the main body via the exhaust duct and paper cooling fan.

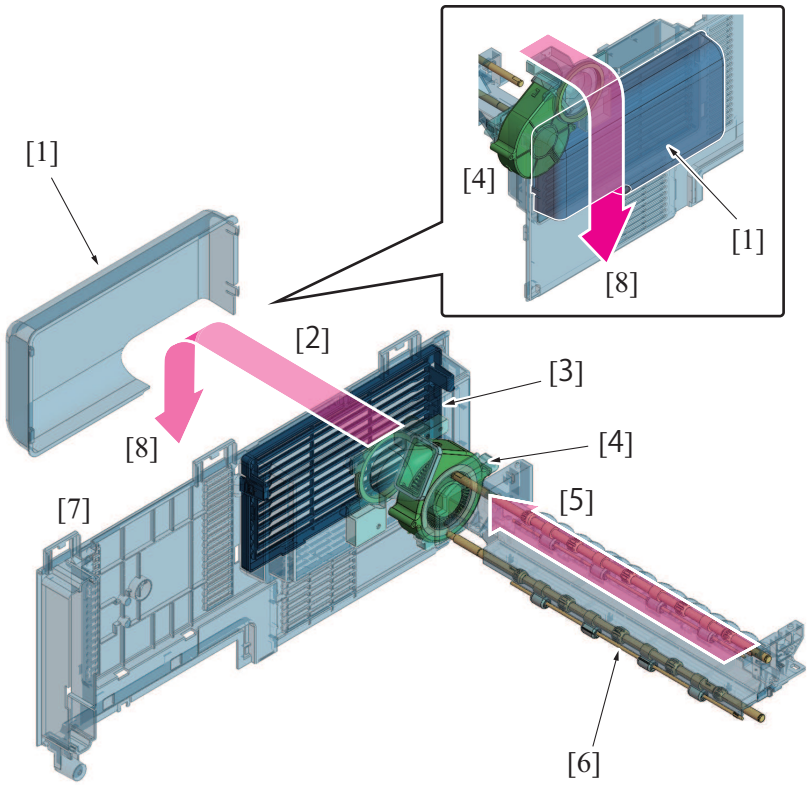


[1]	Fusing unit	[2]	IH coil cooling fan (FM7)
[3]	Paper cooling fan (FM8)	-	-

20.3.6 Paper cooling fan

(1) bizhub C368/C308/C258

- The paper cooling fan cools the paper after fusing and the paper exit/reverse section.
- The paper cooling fan sucks the warm air from the area of the paper exit/reverse section and discharges it out of the machine.
- The exhaust air is discharged externally from the main body rear side and is exhausted downward from the exhaust cover.

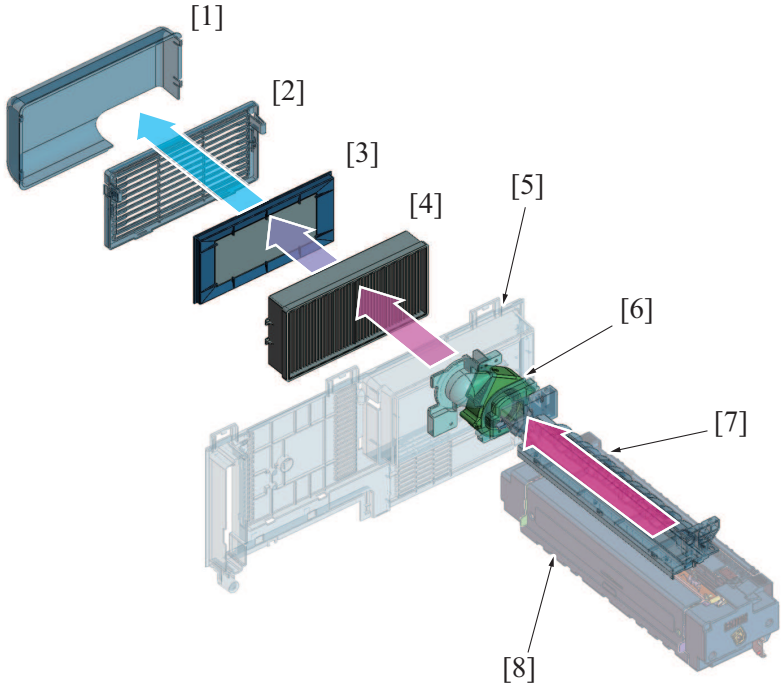


[1]	Exhaust cover	[2]	Discharging exhaust air out of the machine
[3]	Filter cover	[4]	Paper cooling fan (FM8)
[5]	Sucking warm air from the paper exit/reverse section	[6]	Paper exit/reverse section
[7]	Upper rear cover	[8]	Deflection of air flow direction

- The paper cooling fan sucks ultrafine particles (UFPs) and odors that are generated from the fusing unit, and the filter in the rear side of the main body removes them.

NOTE

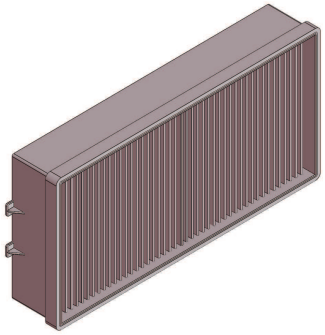
- **The UFP filter is fitted as standard equipment on models that are destined for Europe only.**
- **The deodorant filter is fitted as standard equipment on models that are destined for China only.**
- **The UFP and deodorant filters can be used together. When these filters are used together, the deodorant filter is mounted to the rear of the UFP filter.**



[1]	Exhaust cover	[2]	Filter cover
[3]	Deodorant filter	[4]	UFP filter
[5]	Upper rear cover	[6]	Paper cooling fan (FM8)
[7]	Paper exit/reverse section	[8]	Fusing unit

(a) UFP removal function

- The UFP filter removes UFPs in the air.

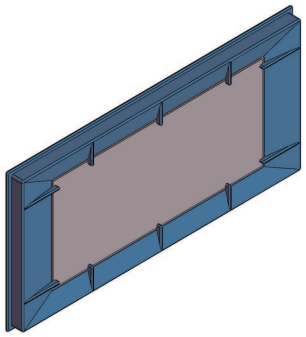


NOTE

- **The UFP filter does not requires a periodic replacement.**
- **A higher air cleaning performance can be achieved through installing optional clean unit CU-101.**

(b) Deodorization function

- The deodorant filter removes odors in the air.

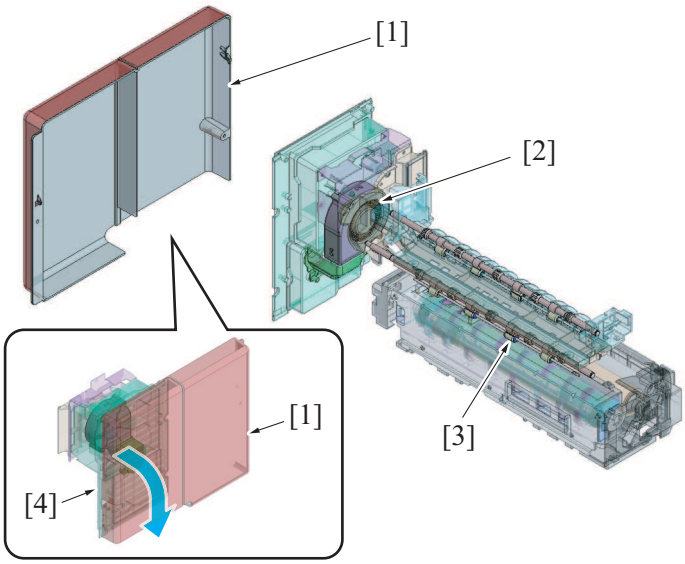


NOTE

- **The deodorant filter does not requires a periodical replacement.**

(2) bizhub C658/C558/C458

- The paper cooling fan cools the paper after fusing and the paper exit/reverse section.
- The paper cooling fan sucks the warm air from the area of the paper exit/reverse section and discharges it out of the machine.
- The exhaust air is discharged externally from the main body rear side and is exhausted downward from the exhaust cover.

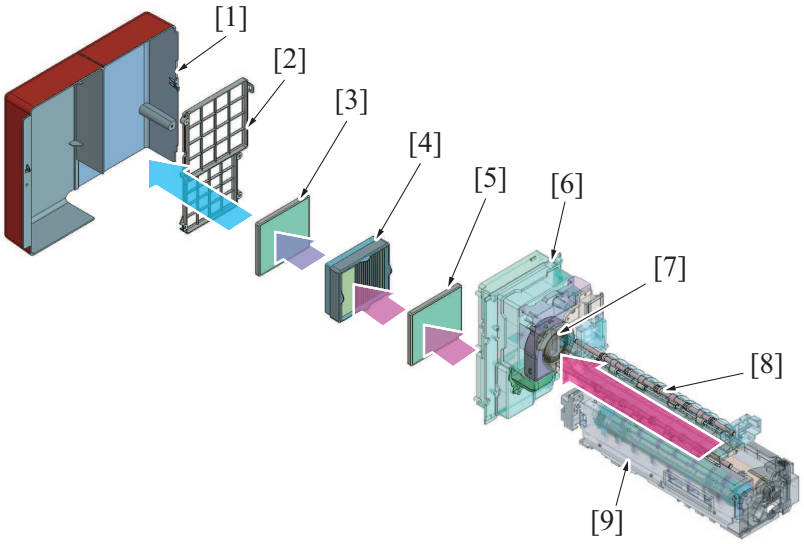


[1]	Exhaust cover	[2]	Paper cooling fan (FM8)
[3]	Paper exit/reverse section	[4]	Filter cover

- The paper cooling fan sucks ultrafine particles (UFPs) and odors that are generated from the fusing unit, and the filter in the rear side of the main body removes them.

NOTE

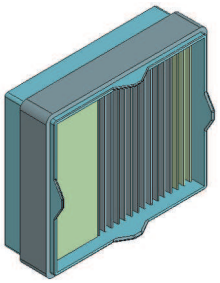
- **The UFP filter is fitted as standard equipment on models that are destined for Europe only.**
- **The deodorant filter is fitted as standard equipment on models that are destined for China only.**
- **The UFP and deodorant filters can be used together. When these filters are used together, the deodorant filter is mounted to the rear of the UFP filter.**



[1]	Exhaust cover	[2]	Filter cover
[3]	Deodorant filter	[4]	UFP filter
[5]	Deodorant filter	[6]	Upper rear cover
[7]	Paper cooling fan (FM8)	[8]	Paper exit/reverse section
[9]	Fusing unit	-	-

(a) UFP removal function

- The UFP filter removes UFPs in the air.

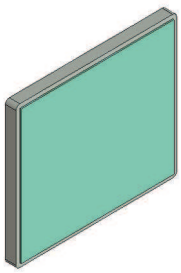


NOTE

- **The UFP filter does not requires a periodic replacement.**
- **A higher air cleaning performance can be achieved through installing optional clean unit CU-102.**

(b) Deodorization function

- The deodorant filter removes odors in the air.

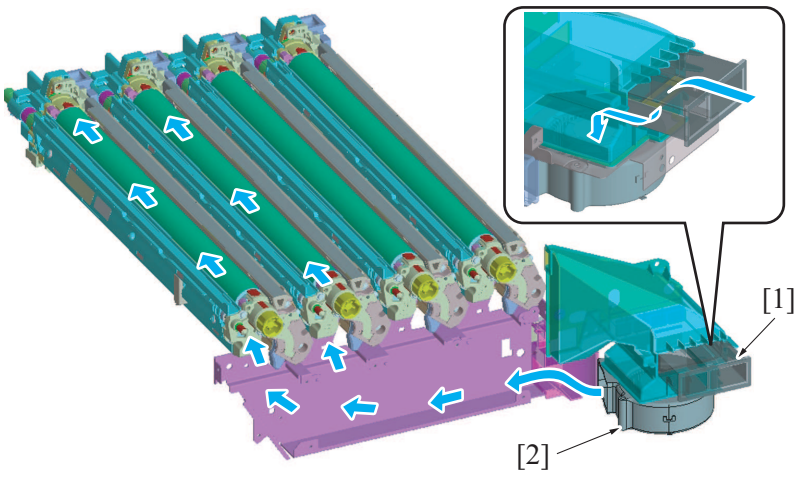


NOTE

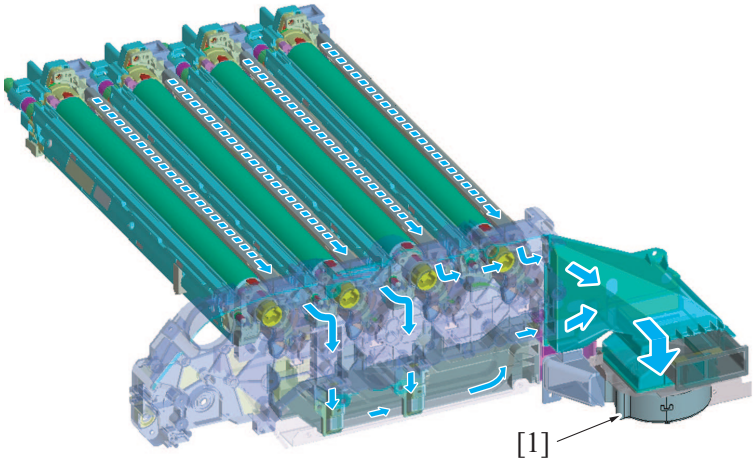
- **The deodorant filter does not requires a periodical replacement.**

20.3.7 Toner suction fan

- The toner suction fan draws the toner dust from the ends of the developer unit to prevent contamination of the machine.
- Air that is drawn in via the toner filter is blown into the machine via ducts to cool the drum unit and developing unit.
- Air is drawn and circulated throughout the machine for many different purposes.



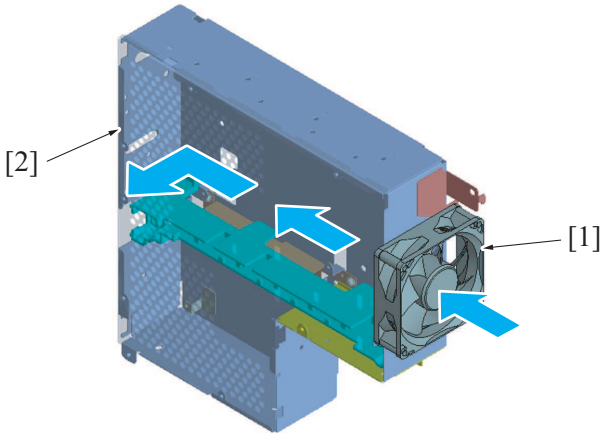
[1]	Toner filter	[2]	Toner suction fan (FM11)



[1]	Toner suction fan (FM11)	-	-

20.3.8 Fusing power supply cooling fan

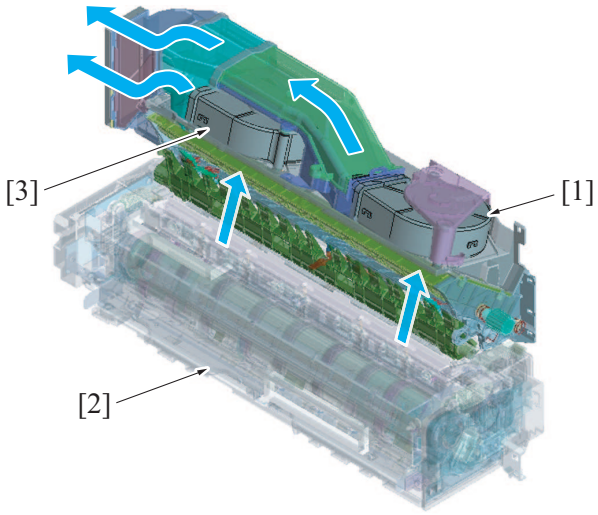
- The fusing power supply cooling fan is used to cool the fusing power supply and IH power supply.
- The fusing power supply cooling fan in the power supply box draws air from the sides of the main body. It blows this air to cool the power supply boards.



[1]	Fusing power supply cooling fan (FM12)	[2]	Fusing power supply/IH power supply box

20.3.9 UFP exhaust fan1, UFP exhaust fan2

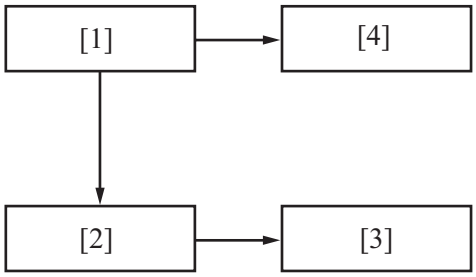
- Air from the paper cooling fan and IH coil cooling fan is drawn with the UFP exhaust fan and exhausted outside of the machine. Heat around the fusing section and air around the reverse section are also drawn.
- bizhub C658 is equipped with two UFP exhaust fans.
- Air that is drawn with the UFP exhaust fan is discharged from the machine via the filter.



[1]	UFP exhaust fan1 (FM17)	[2]	Fusing unit
[3]	UFP exhaust fan2 (FM18)	-	-

21. COUNTER CONTROL

21.1 Configuration



[1]	MFP board (mechanical control area) (MFPB)	[2]	MFP board (controller area) (MFPB)
[3]	Electronic counter	[4]	Key counter (option)

21.2 Operation

Name	Function/system
Electronic counter	• Number of total in copy/print/fax/scan mode will be displayed on the screen as described below. • Black, full color, mono color, and 2 color • Total counter, large size counter, color total (copy + printer), scan counter, fax TX counter, fax RX counter, No. of originals counter, No. of prints counter, total duplex counter • Counts one when an exit signal is applied to it
Key counter (option)	• When charging prints by using the key counter, copies cannot be made without the key counter. However PC prints and fax TX/RX service are available without the key counter. • Displays the cumulative number of copies while the key counter is being mounted. • A mechanical counter driven by an electric signal • Counts one when a paper feed start signal or image forming start signal, whichever occurs earlier, is applied to it

NOTE

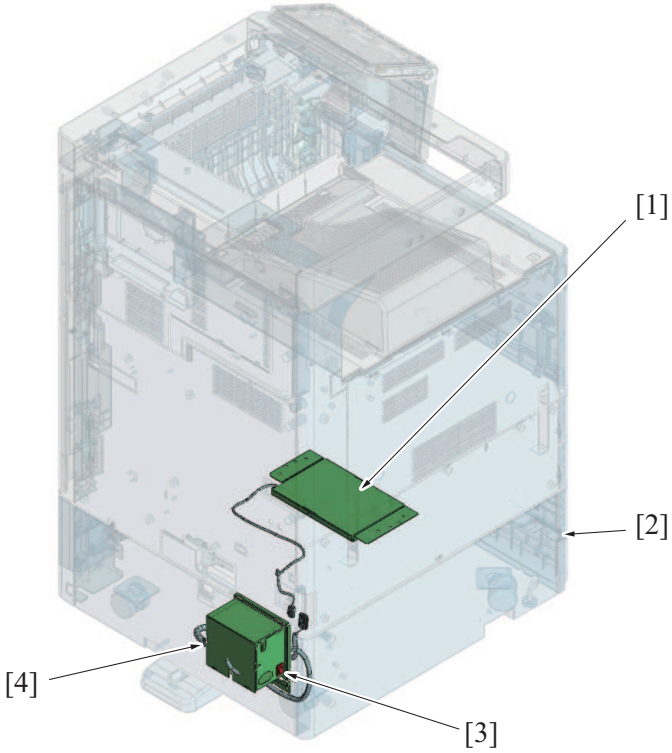
- **The counting modes can be selected at [Billing Setting] of Service Mode. For details, see " I.8.3.1 Counter Setting".**

22. HEATER

22.1 Configuration (HT-509/MK-735)

- Optional heater HT-509 can be attached to the bottom (top of the paper feed cabinet) of the paper tray 2 on the machine.

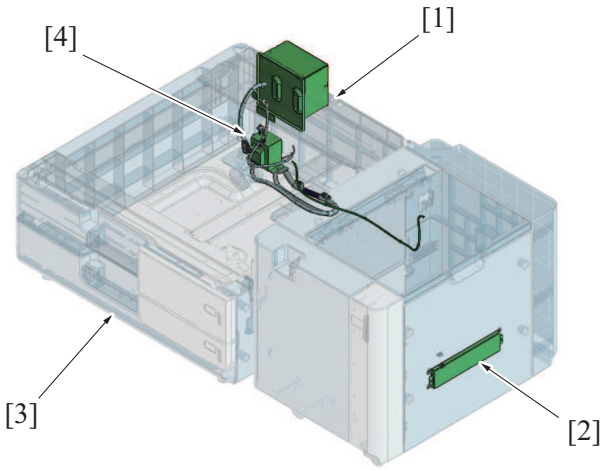
Rear view



[1]	Dehumidifier heater (DH111): HT-509	[2]	Paper feed cabinet (Example: PC-210)
[3]	Dehumidifier heater switch	[4]	Power Supply BOX MK-734

22.2 Configuration (LU/TK-101)

- To make use of the function of the dehumidifier heater, the following combined optional equipment is required.
- Transformer kit TK-101
- Power Supply BOX MK-734
- Paper feed cabinet PC-110, PC-115, PC-210, PC-215, PC-410 or PC-415.

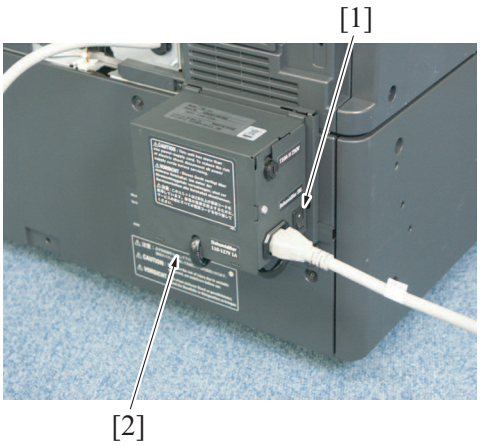


[1]	Power Supply BOX MK-734	[2]	Dehumidifier heater (DH): Standard equipment
[3]	Paper feed cabinet PC-110/PC-115/PC-210/PC-215/ PC-410/PC-415 or desk DK-510	[4]	Transformer kit TK-101

22.3 Control

22.3.1 HT-509/MK-735

- The heater provides heat when it is energized to prevent paper in the paper feed cabinet and paper feed trays from absorbing damp. It prevents paper curling, paper misfeeds, paper jams, and abnormal images that occur when paper absorbs the damp.
- Turn on the dehumidifier heater switch of Power Supply BOX MK-734 to perform humidity control.
- Turn off the dehumidifier heater switch to stop the dehumidifier heater function.



[1]	Dehumidifier heater switch	[2]	Power Supply BOX MK-734

(1) Operation timing

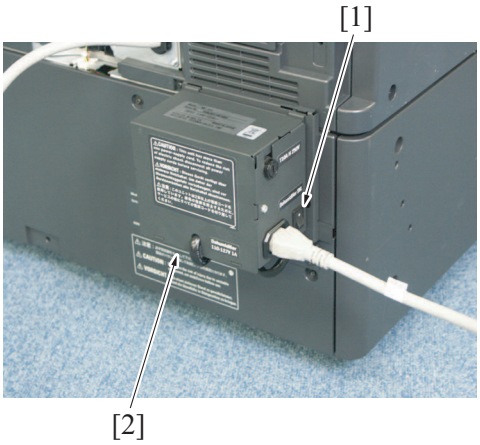
- If the machine is stopped*, the heater is energized and generates heat.
- When the machine starts normally, it stops energizing the heater.

NOTE

- ***: When the covers are opened, a problem or paper jam occurs, or in power-saving mode.**

22.3.2 LU/TK-101

- The heater provides heat when it is energized to prevent paper in the large capacity unit tray from absorbing damp. It prevents paper curling, paper misfeeds, paper jams, and abnormal images that occur when paper absorbs the damp.
- Turn on the dehumidifier heater switch on power supply box MK-734 to perform humidity control.
- Turn off the dehumidifier heater switch to stop humidity control.



[1]	Dehumidifier heater switch	[2]	Power Supply BOX MK-734

(1) Operation timing

- If the machine is stopped*, the heater is energized and generates heat.
- When the machine starts normally, it stops energizing the heater.

NOTE

- ***: When the covers are opened, a problem or paper jam occurs, or in power-saving mode.**

23. INDICATOR FUNCTION

23.1 Configuration

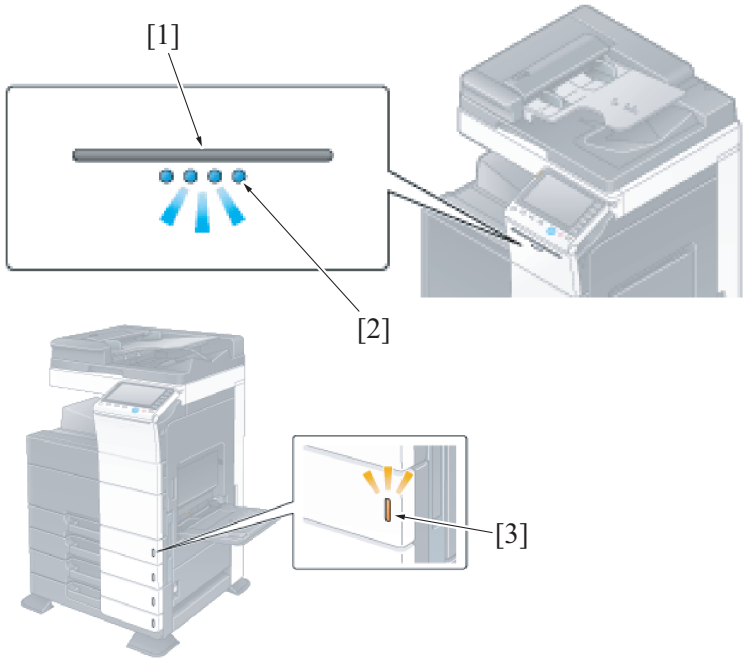
23.1.1 Control panel section



[1]	Start key indicator section	[2]	Power key indicator section
[3]	Warning status indicator section	-	-

23.1.2 Front side section

The following illustration is for bizhub C368/C308/C258.



[1]	Operation status indicator section	[2]	Data indicator section
[3]	Remaining paper level display section	-	-

23.2 Control

- The lighting control for the LED on each indicator section is described below.

23.2.1 Power key and Start key indicator section

Condition	LED indicator	
During warm-up	Lit up blue	Lit up orange

Condition	LED indicator	
		
During stand-by	Lit up blue	Lit up blue
		
During copying or printing	Lit up blue	Lit up blue or orange
		 
Paper misfeed or trouble	Lit up blue	Lit up orange
		
Low power mode Sleep mode	Blinking in blue	Unlit
		
ErP auto power off mode	Blinking in orange	Unlit
		
Sub power off mode	Lit up orange	Unlit
		

23.2.2 Warning status indicator section

Condition	LED indicator
When machine stops	Lit up orange

Condition	LED indicator
	
When warning occurs	Blinking in orange
	
Other status	Unlit
	

23.2.3 Operation status indicator section

Condition	LED indicator
During copying or printing	Steady light and blinking light are repeated
	
Other than the above	Unlit

23.2.4 Data indicator section

Condition	LED indicator
Storing a job	Lit up blue
	
Receiving a job	Blinking in blue
	

Condition	LED indicator
Other status	Unlit
	

23.2.5 Remaining paper level display section

Condition	LED indicator
Paper empty	Lit up orange
	
Paper near empty	Blinking in orange or unlit *
	
Other status (Including lifting-up, and an opened tray)	Unlit
	

- *: The lighting status varies depending on the following settings. [Service Mode] -> [System 1] -> [Machine State LED Setting]. Type 1: Blinks in orange, Type 2: Unlit

24. CHANGES IN REFRESH MODEL

24.1 What is the Refresh Model?

- Although the product name is remained same as the previous product name, each section has been improved.
- It can be identified with the serial number (Serial No.) on the manufacturer plate on the main body.

Product name	Item code	Serial number (Serial No.)
bizhub C368	A7PUxx7	A7PUxx7000001 or later
bizhub C308	A7PYxx7	A7PYxx7000001 or later
bizhub C258	A7R0xx7	A7R0xx7000001 or later

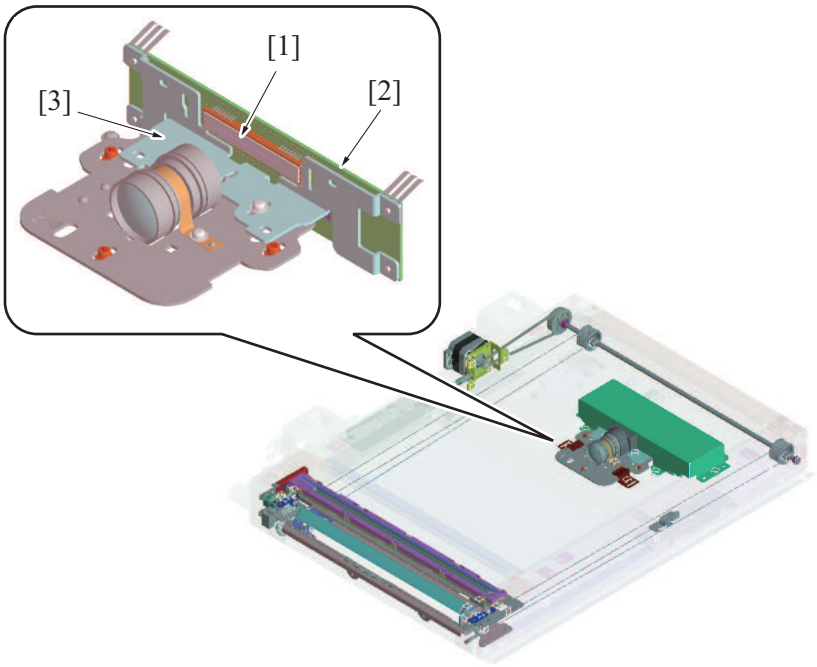
24.2 Scanner Section

- The following changes are made in the refresh model.

1. The CCD module on the CCD board is changed.

24.2.1 CCD Board

The manufacturer is changed due to disuse of the CCD module. Therefore, the CCD board is changed.



[1]	CCD module	[2]	CCD board
[3]	CCD mounting plate	-	-

NOTE

- **To install the new CCD board to the previous MFP, the functional version of firmware on the MFP must be updated to 4.0 or later.**
- **The CCD board can be identified automatically due to the firmware update.**

24.3 Paper Feed Section

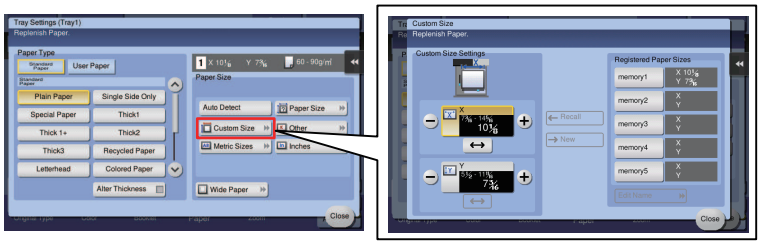
Change point	Description	Applicable tray
Enabled printing on custom-size paper	• Enabled printing on custom-size paper from the tray 1 and the tray 2. • Added settings for detecting custom-size paper. (Engine FW DIP SW No.19: “ON” by default)	• Tray 1 • Tray 2
Changed mechanism of paper length guide and paper width guide	• Supported with the universal design • When paper is loaded, the ease of operation for adjusting the paper length guide and the paper width guide is improved. • Improvement is made to prevent a mis-setting on the paper size, and also prevent paper from bending during paper feed.	• Tray 1 • Tray 2 • Tray 3 (Option) • Tray 4 (Option)

24.3.1 Supporting Custom-size Paper

- From the tray 1 and tray 2, printing on custom-size paper is enabled.

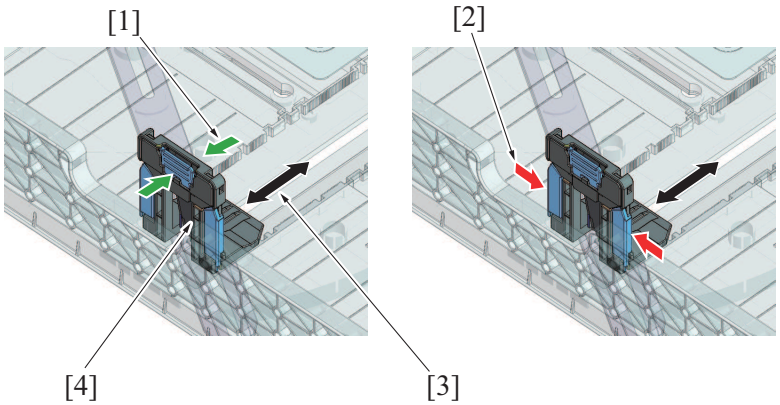
Tray	Previous model	Refresh model	
	Custom size	Custom size	Range
Tray 1	Not settable	Settable	Length (X): 182mm to 431.8 mm Width (Y): 139.7mm to 297 mm
Tray 2	Not settable	Settable	Length (X): 182mm to 457.2 mm Width (Y): 139.7mm to 320 mm

- Screen for changing settings of tray 1



24.3.2 Paper Length Guide

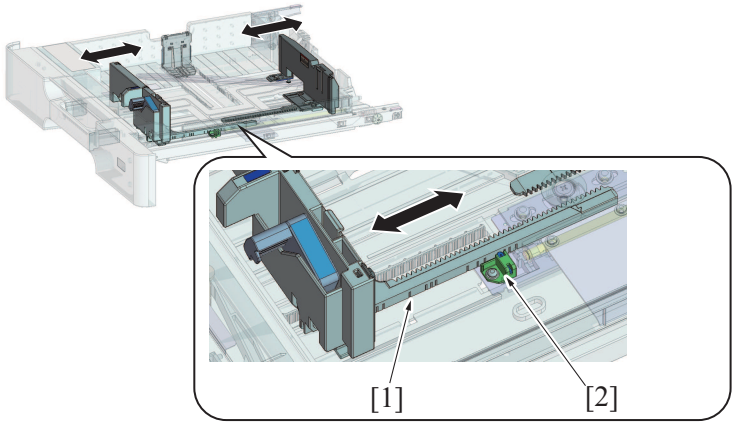
- Two methods are provided to operate the paper length guide.
  - Squeeze the paper length guide to operate it in the direction orthogonal to the direction of movement.
  - Squeeze the paper length guide to operate it in the same direction as the direction of movement.
- Paper length guide positioning employs grooves corresponding to each standard size and a free-stop method of movement using latches between each pair of grooves.



[1]	Squeezing in the same direction as the direction of movement	[2]	Squeeze in the direction orthogonal to the direction of movement
[3]	Direction of movement of the paper length guide	[4]	Paper length guide

24.3.3 Paper Width Guide

- A latching positioning method is used to prevent the paper width guide from misalignment due to shock that is generated during inserting trays.

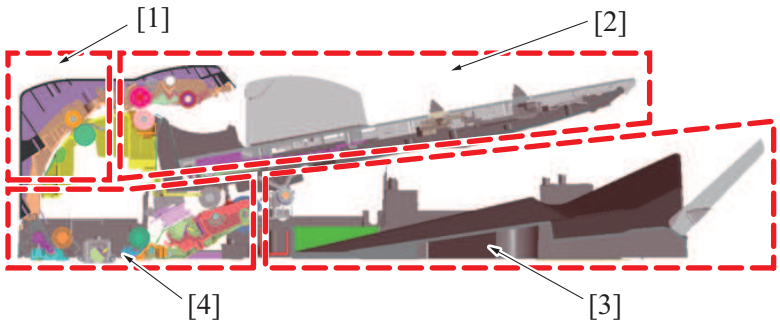


[1]	Paper width guide	[2]	Positioning latch

PA THEORY OF OPERATION DUAL SCAN DOCUMENT FEEDER/SP-501/UK-501 (bizhub C658/C558/C458)

1. CONFIGURATION

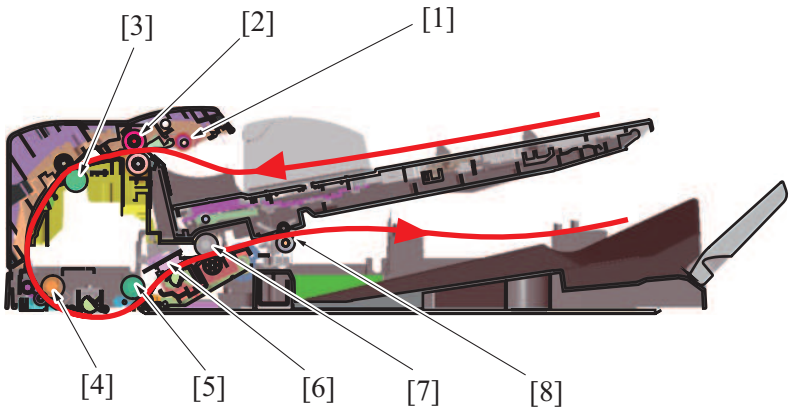
1.1 Section configuration



[1]	Registration section	[2]	Paper feed section
[3]	Paper exit section	[4]	Read section

2. PAPER PATH

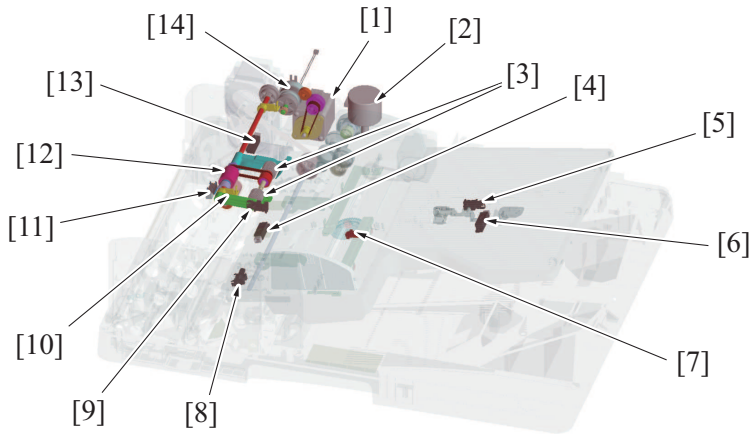
2.1 Paper path



[1]	Pick-up roller	[2]	Feed roller
[3]	Registration roller	[4]	Reading roller 1
[5]	Reading roller 2	[6]	CIS module (CIS)
[7]	Reading roller 3	[8]	Exit roller

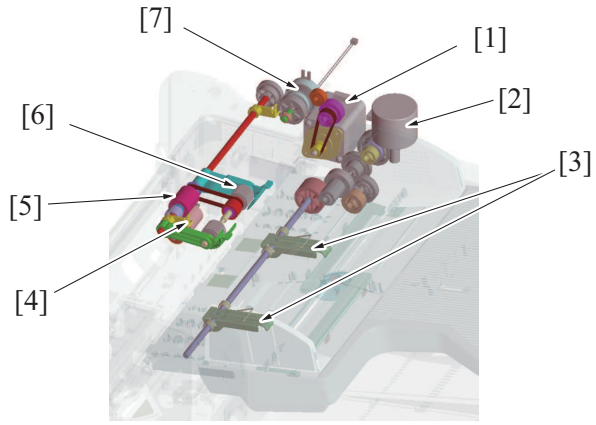
3. PAPER FEED SECTION

3.1 Configuration



[1]	Take-up motor (M1)	[2]	Lift-up motor (M5)
[3]	Pick-up roller	[4]	Empty sensor (PS1)
[5]	Length sensor/1 (PS10)	[6]	Length sensor/2 (PS11)
[7]	Restriction plate positional volume (VR1)	[8]	Lift up lower sensor (PS3)
[9]	Lift up upper sensor (PS2)	[10]	Separation roller
[11]	After separate sensor (PS4)	[12]	Feed roller
[13]	Document feed sensor (PS21)	[14]	Take-up clutch (CL1)

3.2 Drive

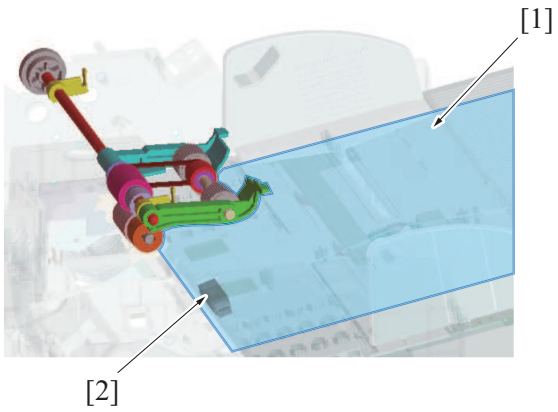


[1]	Take-up motor (M1)	[2]	Lift-up motor (M5)
[3]	Lift-up lever	[4]	Separation roller
[5]	Feed roller	[6]	Pick-up roller
[7]	Take-up clutch (CL1)	-	-

3.3 Operation

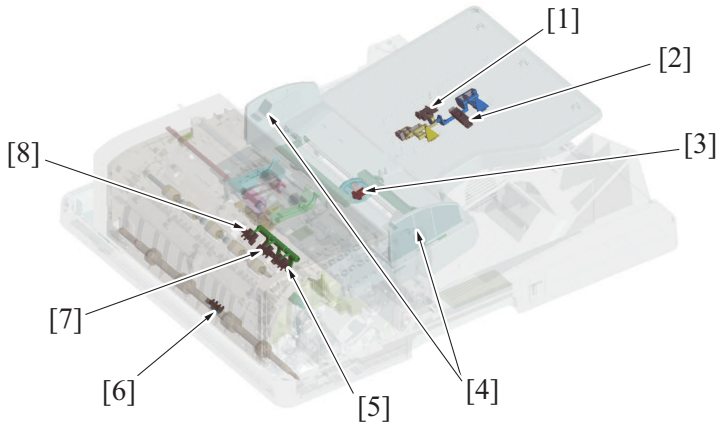
3.3.1 Original set/empty detection

- When an original is loaded on the document feed tray, the empty sensor detects that the presence of the original document.
- When all pages of the original have been fed, the empty sensor detects that there are no more originals.



[1]	Original	[2]	Empty sensor (PS1)

3.3.2 Original size detection mechanism



[1]	Length sensor/1 (PS10)	[2]	Length sensor/2 (PS11)
[3]	Restriction plate positional volume (VR1)	[4]	Original width guide plate
[5]	Consolidation sensor/3 (PS15)	[6]	Before read sensor (PS6)
[7]	Consolidation sensor/2 (PS14)	[8]	Consolidation sensor/1 (PS13)

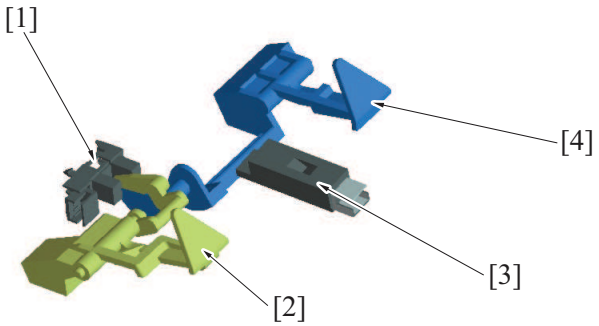
(1) Size detection in standard mode

(a) Detecting the width of the original

- The original is to be loaded in the document feed tray by aligning it with reference to the center of the document feed tray in the standard mode.
- The width of the original is loaded on the document feed tray will be detected with the restriction plate positional volume.
- The restriction plate positional volume includes a variable resistor. The resistor values change in accordance with movement of the original width guide plate.

(b) Detecting the length of the original

- The length of the original is loaded on the document feed tray will be detected by the length sensors/1 and /2.
- The length sensor/1 is a transmission type, while length sensor/2 is a reflection type. The length sensor/1 is detected by two actuators, that is, actuator 1 and actuator 2.
- When the document feed tray is not loaded with any originals, length sensor/1 is blocked. When an original is loaded and only actuator 1 is pressed, document length sensor/1 is unblocked. When both actuator 1 and actuator 2 are pressed, a blocked document length sensor/1 is detected by actuator 2.



[1]	Length sensor/1 (PS10)	[2]	Actuator 1
[3]	Length sensor/2 (PS11)	[4]	Actuator 2

(2) Size detection in mixed original / AMS mode

(a) Detecting the width of the original

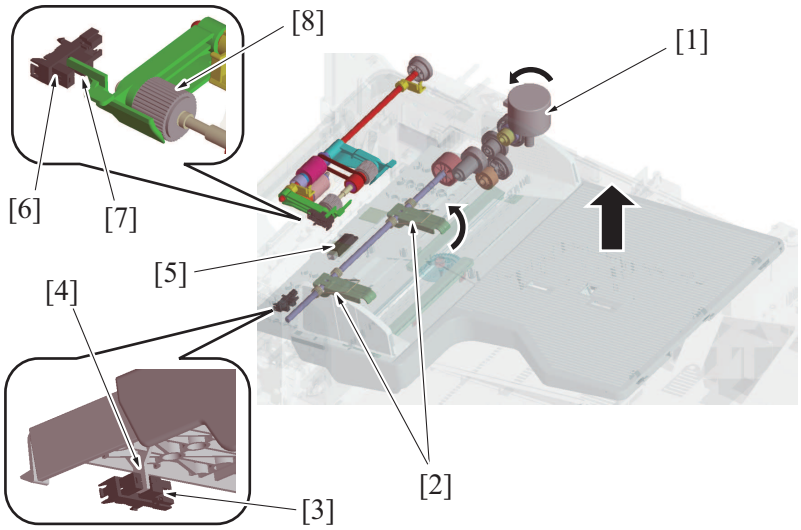
- In the mixed original mode, the original is aligned to the rear side of the document width guide plate.
- In the mixed original / AMS mode, no width is determined on the document feed tray; rather, the width is detected while the originals are being fed.
- Three consolidation sensors are disposed at positions immediately after the paper feed section, functioning to detect the width of the original.

(b) Detecting the length of the original

- In the mixed original/AMS mode, the length of the original is not determined on the document feed tray. But the length is calculated and determined based on the period of time during which the before read sensor remains activated.

3.3.3 Up/down control for the document feed tray

- The document feed tray rises to feed originals.
- The lift-up motor performs the up/down control of the document feed tray.
- The document feed tray is lowered due to completion of a job, paper jam, or paper misloading.



[1]	Lift-up motor (M5)	[2]	Lift-up lever
[3]	Lift up lower sensor (PS3)	[4]	Lower limit detection actuator
[5]	Empty sensor (PS1)	[6]	Lift up upper sensor (PS2)
[7]	Upper limit detection actuator	[8]	Pick-up roller

(1) Preliminary up operation

- The document feed tray stops in the lower limit position during standby.
- When a job starts with the document feed tray at the lower limit position, the tray will take longer to rise until paper is fed.
- To shorten the time from the job start to end, lift the document feed tray to the document feed tray standby position in advance.
- The document feed tray standby position can be adjusted through [Administrator Settings] -> [System Settings] -> [ADF Settings]. Preliminary lift is not performed and stands by at the lower limit position if OFF is selected.

(2) Up operation

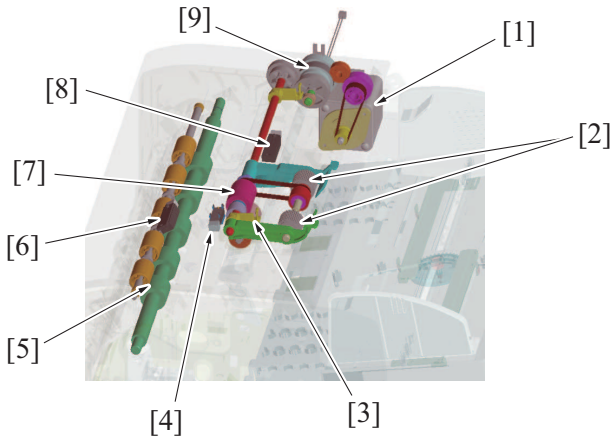
- The document feed tray stops in the lower limit position during standby.
- When an original is loaded into the tray, the empty sensor detects the original. The lift-up motor turns on when the control panel is pressed.
- The lift-up lever moves via lift-up motor drive to lift the document feed tray to the document feed tray standby position.
- The lift-up motor is driven to lift the document feed tray to the document feed position when the Start key is pressed.
- The top surface of the original pushes up the pick-up roller. The lift operation stops at the timing when the lift up upper sensor is unblocked.
- The number of originals decrease as each document is fed. The lift operation is performed again once the lift up upper sensor is blocked to maintain an optimal paper feed position.

(3) Down operation

- Once all originals have been fed and the empty sensor detects the empty state, the lift-up motor operates in reverse.
- The lift-up lever moves via lift-up motor drive to lower the document feed tray.
- The operation to lower the document feed tray stops when the lift up lower sensor is blocked.
- The document feed tray is lowered in an original empty state when a job completes or originals have been pulled out.
- The document feed tray is lowered due to paper jam, paper misloading, or a state that the DF is raised.

3.3.4 Original take-up control

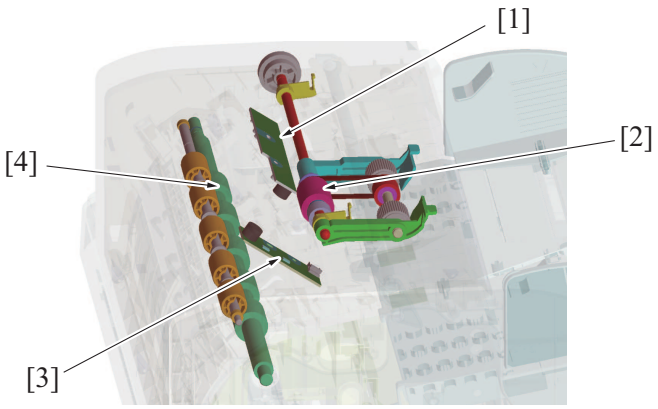
- The take-up motor provides the drive for original take-up operations.
- The drive from the take-up motor is transmitted to the pick-up roller and feed roller when the take-up clutch is energized. The original is picked up and fed in by the rotation of the rollers.
- The original picked up and fed in is transported onto the registration roller.



[1]	Take-up motor (M1)	[2]	Pick-up roller
[3]	Separation roller	[4]	After separate sensor (PS4)
[5]	Registration roller	[6]	Registration sensor (PS5)
[7]	Feed roller	[8]	Document feed sensor (PS21)
[9]	Take-up clutch (CL1)	-	-

3.3.5 Double feed detection (UK-501)

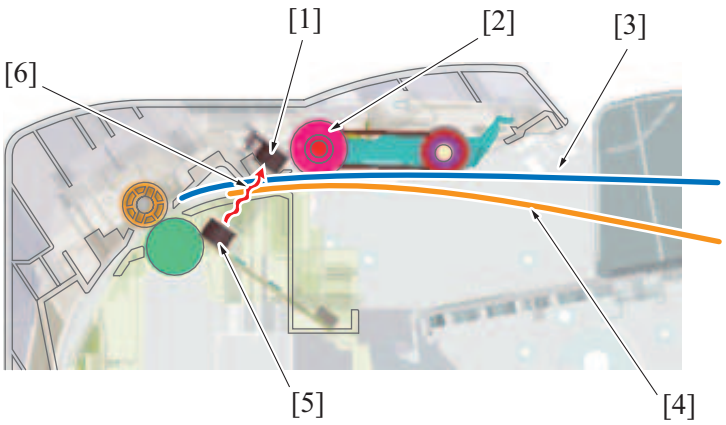
- With the optional UK-501 being installed, it is possible to detect originals double feed.
- At double feed detection, the passing originals come in contact with ultrasonic waves. Depending on the amount of unblocked ultrasonic waves, it can be determined whether originals are double feed.
- Double feed detection uses a detection board that is configured with one pair of a receiver and a transmitter.



[1]	Multi feed detection board/2 (receiver) (MFDB/2)	[2]	Feed roller
[3]	Multi feed detection board/1 (transmitter) (MFDB/1)	[4]	Registration roller

(1) Double feed detection control

- Originals come into contact with ultrasonic waves that are transmitted from the multi feed detection board/1 (transmitter). The ultrasonic waves are received on the multi feed detection board/2 (receiver).
- The ultrasonic waves attenuate due to the air layer between originals when originals are double feed.
- The voltage at the receiver is checked. A determination of original double feed is made if the voltage is the same as or less than a predetermined value.
- The following lists the type of originals that can be detected for double feed.
  - Originals with weight of 35 to 210 g/m^2(9 5/16 to 55 7/8 lb). Other types of originals may not be detected properly when double feed occurs.



[1]	Multi feed detection board/2 (receiver) (MFDB/2)	[2]	Feed roller
[3]	Scanned original	[4]	Double feed original
[5]	Multi feed detection board/1 (transmitter) (MFDB/1)	[6]	Ultrasonic waves

(2) Operation after double feed detection

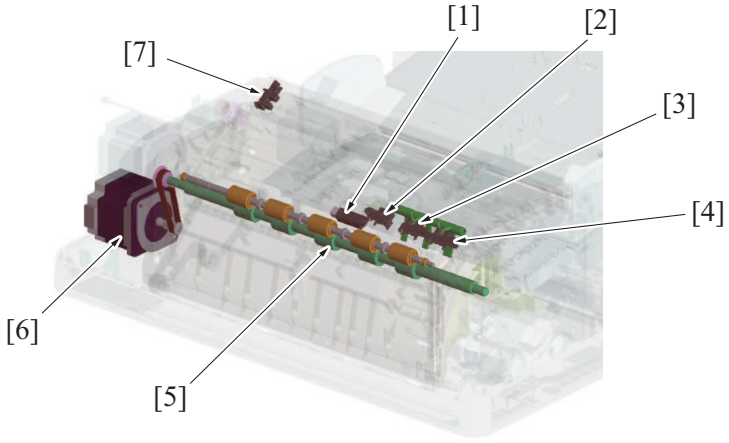
- The following two operations are available when double feeds are detected.
  The desired operation can be selected from [Switch No. 121] in [Service Mode] -> [System 2] -> [Software Switch Setting].
  - Stop transporting the double feed originals at the time that the double feed is detected.
    The software switch settings value is "Bit assignment 00000000 / HEX assignment 00".
  - Discharge the fed originals after a double feed is detected and then stop feeding paper.
    The software switch settings value is "Bit assignment 00000010 / HEX assignment 02".

(3) Double feed detection adjustment

- Sensitivity adjustment of the multi feed detection sensor is performed at the time of installing or replacing the double feed detection kit.
- Sensitivity adjustment of the multi feed detection sensor is performed from [Service Mode] -> [ADF] -> [Multi Feed DetectionAdj.].
- Tuck in the double feed detection kit (UK-501) adjustment sheet between the multi feed detection board/1 (transmitter) and the multi feed detection board/2 (receiver), and output ultrasonic waves.
- Adjust the value that is received at the multi feed detection board/2 (receiver) within the specified range.

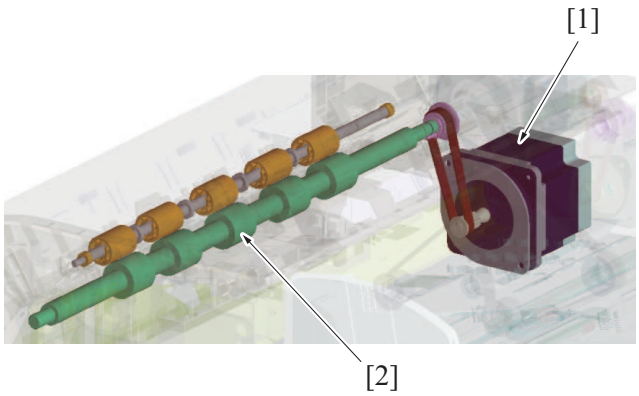
4. REGISTRATION SECTION

4.1 Configuration



[1]	Registration sensor (PS5)	[2]	Consolidation sensor/1 (PS13)
[3]	Consolidation sensor/2 (PS14)	[4]	Consolidation sensor/3 (PS15)
[5]	Registration roller	[6]	Registration motor (M2)
[7]	Read open/close sensor (PS16)	-	-

4.2 Drive

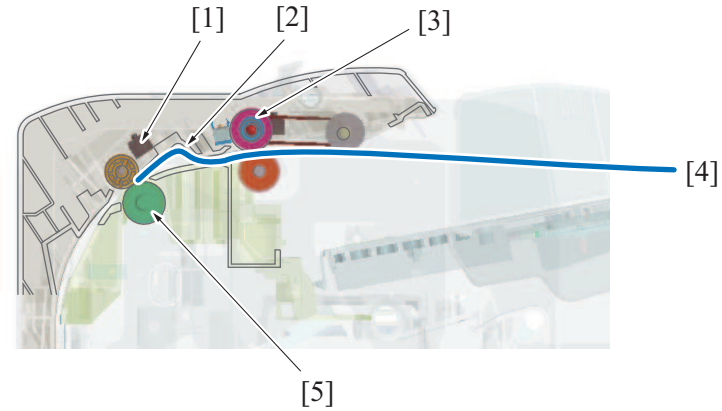


[1]	Registration motor (M2)	[2]	Registration roller

4.3 Operation

4.3.1 Registration control

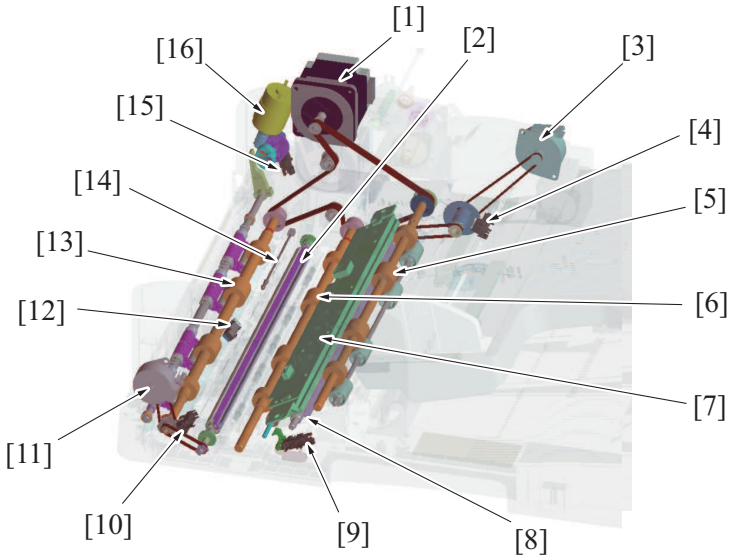
- The registration roller is driven by the registration motor.
- While the original is being transported, a loop is formed in the original between the tack-up roller and registration roller to thereby correct any skew in the original.
- The registration sensor detects original and the timing at which to de-energize the registration motor is controlled.



[1]	Registration sensor (PS5)	[2]	Loop formation
[3]	Feed roller	[4]	Original
[5]	Registration roller	-	-

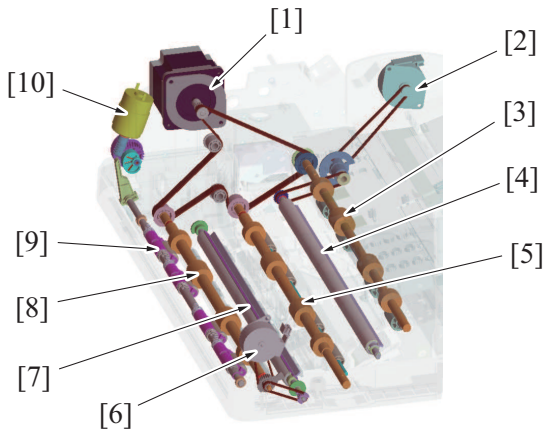
5. READ SECTION

5.1 Configuration



[1]	Reading motor (M3)	[2]	DF original glass cleaning brush
[3]	Back side cleaning motor (M7)	[4]	Back side cleaning home sensor (PS9)
[5]	Reading roller 3	[6]	Reading roller 2
[7]	CIS module (CIS)	[8]	CIS glass cleaning brush
[9]	CIS under guide open/close sensor (PS20)	[10]	Front side cleaning home sensor (PS18)
[11]	Front side cleaning motor (M8)	[12]	Before read sensor (PS6)
[13]	Reading roller 1	[14]	DF temperature sensor (TH)
[15]	Read roller home sensor (PS8)	[16]	Reading roller pressure/retraction motor (M6)

5.2 Drive

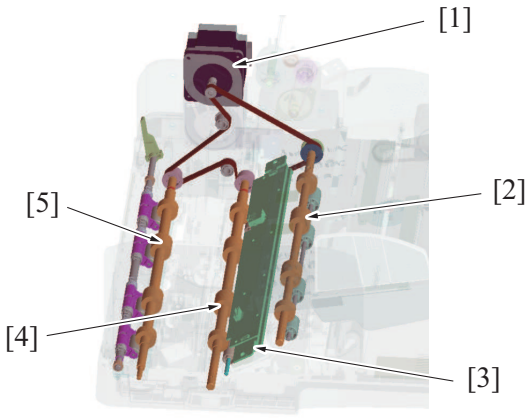


[1]	Reading motor (M3)	[2]	Back side cleaning motor (M7)
[3]	Reading roller 3	[4]	CIS glass cleaning brush
[5]	Reading roller 2	[6]	Front side cleaning motor (M8)
[7]	DF original glass cleaning brush	[8]	Reading roller 1
[9]	Reading roll	[10]	Reading roller pressure/retraction motor (M6)

5.3 Operation

5.3.1 Reading transport control

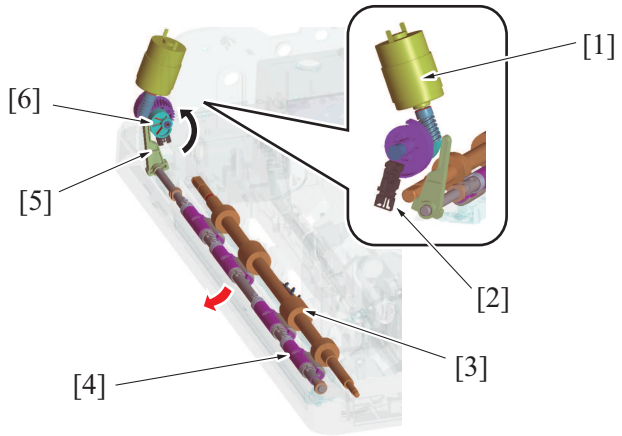
- The reading roller 1, 2, and 3 are driven by the reading motor.
- When reading a 2-sided original, the 2-sided original (the front side and back side) is read at once in one pass of the original.
- The front side of the 2-sided original is read by the scanner unit section of the main body after the leading edge of the original has moved past reading roller 1. The back side of the 2-sided original is read by the CIS after the leading edge of the original has moved past reading roller 2.



[1]	Reading motor (M3)	[2]	Reading roller 3
[3]	CIS module (CIS)	[4]	Reading roller 2
[5]	Reading roller 1	-	-

5.3.2 Reading roller pressure/retraction control

- Original speed fluctuates as the trailing edge of the original moves past reading roller 1. To inhibit these speed fluctuations, the reading roller pressure/retraction motor is employed to retract reading roller 1.
- The rotation of the cam is driven by the reading roller pressure/retraction motor via the gear.
- Due to the rotation of the cam, the lever is put back and the reading roll being pressed against the reading roller 1 is pushed down.

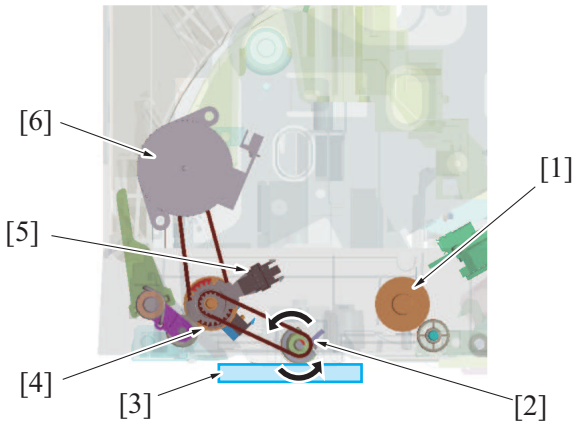


[1]	Reading roller pressure/retraction motor (M6)	[2]	Read roller home sensor (PS8)
[3]	Reading roller 1	[4]	Reading roll
[5]	Lever	[6]	Cam

5.3.3 DF original glass contamination prevention control

(1) DF original glass cleaning

- A reading line can occur if the DF original glass is contaminated with dust or dirt. The DF original glass cleaning mechanism prevents this fault from occurring.
- The cleaning brush rotates to remove dust sticking to the DF original glass.
- The cleaning brush is rotated by the front side cleaning motor.
- The front side cleaning home sensor detects the cleaning brush at its home position.



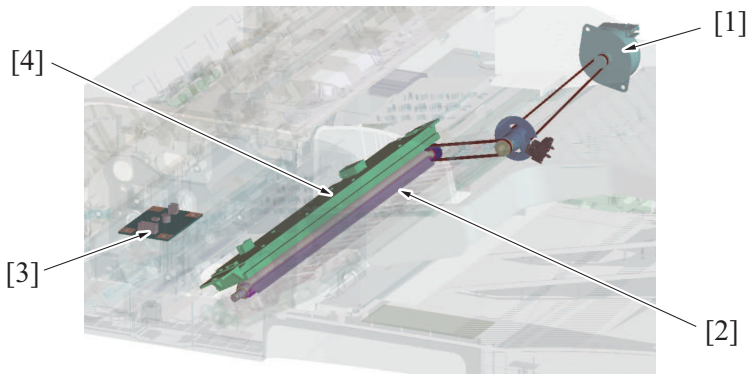
[1]	Reading roller 2	[2]	Cleaning brush
[3]	DF original glass	[4]	Reading roller 1
[5]	Front side cleaning home sensor (PS18)	[6]	Front side cleaning motor (M8)

(2) Details of DF original glass cleaning

Condition		Cleaning operation
Predrive	Power ON	Rotates the cleaning brush one complete turn to check for its correct operation.
	Existing from sleep	
Start key ON	Before starting reading	Rotates the cleaning brush one complete turn to perform cleaning.
	During reading (not performed in black mode)	Rotates the cleaning brush one complete turn to perform cleaning for every two originals during continuous reading of originals.
		Rotates the cleaning brush three complete turns to perform cleaning for each original during continuous reading of originals, if the despeckle mode is selected.
	After completing reading last original	The cleaning brush tends to curl if repeatedly operated in one direction only, resulting in poor cleaning performance. To straighten the brush, it is rotated one complete turn in the backward direction when reading of the last original is completed.

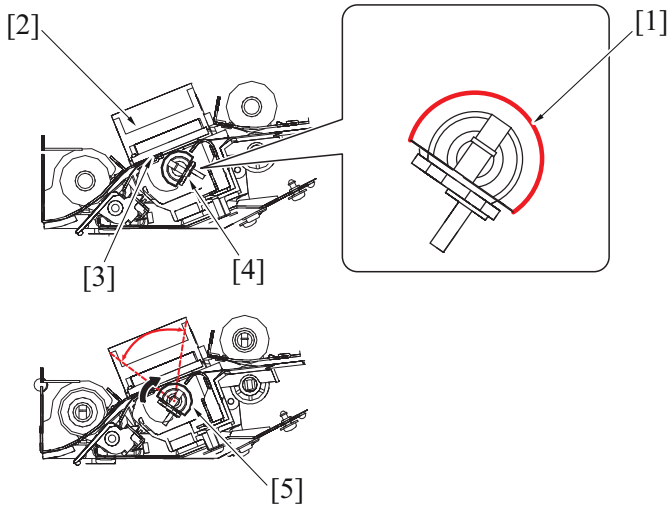
5.3.4 CIS original reading control

- The back side of the original is read by the CIS (contact image sensor) module. The image data read by the CIS is transferred to the dual scan image processing board.
- The CIS original reading section consists of the CIS module, DF power supply and the back side cleaning mechanism.
- The CIS module has two LEDs.



[1]	Back side cleaning motor (M7)	[2]	Cleaning brush
[3]	DF power supply (DFPU)	[4]	CIS module (CIS)

- A cleaning brush to which a white plate is affixed is disposed on the side opposite the CIS module. Use of a specific position of the cleaning brush through rotation of the cleaning brush allows the following operations to be performed: “gain adjustment/shading correction”, “ADF Scan Glass Contamin. Sensitivity”, and “CIS glass cleaning by the brush”.
- “Document passage” is performed at the home position.
- “Shading correction”, “gain adjustment”, and “ADF Scan Glass Contamin. Sensitivity” are made using the shading surface.

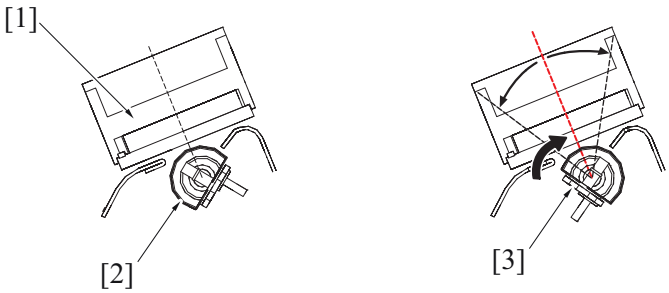


[1]	White plate affixed	[2]	CIS module (CIS)
[3]	CIS glass	[4]	Cleaning brush (Home position)
[5]	Cleaning brush (Shading correction surface)	-	-

5.3.5 CIS control when power is turned ON

1. The LEDs of CIS module are turned ON.
2. The cleaning brush is detected at its home position.
3. The cleaning brush is rotated and brought to a stop at the gain adjustment position.
   The gain adjustment is made twice with the cleaning brush at that position.
   The gain adjustment is performed near the center of the shading correction surface.
4. After the adjustments, the LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

* The same control is performed when the main body exits from the sleep mode.



[1]	CIS module (CIS)	[2]	Cleaning brush (Home position)
[3]	Cleaning brush (Gain adjustment position)	-	-

5.3.6 CIS control when the document is loaded

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS module are turned ON.
3. The cleaning brush is rotated four complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
   The cleaning brush uses the shading correction surface to perform “ADF Scan Glass Contamin. Sensitivity” during its fourth turn.
4. The LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

NOTE

- **No operation is performed when the document is loaded if the following function is selected using the service mode: [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set].**

5.3.7 CIS control when the start key is pressed

- This control is performed only in the 2-sided original reading mode.

(1) Before a print cycle (back side reading)

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS module are turned ON.
3. The cleaning brush is rotated three complete turns.

The cleaning brush cleans the CIS glass during its first turn.
The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn.

4. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).
5. The back side of the original is read as the original moves over the CIS.

(2) During a print cycle (operation between originals after reading)

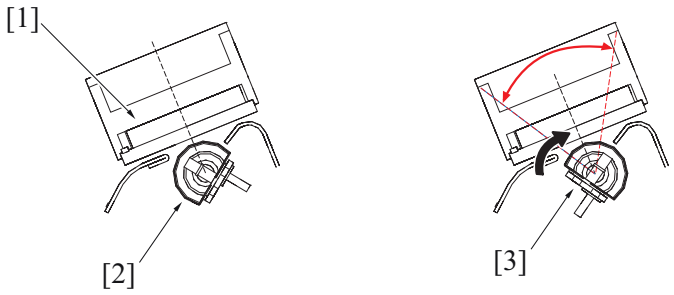
The brush cleaning operation is normally performed each time the original is read.
If a print cycle produces a large number of printed pages continuously, however, either the cleaning operation or the shading correction operation is performed.
The shading correction operation is performed at predetermined intervals during a multiprint cycle in order to maintain an appropriate shading correction value.

(a) Cleaning operation

1. The cleaning brush is rotated one complete turn.
   (The cleaning brush normally makes one turn, but makes three turns in the despeckle mode.)
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).

(b) Shading correction operation

1. The cleaning brush is rotated three complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).



[1]	CIS module (CIS)	[2]	Cleaning brush (Home position)
[3]	Cleaning brush (Shading correction surface)	-	-

(c) After the print cycle

1. After the reading sequence, the LEDs are turned OFF.
2. The cleaning brush is turned backward (to tame the brush).
3. The cleaning brush is brought to a stop when its home position is detected.
4. The cleaning brush perform “ADF Scan Glass Contamin. Sensitivity”.
   - The LEDs are turned ON. The cleaning brush is rotated four complete turns.
   - The cleaning brush cleans the CIS glass during its first turn.
   - The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
   - The cleaning brush uses the shading correction surface to perform “ADF Scan Glass Contamin. Sensitivity” during its fourth turn.
   - The cleaning brush is brought to a stop at its home position.
   - The LEDs are turned OFF.

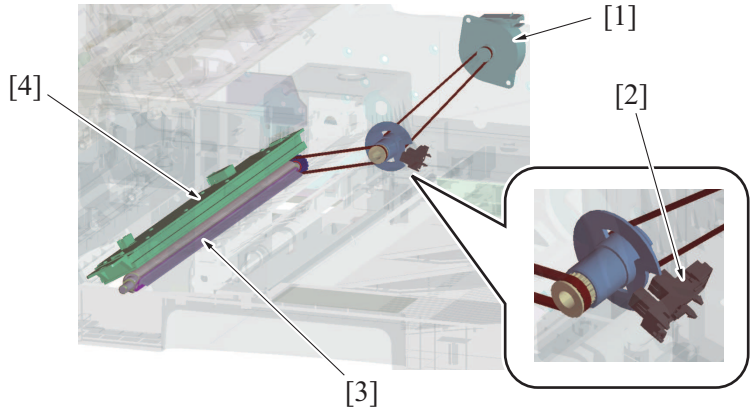
NOTE

- **Steps of 4 is not performed if the following function is selected using the service mode: [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set] .**

5.3.8 CIS glass contamination prevention control

(1) CIS glass cleaning

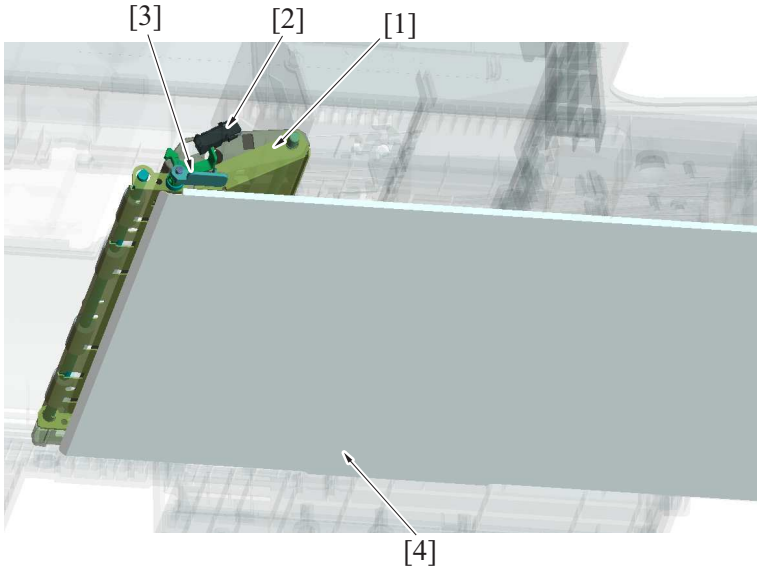
- The CIS glass is cleaned only when two sides of the original are to be read.
- When the back side cleaning motor is energized, the cleaning brush is rotated to remove dust and dirt from the surface of the CIS glass.
- Cleaning of the DF original glass (front side) takes place at timing different from that of cleaning of the CIS glass (back side) and the cleaning of the back side sources its power drive differently from the front side.
- The cleaning brush at its home position is detected by the back side cleaning home sensor.



[1]	Back side cleaning motor (M7)	[2]	Back side cleaning home sensor (PS9)
[3]	Cleaning brush	[4]	CIS module (CIS)

5.3.9 Opening and closing guide set detection

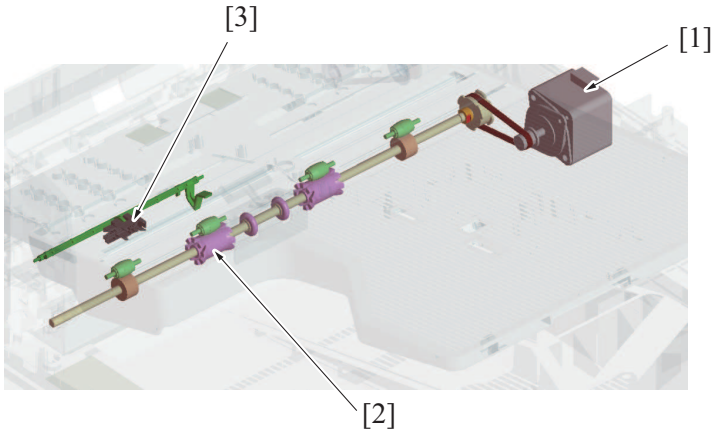
- The opening and closing guide is provided to facilitate misfeed clearing procedures performed near the back side reading position.
- The CIS under guide open/close sensor detects the opening and closing guide in the closed position.



[1]	Opening and closing guide	[2]	CIS under guide open/close sensor (PS20)
[3]	Lever	[4]	Original pad

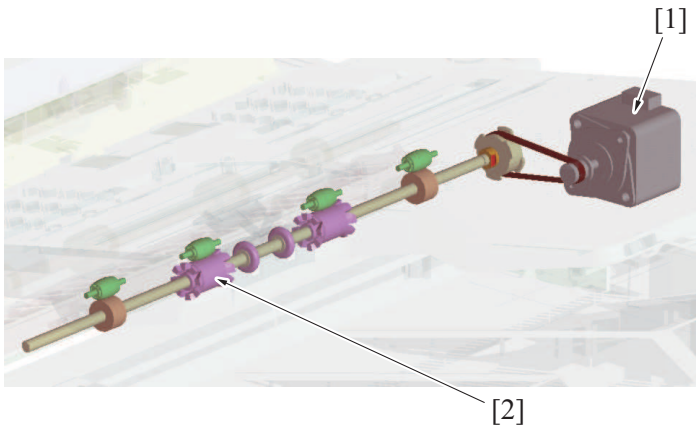
6. PAPER EXIT SECTION

6.1 Configuration



[1]	Exit motor (M4)	[2]	Exit roller
[3]	Exit sensor (PS7)	-	-

6.2 Drive

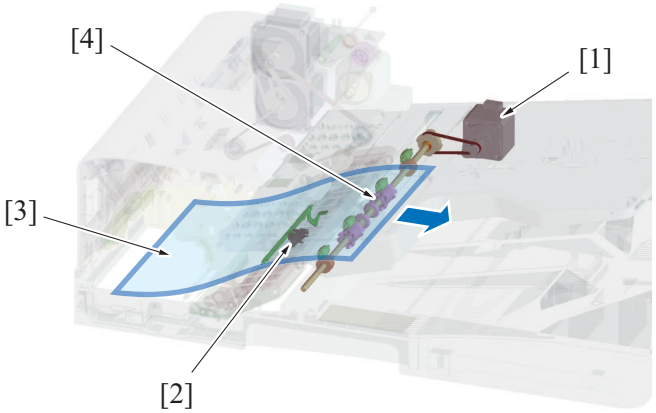


[1]	Exit motor (M4)	[2]	Exit roller

6.3 Operation

6.3.1 Document exit mechanism

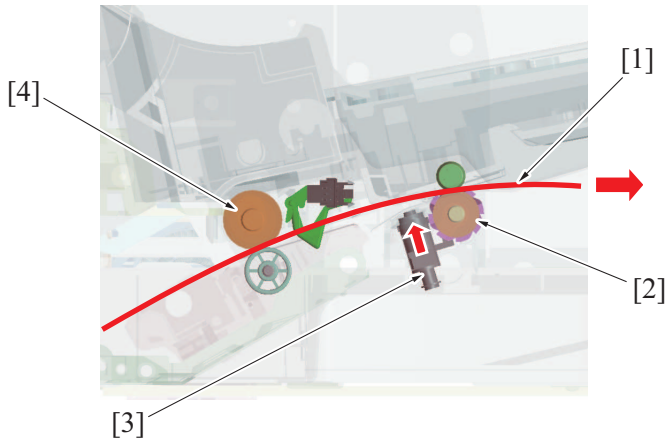
- The paper exit section includes the exit roller that feeds the original transported from the read section out onto the exit tray.
- The exit roller is driven by the exit motor.



[1]	Exit motor (M4)	[2]	Exit sensor (PS7)
[3]	Original	[4]	Exit roller

6.3.2 Faxed original stamp function SP-501

- Mounting the optional “Stamp unit SP-501” allows a stamp to be placed on a faxed original.
- The stamp solenoid located upstream of the original exit roller is energized when the original is about to be fed out and the stamp mounted on the solenoid plunger is pressed against the surface of the original. This places a faxed mark (+) on the surface of the original.
- This function is enabled when [Service Mode] -> [System 2] -> [Stamp] -> [Set] (default setting: Unset) is configured and the user selects [Application] -> [Stamp/Composition] -> [TX Stamp] (default setting: OFF)” on the “Scan/Fax” screen.
- This function is not used for “Copy” or “Scan”.



[1]	Original	[2]	Exit roller
[3]	Stamp unit (SP-501)	[4]	Reading roller 3

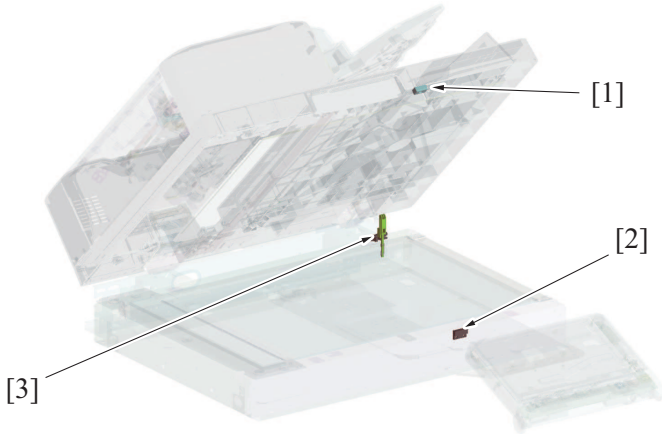
7. OPEN AND CLOSE DETECTION SECTION

7.1 DF angle open and close detection

- The lever actuator is provided to detect the original size when using the auto document feeder as the original cover.
- When the dual scan document feeder is lowered under predetermined angle, the lever actuator presses the original cover angle detection lever of the MFP main body to turn ON the angle sensor.

7.2 DF open and close detection

- The magnet is installed to detect the open and close of the dual scan document feeder on the main body side.
- The original cover sensor on the main body will turn ON by the magnet when lowering the DF.

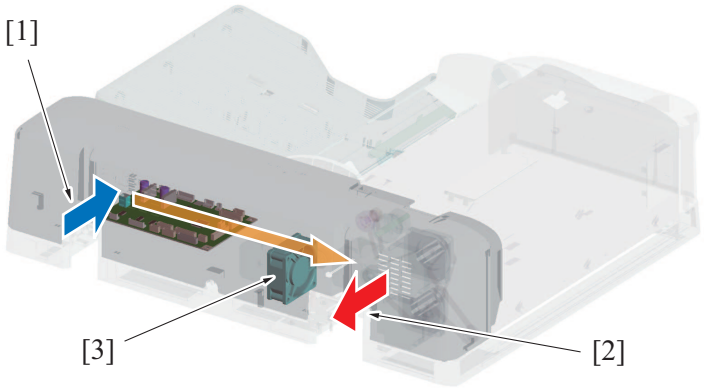


[1]	Magnet	[2]	Original cover sensor (RS201) (Main body scanner section)
[3]	Angle sensor (PS202) (Main body scanner section)	-	-

8. FAN CONTROL

8.1 Function

- The cooling fan motor drives during original scanning to prevent the temperature of the drive motor from increasing.



[1]	Drawing in external air	[2]	Discharging air outside of the machine
[3]	Cooling fan motor (FM)	-	-

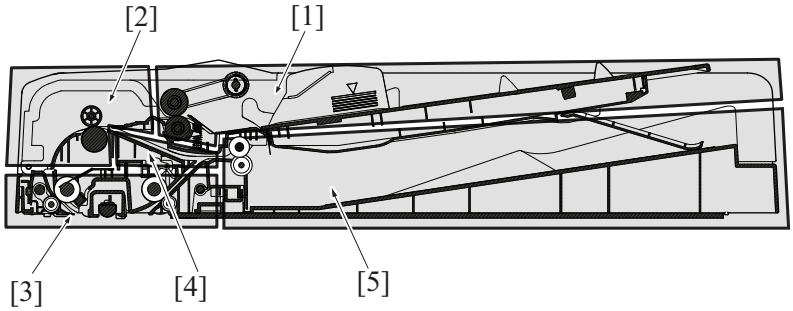
8.2 Control condition

Motor name	Control	Control conditions
Cooling fan motor (FM)	Stop	Standby state
	Full speed	Original document feeding

PB THEORY OF OPERATION DF-629

1. CONFIGURATION

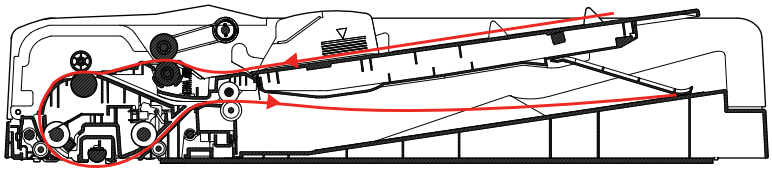
1.1 Section configuration



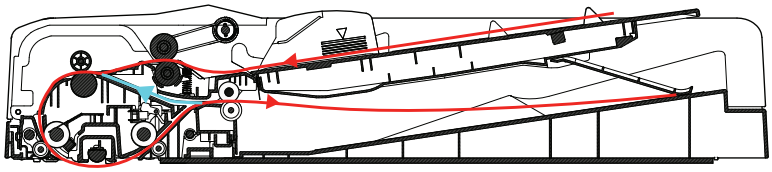
[1]	Document feed section	[2]	Document registration section
[3]	Document reading section	[4]	Document switchback section
[5]	Document exit section	-	-

1.2 Paper path

1.2.1 1-sided paper path

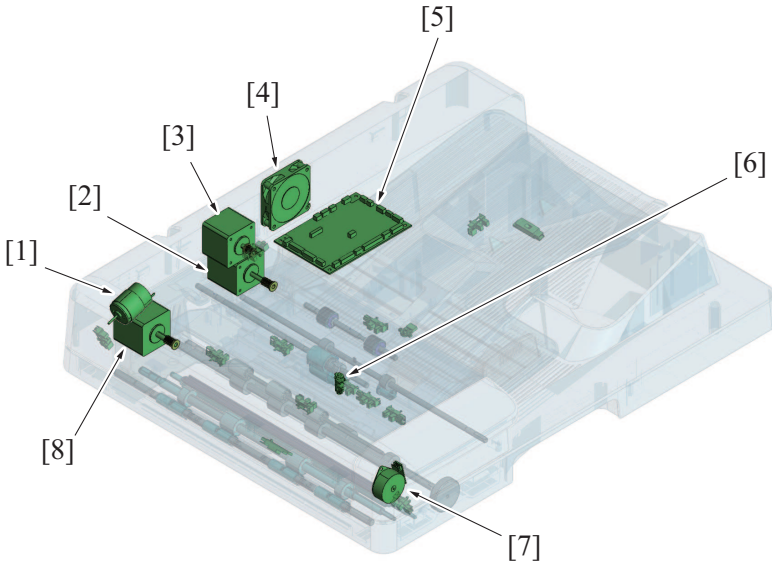


1.2.2 2-sided paper path



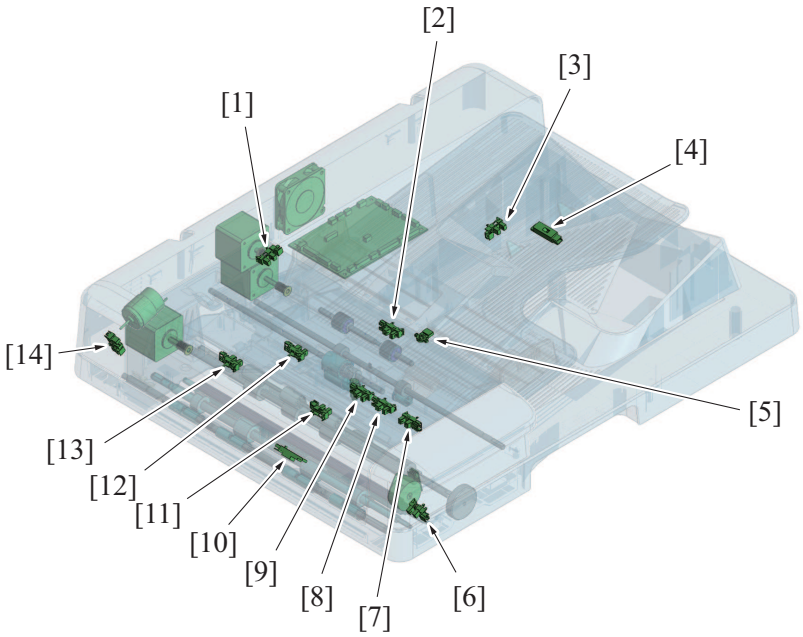
1.3 Main part configuration

1.3.1 Main electrical part



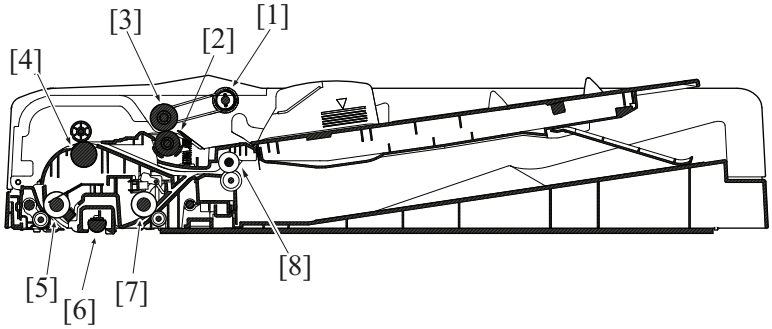
[1]	Reading roll release motor (M5)	[2]	Registration motor (M3)
[3]	Document feed motor (M2)	[4]	DF cooling fan motor (FM1)
[5]	DF control board (DFCB)	[6]	Stamp Unit (SP-501) * option
[7]	Glass cleaning motor (M4)	[8]	Document reading motor (M1)

1.3.2 Sensor



[1]	Upper door sensor (PS13)	[2]	Document empty sensor (PS1)
[3]	Document length size sensor/1 (PS6)	[4]	Document length size sensor/2 (PS7)
[5]	Document width size sensor (VR1)	[6]	Document reading glass cleaning sensor (PS12)
[7]	Mixed original sensor/3 (PS10)	[8]	Mixed original sensor/2 (PS9)
[9]	Mixed original sensor/1 (PS8)	[10]	Document reading sensor (PS4)
[11]	Document exit sensor (PS5)	[12]	After Separate sensor (PS2)
[13]	Document registration sensor (PS3)	[14]	Reading roll position sensor (PS11)

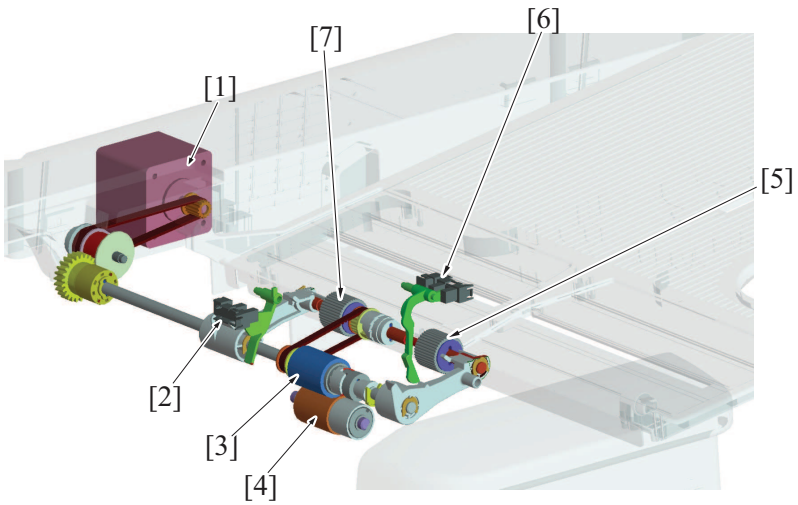
1.3.3 Roller placement



[1]	Document pick-up roller	[2]	Document separation roller
[3]	Document feed roller	[4]	Registration roller
[5]	Document reading roller/1	[6]	Document reading glass cleaning roller
[7]	Document reading roller/2	[8]	Document switchback exit roller

2. DRIVE

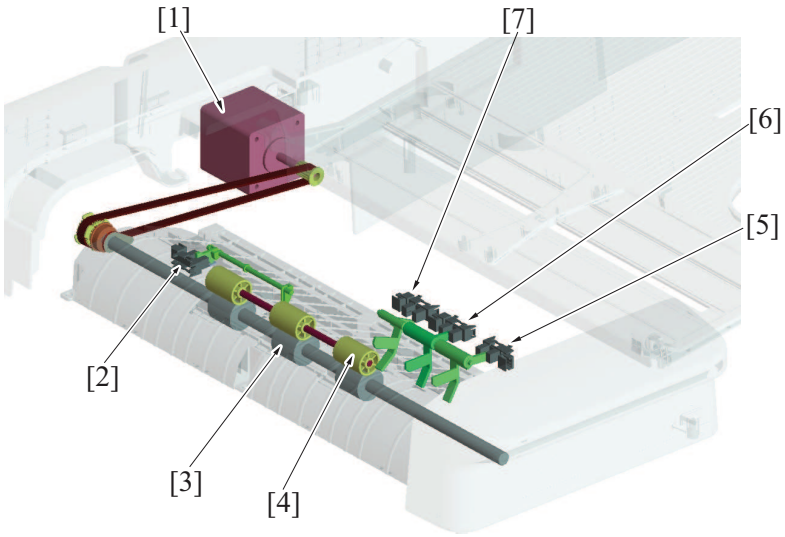
2.1 Paper feed drive



[1]	Document feed motor (M2)	[2]	After separate sensor (PS2)
[3]	Document feed roller	[4]	Document separation roller
[5]	Document pick-up roller	[6]	Document empty sensor (PS1)
[7]	Document pick-up roller	-	-

- The document feed section consists of the document pick-up roller, document feed roller, as well as the document separation roller, and is directly driven by the document feed motor.
- When the start key is pressed, the document pick-up roller lowers to press the original, and the original is taken up and fed in. The original is transported to the registration roller by the document pick-up roller and document feed roller.
- After the take-up and feeding sequence, the document feed motor is rotated backward, which raises the document pick-up roller.

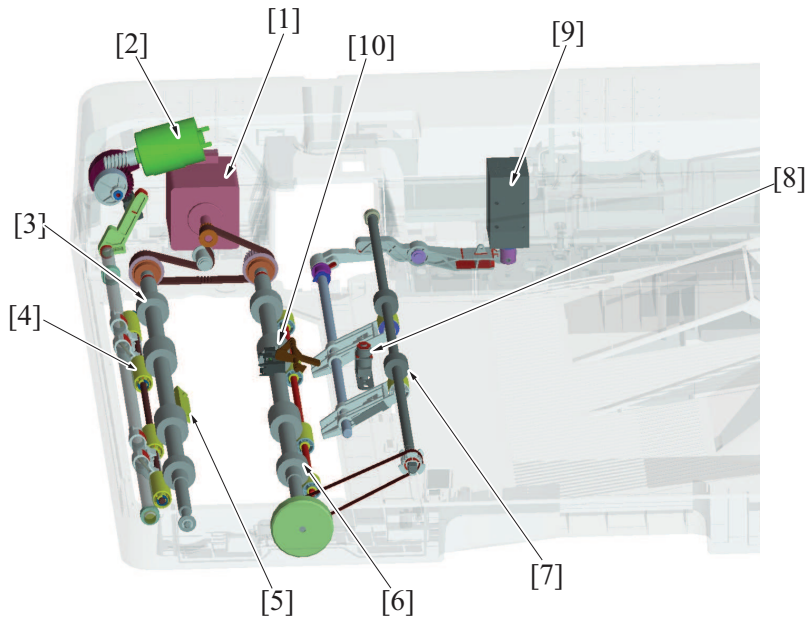
2.2 Registration drive



[1]	Registration motor (M3)	[2]	Document registration sensor (PS3)
[3]	Registration roller	[4]	Registration roll
[5]	Mixed original sensor/3 (PS10)	[6]	Mixed original sensor/2 (PS9)
[7]	Mixed original sensor/1 (PS8)	-	-

- Timing at which to start transporting the original is controlled using the registration motor.
- The original is pressed against the registration roller and registration roll. This forms a loop in the original to thereby correct any skew in the original.
- Mixed original sensors/1, 2/, and 3/ detect width of the originals in the mixed original mode.

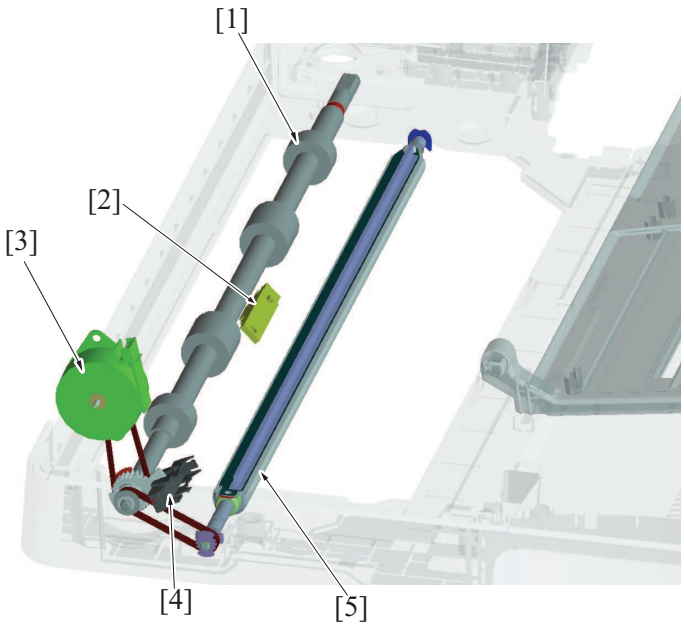
2.3 Document reading drive



[1]	Document reading motor (M1)	[2]	Reading roll release motor (M5)
[3]	Document reading roller/1	[4]	Document reading roll
[5]	Document reading sensor (PS4)	[6]	Document reading roller/2
[7]	Document exit roller	[8]	Stamp unit (SP-501) * option
[9]	Document exit roller release solenoid (SD1)	[10]	Document exit sensor (PS5)

- The document reading motor drives the document reading section and document exit section.
- The document reading roll is equipped with a pressure/release mechanism. The pressure is released when the trailing edge of the original moves past the roller.
- The document reading motor rotates backward to allow the second feed of the original to be performed during switchback in the 2-sided mode.
- The document exit roll is equipped with a pressure/release mechanism. The pressure is released when the original is fed in a second time so that its second side can be read.

2.4 Document reading glass cleaning drive



[1]	Document reading roller	[2]	Document reading sensor (PS4)
[3]	Glass cleaning motor (M4)	[4]	Document reading glass cleaning sensor (PS12)
[5]	Document reading glass cleaning brush	-	-

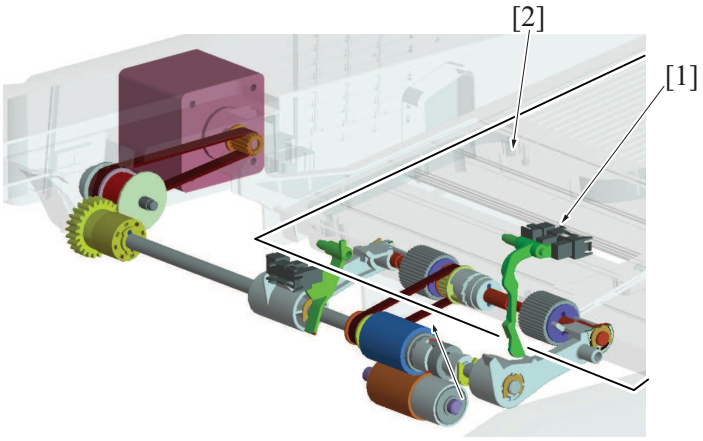
- The glass cleaning motor drives the document reading glass cleaning brush.
  The position of the cleaning brush is controlled by the document reading glass cleaning sensor.

3. OPERATION

3.1 Document feed section

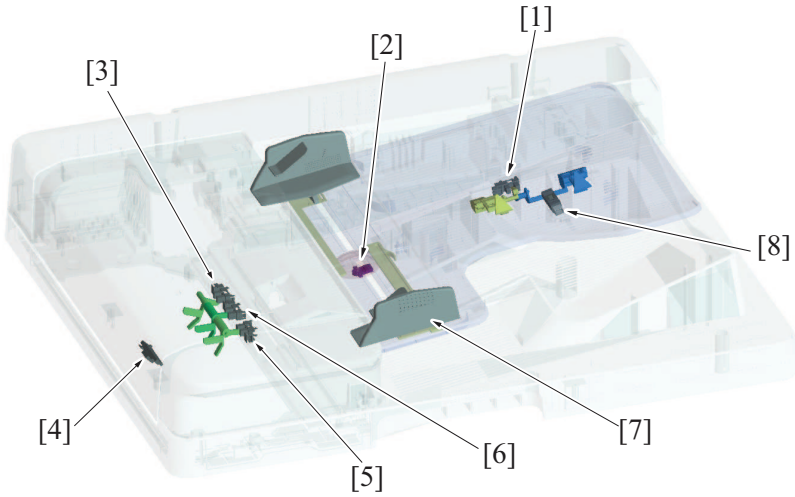
3.1.1 Document set/empty detection

- When an original is loaded on the document feed tray, the document empty sensor detects that there is original.
- If no original is loaded when the document pick-up roller is in the standby position, the actuator blocks the document empty sensor and it is detected that no original is loaded.
- When an original is loaded on the document feed tray, the leading edge of the original pushes the actuator so that the document empty sensor is unblocked. It is detected that an original is loaded.
- When all pages of the original are fed in, the document empty sensor detects that there is no original on the document feed tray.

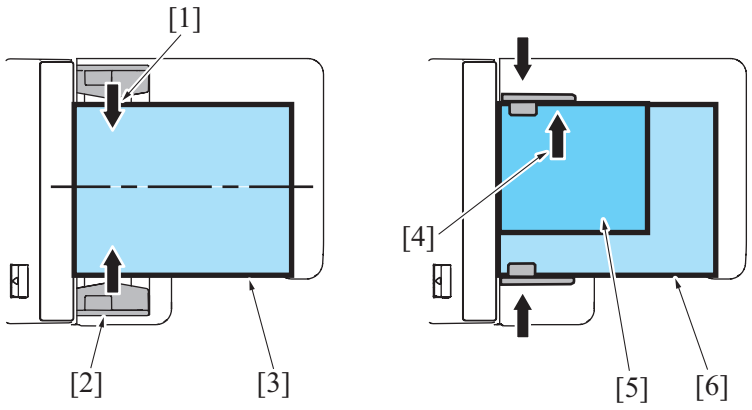


[1]	Document empty sensor (PS1)	[2]	Original

3.1.2 Document size detection mechanism



[1]	Document length size sensor/1 (PS6)	[2]	Document width size sensor (VR1)
[3]	Mixed original sensor/1 (PS8)	[4]	Document reading sensor (PS4)
[5]	Mixed original sensor/3 (PS10)	[6]	Mixed original sensor/2 (PS9)
[7]	Document width guide	[8]	Document length size sensor/2 (PS7)



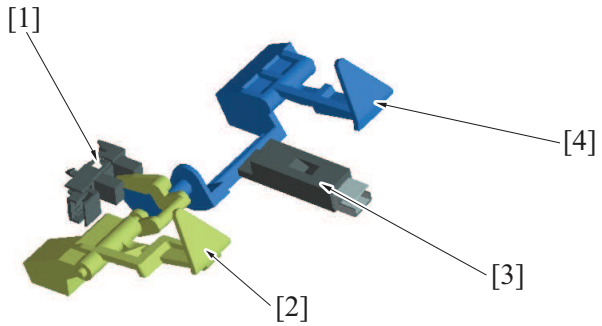
[1]	Adjust the document width guide plates (center alignment)	[2]	Document width guide plates
[3]	Original (standard mode)	[4]	Align the original with narrow width with the rear side of the document width guide plates (rear alignment)
[5]	Original with narrow width (mixed original mode)	[6]	Original with wide width (mixed original mode)

(1) Detecting the width of the original

- The width of the original is set on the document feed tray will be detected by the document width size sensor.
- A variable resistor is incorporated in the document width size sensor. Its resistance value varies in association with the movement of the document width guide.
- The original is to be loaded in the original feed tray by aligning it with reference to the center of the document feed tray in the standard mode. In the mixed original mode, the original is aligned to the rear side of the document width guide plate.

(2) Detecting the length of the original

- The length of the original is set on the document feed tray will be detected by the document length size sensors/1 and /2.
- The document length size sensor/1 is a transmission type, while document length size sensor/2 is a reflection type. The document length size sensor/1 is detected by two actuators, that is, actuator/1 and actuator/2.
- When the document feed tray is not loaded with any originals, document length size sensor/1 is blocked. When an original is loaded and only actuator/1 is pressed, document length size sensor/1 is unblocked. When both actuator/1 and actuator/2 are pressed, a blocked document length size sensor/1 is detected by actuator/2.



[1]	Document length size sensor/1 (PS6)	[2]	Actuator/1
[3]	Document length size sensor/2 (PS7)	[4]	Actuator/2

(3) Detecting the width of the original (in the mixed original/AMS mode)

- In the mixed original/AMS mode, no width is determined on the document feed tray; rather, the width is detected while the originals are being fed. Three mixed original sensors are disposed at positions immediately after the document feed section, functioning to detect the width of the original.

(4) Detecting the length of the original (in the mixed original/AMS mode)

- In the mixed original/AMS mode, no length is determined on the document feed tray; rather, the length of the original is calculated and determined based on the period of time during which the document reading sensor remains activated.

(5) Document feed tray size detection

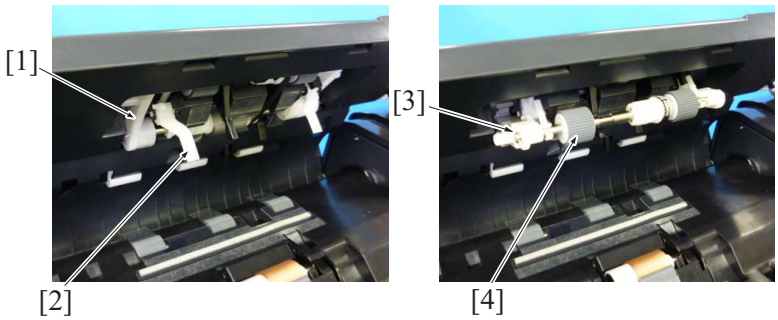
- The original size is determined by the combination of the results of detection made of the width and length of the original.

Document length size sensor/2 (PS7)		OFF	OFF	Reflector	Reflector
Document length size sensor/1 (PS6)		Blocked	Unblocked	Unblocked	Blocked
Document width size sensor (VR1)	114.5	Postcard	B5S	A4S	A3
	136	B6S	B5S	A4S	A3
	163	A5S	B5S	A4S	A3
	190.6	B5S	B5S	A4S	A3
	236.5	A5	Letter S	A4S	Foolscap
	266.2	B5	B4	B4	B4
	286.2	Letter	Ledger	Ledger	Ledger
	(307)	A4	A3	A3	A3

3.1.3 Pick-up roller up/down control

(1) Up control

- When a job is completed, the document feed motor starts rotating backward. Then, the swing arm mounted on the same shaft as the document feed roller is rotated backward to thereby raise the original pick-up roller to the standby position.
- The document pick-up roller is fixed at the raised position by a torque limiter of the paper drive section.
- When the swing arm is raised to the standby position, the document stopper is lowered by its own weight and fixed by the lock pawl of the swing arm. The document stopper is unlocked when the swing arm lowers.
- The document stopper has two functions: one, to align the leading edges of the originals loaded in the standby state; and, two, to prevent the leading edge of the original from advancing over the pick-up position into the feed section.



[1]	Swing arm (standby position)	[2]	Document stopper
[3]	Swing arm (feed position)	[4]	Document pick-up roller

(2) Down control

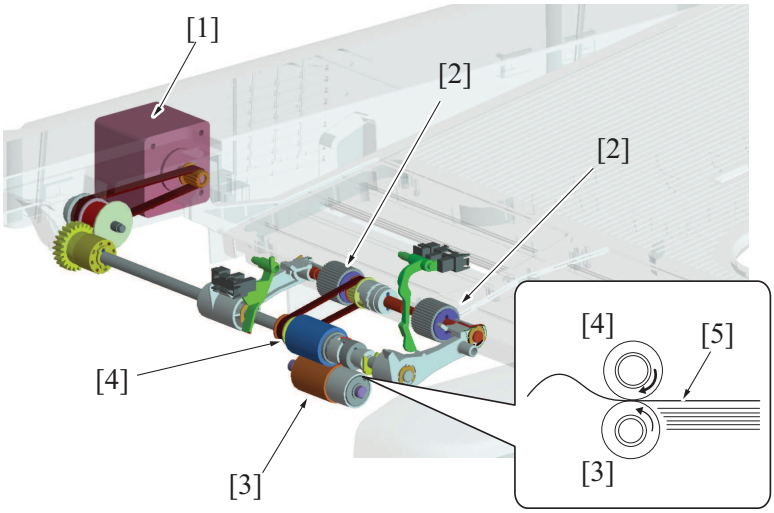
- When the start key is pressed, the document feed motor starts rotating forward. The rotation shaft of the swing arm mounted on the same shaft as the document feed roller is rotated forward, so that the original pick-up roller is lowered to the feed position.
- The document stopper is unlocked when the swing arm lowers.

3.1.4 Document feed/separation control

- When the start key is pressed, the document feed motor starts rotating forward, so that the document feed roller rotates forward.
- The rotation shaft of the swing arm mounted on the same shaft as the document feed roller is rotated forward, so that the document pick-up roller is lowered to the feed position. The document pick-up roller is rotated by a drive belt to thereby feed the original onto the document feed roller.

(1) Separation/feed operation

1. The document separation roller is pressed up against, and driven by, the document feed roller. A torque limiter is mounted on the shaft of the document separation roller.
2. The acting pressure of the document feed roller/document separation roller/torque limiter serves as the limit torque for preventing double feed.
3. When there is no original or only one sheet of original between the document separation roller and the document feed roller, the limit torque is exceeded and the document separation roller follows the rotation of the document feed roller.
4. If there are two or more sheets of original between the document separation roller and the document feed roller, the limit torque is greater than the friction force of the original, so that the document separation roller stops rotating.
5. Because of the stationary document separation roller, the lower sheet of original in contact with the document separation roller is not fed in, so that the first sheet of original is original separated from the second sheet of original.



[1]	Document feed motor (M2)	[2]	Document pick-up roller
[3]	Document separation roller	[4]	Document Feed roller
[5]	Original	-	-

(2) Periodically replaced parts

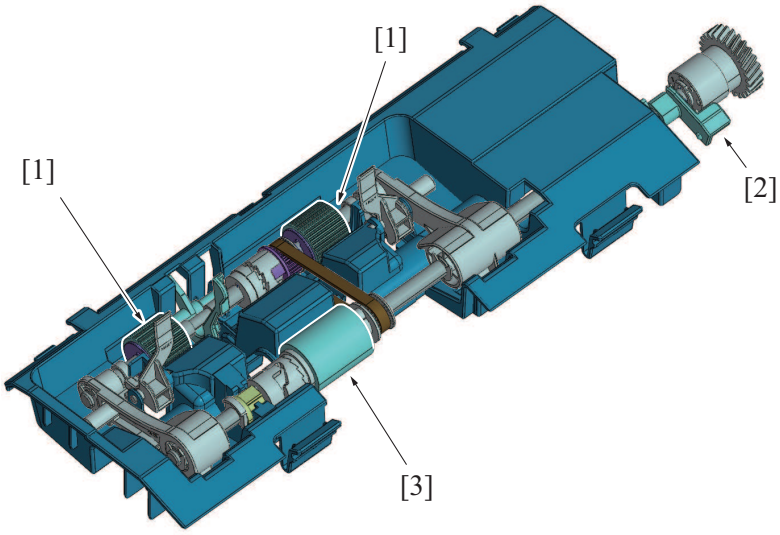
- The document pick-up roller, document feed roller, and document separation roller are periodically replaced parts.
- At replacing the rollers, the paper feed assembly (document pick-up roller + document feed roller) and document separation roller must be replaced at the same time.
- Otherwise, the document pick-up roller, document feed roller, and document separation roller must be replaced at the same time.
- None of the document pick-up rollers, document feed rollers, and document separation roller are provided with a new article detection mechanism. When the three rollers are replaced with new ones, the “ADF Feed” counter must be reset to zero using “Counter / Life” of the Service Mode.

- The number of times the DF has been subjected to paper feed operations can be checked with the “ADF Feed” counter of the Service Mode.

Periodical replacement cycle	Paper feed operations 200,000 times

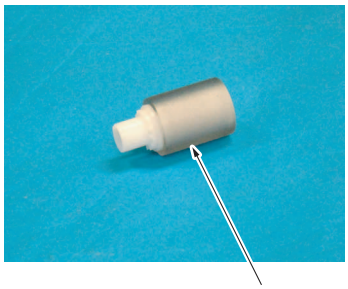
- Refer to "Replacing the document roller assembly", "Replacing the paper feed assy.", "Replacing the separation roller assy" for methods of replacing document pick-up roller, document feed roller, document separation roller, and details of the Service Mode.

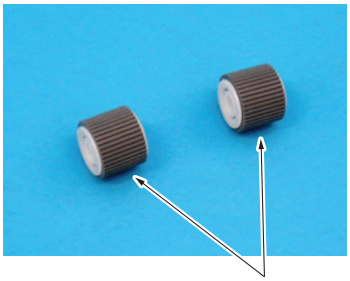
(a) Paper feed assembly



[1]	Document pick-up roller	[2]	Paper feed assembly lock lever
[3]	Document feed roller	-	-

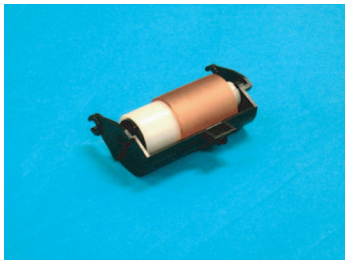
(b) Document feed roller / Document pick-up roller





[1]	Document feed roller	[2]	Document pick-up roller

(c) Document separation roller



3.1.5 Document separation roller pressure switching mechanism

- As a solution to misfeed problems when they occur, the pressure of the document separation roller can be changed as necessary.
- Inserting a spacer into a space below the spring that applies pressure to the document separation roller will increase the pressure.
- The pressure may be set in two steps selectable according to the direction in which the spacer is inserted.
- The spacer is disposed beside the document separation roller.
- For details, see “ I.14.1.3 Adjusting the pressure of the separation roller”.

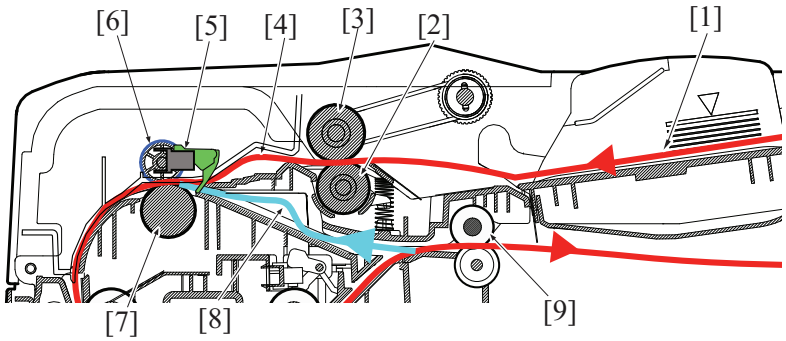
3.2 Document registration section

3.2.1 Document registration outline

- The registration motor provides the drive for the registration roller.
- The original will create a loop between the document feed roller and the registration roller when the original is being conveyed in order to correct the skew.

3.2.2 Document registration loop formation process

1. The registration sensor detects the leading edge of the original.
2. The registration roller remains stationary.
3. Because the document feed roller (document switchback exit roller for the 2nd side of the original) continues rotating to feed the original, a loop is formed at the leading edge of the original.
4. The loop corrects skew in the original.
5. The registration roller is started to rotate to transport the original.

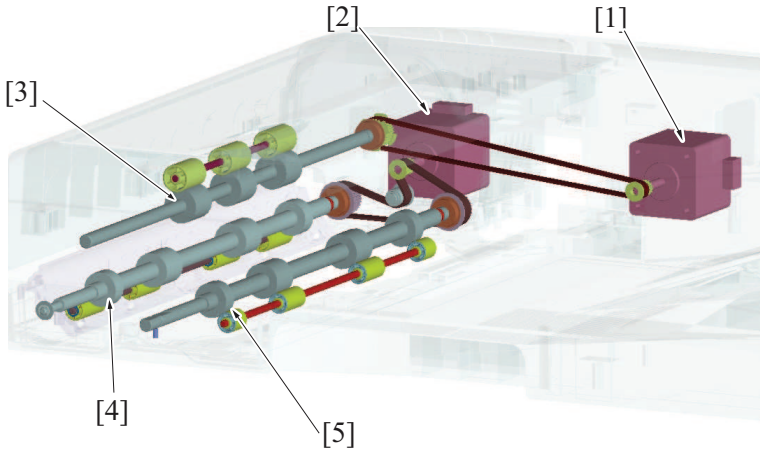


[1]	Original	[2]	Document separation roller
[3]	Document feed roller	[4]	Loop formation (1st side)
[5]	Document registration sensor (PS3)	[6]	Registration roll
[7]	Registration roller	[8]	Loop formation (2nd side)
[9]	Document switchback exit roller	-	-

3.3 Document reading section

3.3.1 Transport mechanism

- The original transported from the document feed section will be transported to the document reading section by the registration roller, the document reading roller/1 and /2, and the document switchback exit roller.
- The registration roller is driven by the registration motor.
- The document reading roller/1 and /2 are driven by the document reading motor.

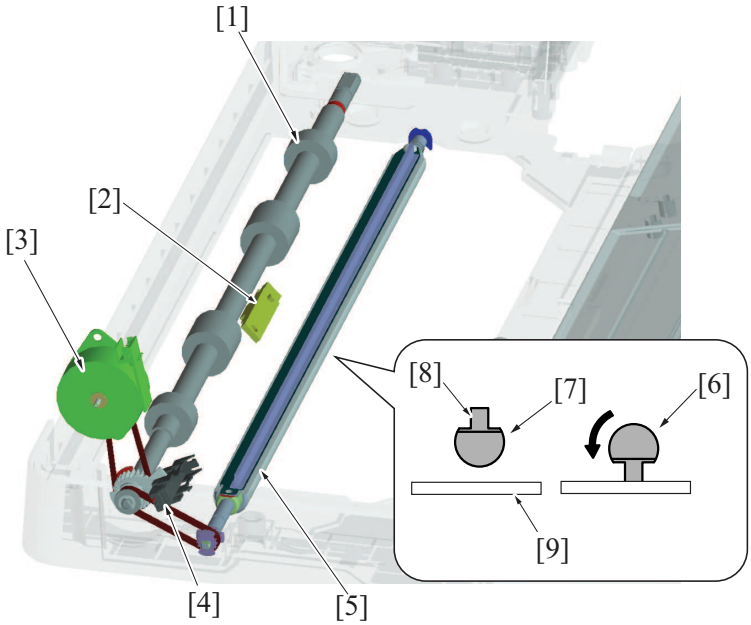


[1]	Registration motor (M3)	[2]	Document reading motor (M1)
[3]	Registration roller	[4]	Document reading roller/1
[5]	Document reading roller/2	-	-

3.3.2 Document reading glass cleaning mechanism

(1) DF original glass cleaning

- A reading line can occur if the DF original glass is contaminated with dust or dirt. The DF original glass cleaning mechanism prevents this fault from occurring.
- A half face of the document reading glass cleaning roller is provided with the document reading glass cleaning brush. While the original is being read, the document reading glass cleaning brush faces up. When the DF original glass is to be cleaned, the document reading glass cleaning roller rotates, so that the document reading glass cleaning brush faces the DF original glass.
- The document reading glass cleaning brush is drive by the glass cleaning motor.
- The position of the cleaning brush is controlled by the document reading glass cleaning sensor.

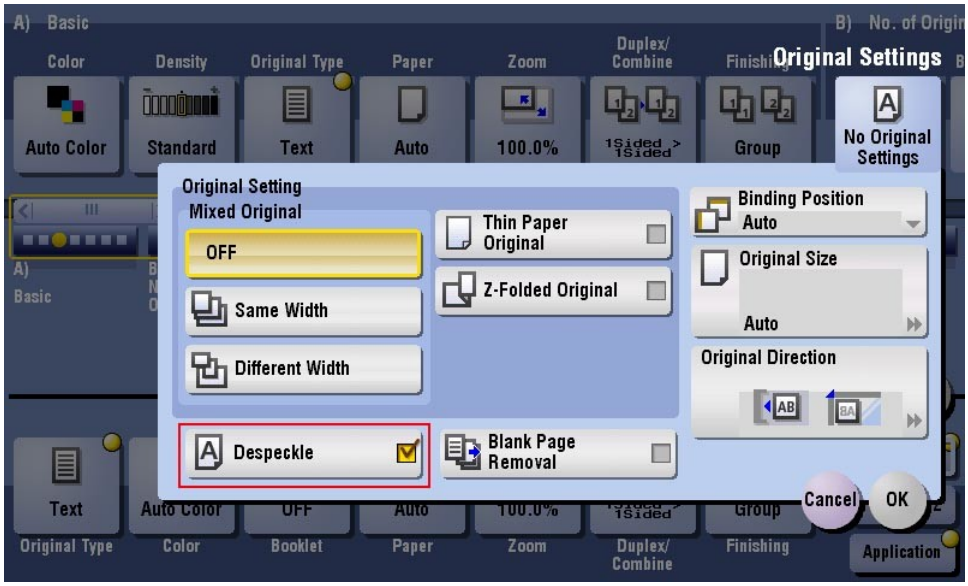


[1]	Document reading roller	[2]	Document reading sensor (PS4)
[3]	Glass cleaning motor (M4)	[4]	Document reading glass cleaning sensor (PS12)
[5]	Document reading glass cleaning roller	[6]	Document reading glass cleaning roller (cleaning position)
[7]	Document reading glass cleaning roller (standby position)	[8]	Cleaning brush section
[9]	Document reading glass	-	-

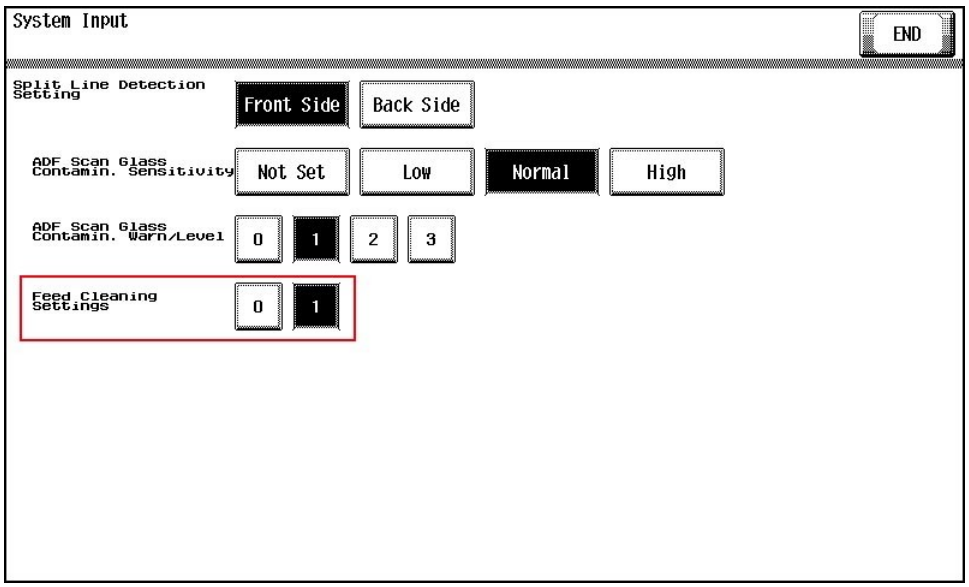
(2) Details of original reading glass cleaning

Condition		Cleaning operation
Predrive	Power ON	Rotates the document reading glass cleaning brush one complete turn to check for its correct operation. (forward rotation)
	Exiting from sleep	
Start key ON	Before starting reading	Rotates the document reading glass cleaning brush one complete turn to perform cleaning. (forward rotation: default setting)
	During reading	Rotates the document reading glass cleaning brush one complete turn to perform cleaning for every two originals during continuous reading of originals. (forward rotation)
		Rotates the document reading glass cleaning brush three complete turns to perform cleaning for each original during continuous reading of originals, if [Original Settings] -> [Despeckle] *1 is selected. (forward rotation) Because the document reading glass cleaning brush is rotated three complete turns to perform the cleaning, however, the original-to-original distance is widened than at normal timing. This results in reduced productivity in reading the originals.
		No document glass cleaning sequence is performed between originals during continuous reading of originals, if [System2] -> [ADF Scan Glass Contamin. Set.] -> [Feed Cleaning Settings] -> [0] *2 is selected in the Service Mode.
	After completing reading last original	The document reading glass cleaning brush tends to curl if repeatedly operated in one direction only, resulting in poor cleaning performance. To straighten the brush, it is rotated one complete turn in the backward direction when reading of the last original is completed. (backward rotation)

(a) *1: Despeckle mode setting screen

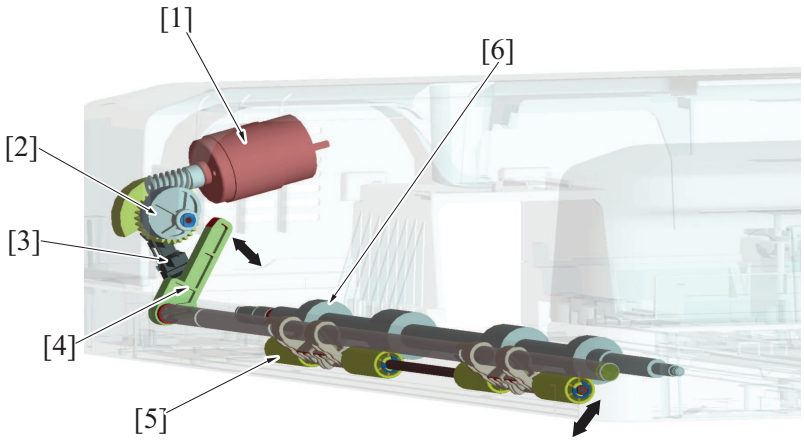


(b) *2: Feed cleaning settings screen



3.3.3 Document reading roll pressure/release control

- Rotation of the reading roll release motor drives the cam, which pushes the lever, so that the original reading roll is spaced apart from the document reading roller.
  Pressure and release positions are detected by the reading roll position sensor.

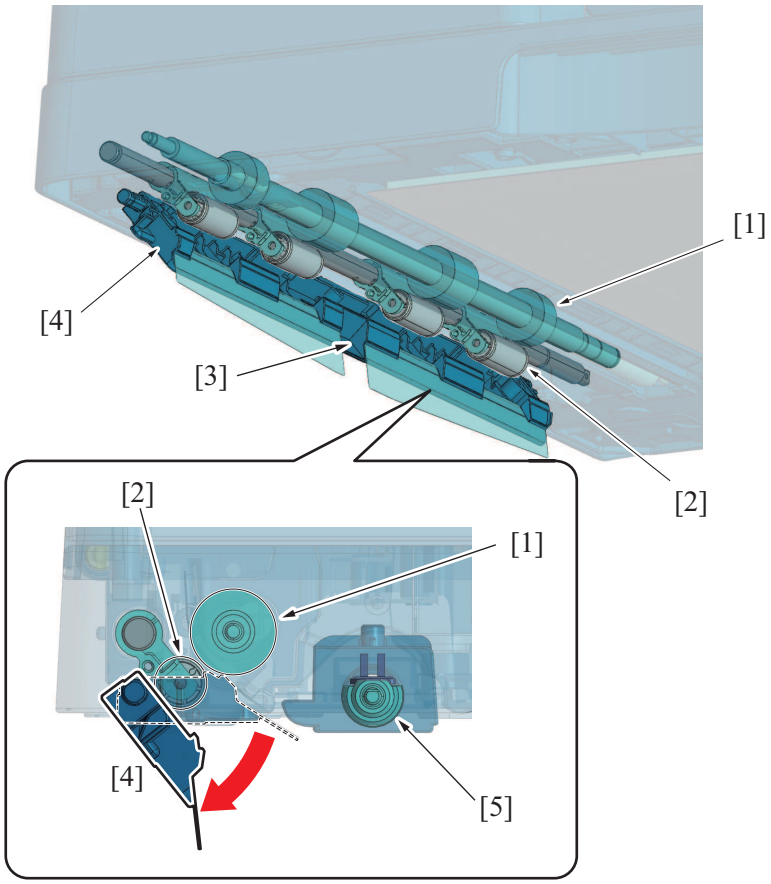


[1]	Reading roll release motor (M5)	[2]	Cam
[3]	Reading roll position sensor (PS11)	[4]	Lever
[5]	Reading roll	[6]	Document reading roller

3.3.4 Document reading front guide

- Open the document reading guide to handle documents that are caught between the document reading roller/1 and the document reading roll.
- Open the original reading guide to clean the original reading roller/1 and the original reading sensor flock fabric.
- A spring is mounted to the document reading guide, therefore holding it by one hand is required at the time of handling a document. After you finished handling the document, release the hand holding the guide and return the guide to its normal position.
- No open-close sensor is mounted to the document reading guide.

Scanner side-view drawing

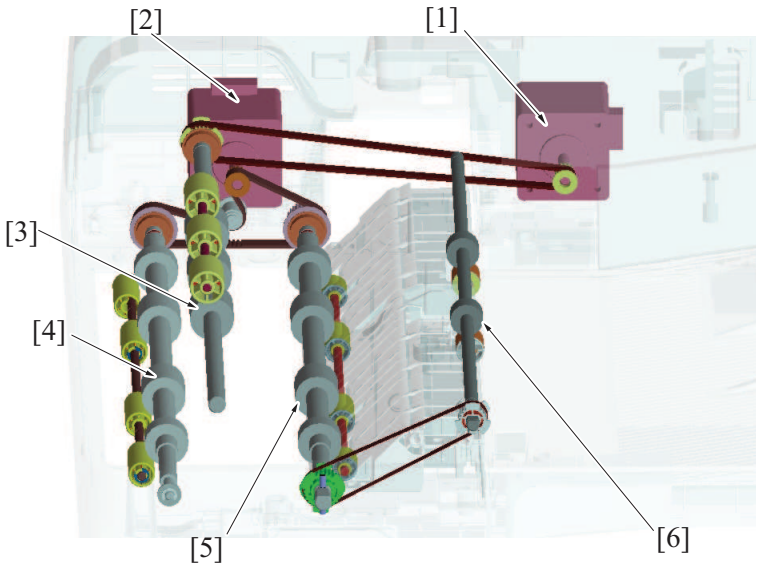


[1]	Document reading roller/1	[2]	Document reading roll
[3]	Flock fabric	[4]	Document reading guide
[5]	Original reading glass cleaning roller	-	-

3.4 Document switchback/exit section

3.4.1 Document switchback/exit mechanism

- The original transported from the transport section will exit by the document reading roller/1, /2 and document switchback exit roller.
- In the 2-sided mode, the document switchback exit roller is rotated backward and the original is fed to the registration roller again.
- The document switchback exit roller is driven by the document reading motor.

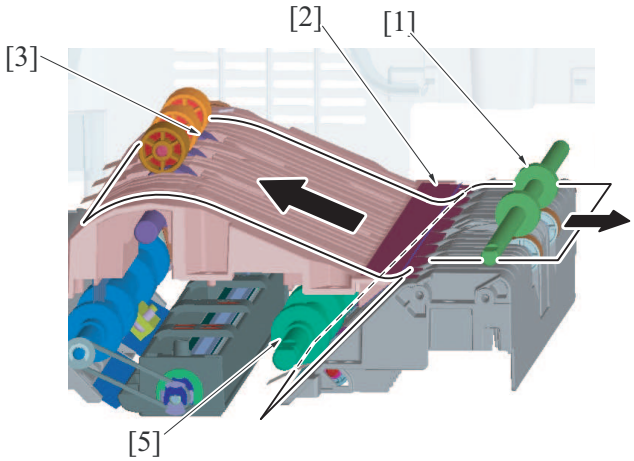


[1]	Registration motor (M3)	[2]	Document reading motor (M1)
[3]	Registration roller	[4]	Document reading roller/1
[5]	Document reading roller/2	[6]	Document switchback exit roller

3.4.2 Switching mechanism for document switchback/exit

(1) Document switchback section

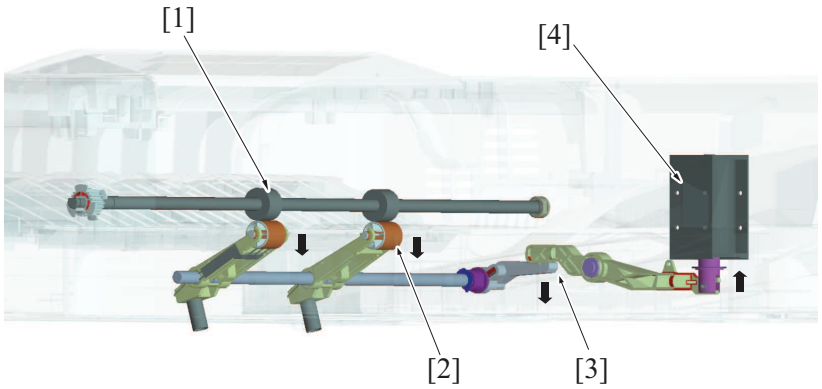
- The switchback path switching guide film provides a route toward the switchback path.
- In the 2-sided mode, the document switchback exit roller is rotated backward. This allows the trailing edge of the original to move along the upper side of the switchback path switching guide film to be fed to the switchback path, so that the original is fed to the registration roller.
- The switchback path switching guide film is fixed at all times.



[1]	Document switchback exit roller	[2]	Switchback path switching guide film
[3]	Registration roller	-	-

3.4.3 Switchback exit roll pressure/retraction control

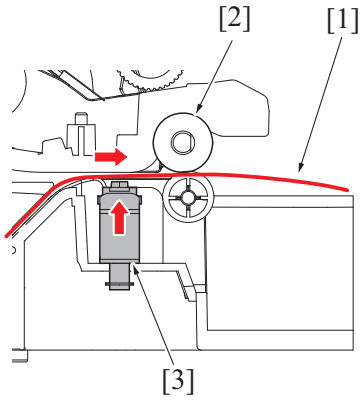
- Operation of the document exit roller release solenoid causes the lever to be pushed down and the document exit roll to be lowered, so that the document exit roll is spaced away from the document exit roller.
- This spacing operation is performed during switchback for reading of the back side of the originals and for putting pages in numerical order in the 2-sided mode.



[1]	Document switchback exit roller	[2]	Document exit roll
[3]	Lever	[4]	Document exit roller release solenoid (SD1)

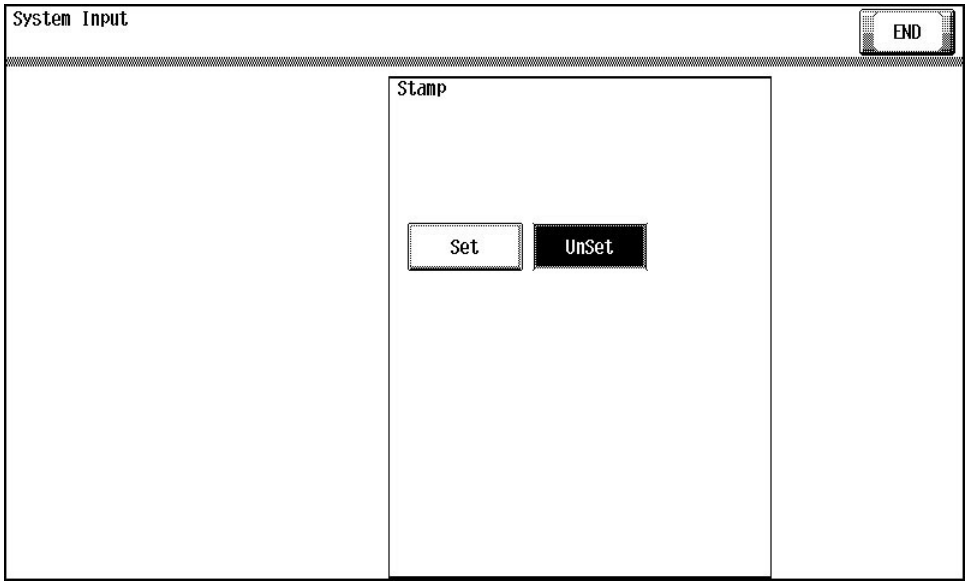
3.4.4 Faxed document stamp function

- Mounting optional “Stamp unit SP-501” allows a stamp to be placed on a faxed document.
- The stamp solenoid located upstream of the document exit roller is energized when the original is about to be fed out and the stamp mounted on the solenoid plunger is pressed against the surface of the original. This places a faxed mark (+) on the surface of the original.
- This function is enabled when “System2/Stamp/Set*1 (default setting: Unset)” is turned ON using the Service Mode and the user selects “Application/TX Stamp*2 (default setting: OFF)” on the “Scan/Fax” screen.
- This function is not used for “Copy” or “Scan”.



[1]	Original	[2]	Document switchback exit roller
[3]	Stamp unit (SP-501)	-	-

(1) *1: Stamp mounting setting screen

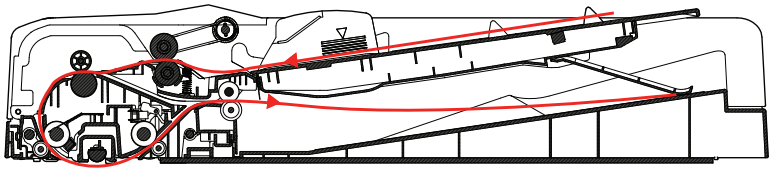


(2) *2: TX Stamp setting screen



3.5 Paper path operation

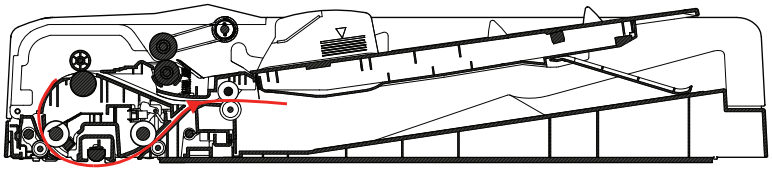
3.5.1 1-sided mode



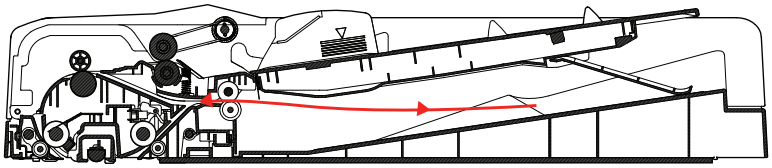
1. Pressing the start key will lower the document pick-up roller and press the original.
2. The document pick-up roller, document feed roller and document separation roller will start rotating to start feeding the first sheet of paper.
3. When the paper reaches the registration roller, a loop is formed in the paper. Then, the registration motor is started, so that the registration roller transports the paper.
4. The document feed motor is deenergized when a predetermined period of time elapses after the registration motor has been activated. The document reading motor will start running.
5. It starts reading from the leading edge of the original when the document reading sensor turned ON and the predetermined period of time has passed.
6. The document reading roll will be retracted right before the back edge of the original passes through the document reading roller/1. After a predetermined period of time, document reading roll will be pressed again to prepare for the next original.
7. The original will be exit by document reading roller/2 and the document exit roller.
8. All motors will turn OFF after the trailing edge of the original turns OFF the document exit sensor and the predetermined period of time is passed.

3.5.2 2-sided mode

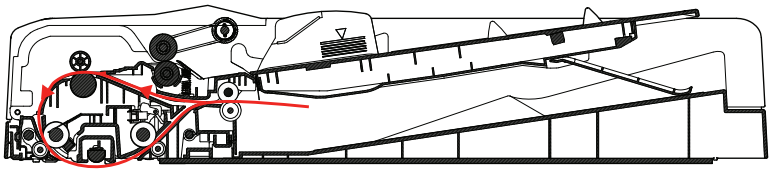
1. In the same manner as in the 1-side mode, the first side of the original is read.



2. After the original moves past document reading roller/2, the document reading motor is rotated backward and the original is transported to the switchback section.



3. It starts reading from the leading edge of the original when the document reading sensor turned ON and the specified period of time has passed.



4. To ensure that the front and back sides of the originals are in correct order, the original undergoes the similar switchback operation again before being fed into the tray.

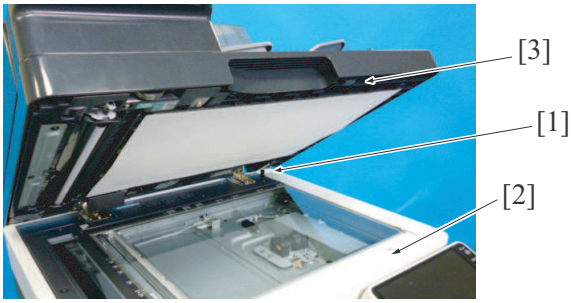
3.6 DF open/close detection mechanism

3.6.1 Document exchange detection control

- An angle detection mechanism is provided to detect the operation of exchanging originals when the DF is used as the original cover of the main body.
- When the DF is raised to an angle of about 14.5 degrees or more, the detection lever is pushed up by a spring. The angle sensor that has been blocked by the detection lever is now unblocked. It is, as a result, detected that the DF “is raised to an angle of 14.5 degrees or more”.
- When, on the other hand, the DF is lowered to an angle of about 14.5 degrees or less, the detection lever is pushed down. Then, the angle sensor, which has been unblocked, is blocked, so that it is detected that the DF “is lowered to an angle of 14.5 degrees or less”.
- When the DF state undergoes changes from a condition of being fully lowered to a condition of “being raised to an angle of 14.5 degrees or more” and then to a condition of “being lowered to an angle of 14.5 degrees or less”, it is determined that “an original is placed manually on the original glass”. Then the original size detection control will be started.

3.6.2 DF open/close detection

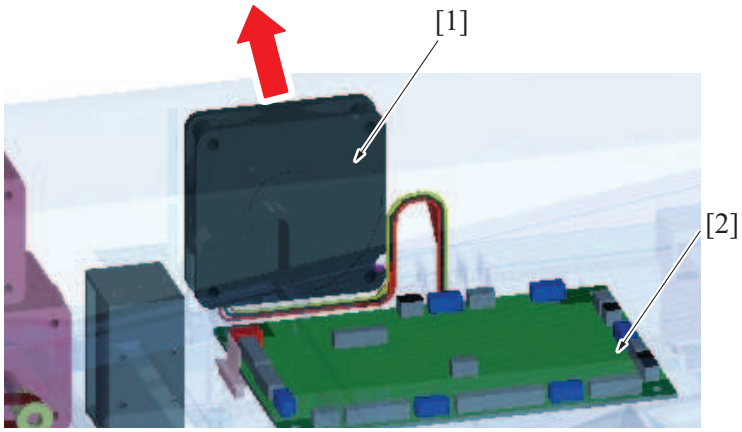
- The magnet is installed to detect the open/close status of the DF on the main body side.
- The original cover sensor on the main body will turn ON by the magnet when lowering the DF.



[1]	Angle sensor (PS202)	[2]	Original cover sensor (RS201)
[3]	Magnet	-	-

3.7 Cooling inside the unit mechanism

- The DF cooling fan motor functions to cool the inside of DF, DF control board, and document feed motor in the DF.
- It discharges heat generated inside the DF out through the exhaust port.



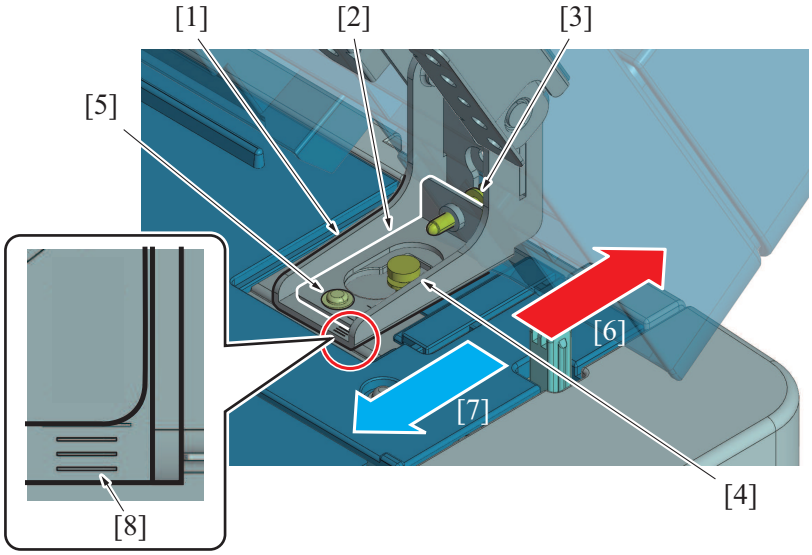
[1]	DF cooling fan motor (FM1)	[2]	DF control board (DFCB)

3.8 DF Skew(Front) adjustment mechanism

- The document feeder is installed to the scanner section of the machine and fixed with two hinges.
- The hinge on the right side of the machine is equipped with a DF skew (Front) adjustment mechanism.
- Turn the adjusting screw to move hinges backward or forward. It changes the relative installing position of the machine and DF. Also, it corrects the inclination of the first side image that is scanned using the CCD unit on the scanner section of the machine.

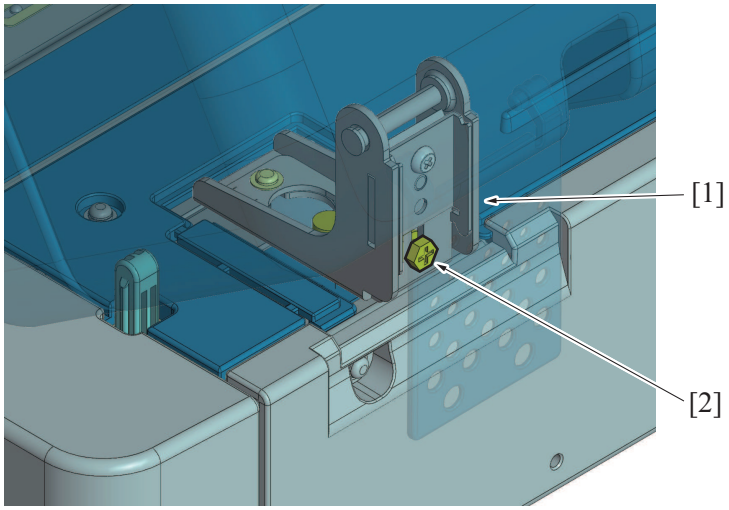
3.8.1 Hinge on the right side of the machine (front)

- Tighten the hinge fixing screw and turn the adjustment screw to move the hinge forward or backward. (The hinge moves forward or backward since the DF fixing plate is mounted to the machine)
- If the hinge moves towards the front side of the machine, the scale that is engraved on the hinge appears. (+ direction)
- If the hinge moves towards the rear side of the machine, the scale that is engraved on the hinge is hidden. (- direction)
- The amount of adjustment is read on a scale. (Default: 4 scales)
- The amount of correction to the hinge can be automatically measured through reading the adjustment chart in "ADF/DFSkew (Front)" of Service Mode.
  See " I.14.1.2 Adjusting front side skew feed on ADF" for details about the "ADF/DFSkew (Front)".



[1]	Machine right-side hinge	[2]	DF mounting plate
[3]	Adjustment screw	[4]	DF mounting plate fixing screw: Fixes the DF fixing plate to the machine.
[5]	Hinge fixing screw: Fixes the hinge to the DF mounting plate.	[6]	Hinge movement direction: -
[7]	Hinge movement direction: +	[8]	Adjustment scale

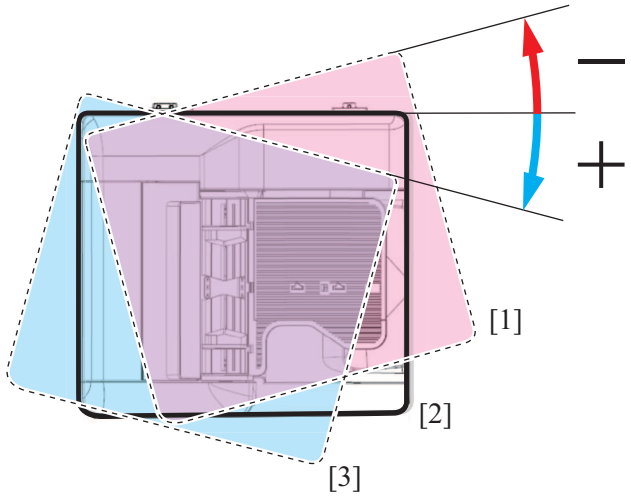
3.8.2 Hinge on the right side of the machine (rear)



[1]	Machine right-side hinge	[2]	Adjustment screw: Turn the adjustment screw to move the hinge backward or forward. • Amount of adjustment + direction: Clockwise turn • Amount of adjustment - direction: Counterclockwise turn

3.8.3 Adjustment direction conceptual drawing

Upper view

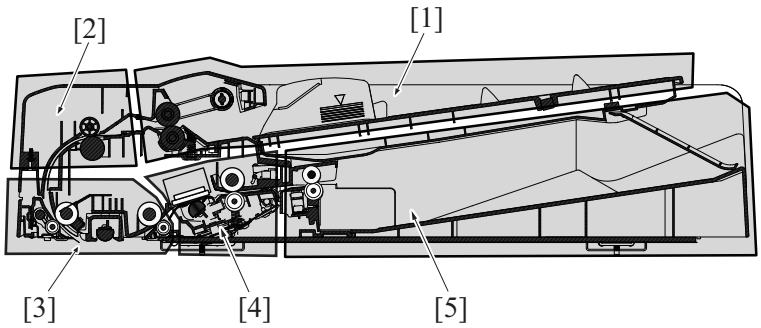


[1]	DF movement direction (hinge movement direction): -	[2]	Home position
[3]	DF movement direction (hinge movement direction): +	-	-

PC THEORY OF OPERATION DF-704

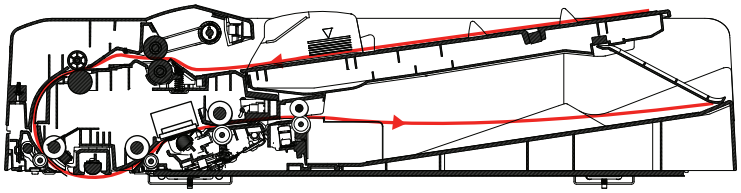
1. CONFIGURATION

1.1 Section configuration



[1]	Document feed section	[2]	Document registration section
[3]	1-sided document reading section	[4]	2-sided document reading section
[5]	Document exit section	-	-

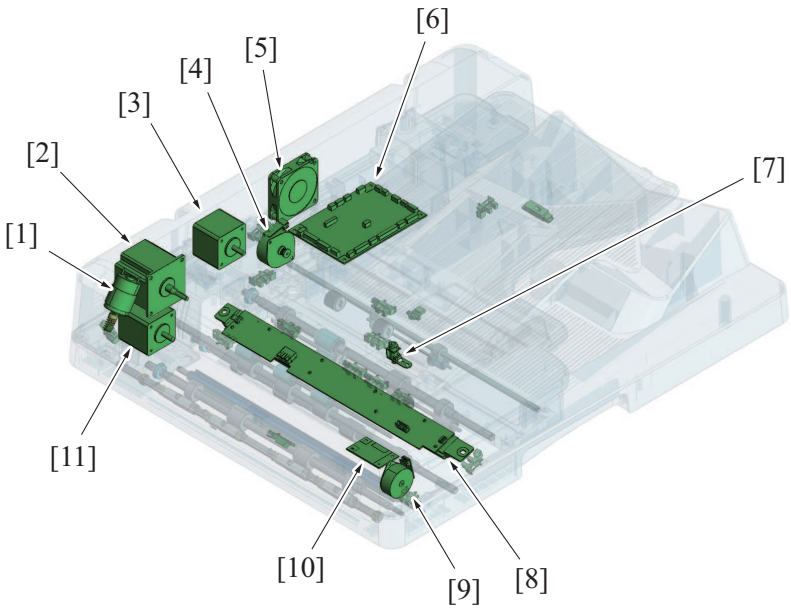
1.2 Paper path



- The same paper path is established in the 1-sided mode and 2-sided mode.
- In 1-sided mode, the CCD at the scanner section reads the image of the original. In 2-sided mode, at the same timing as that when the front side of the original is read by the CCD at the scanner section, the CIS in the DF reads the back side of the original. The speed at which the original is read in the 2-sided mode is, therefore, the same that in the 1-sided mode.

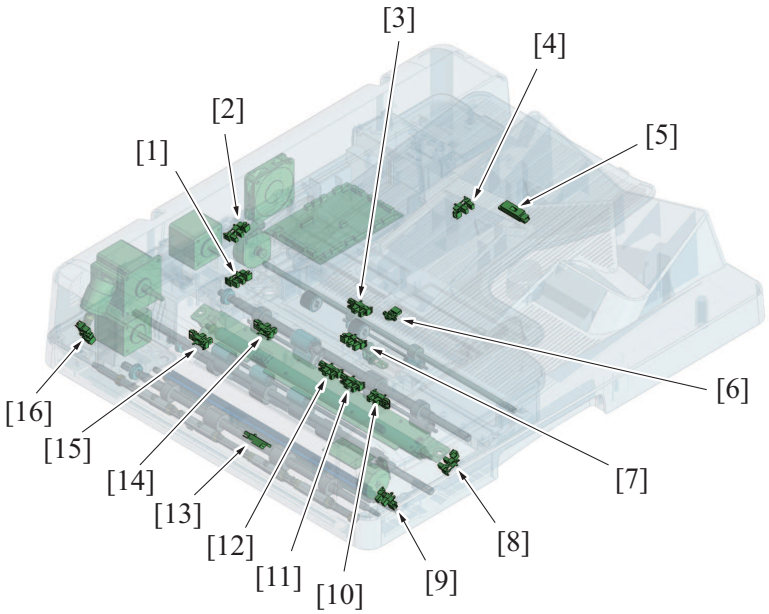
1.3 Main part configuration

1.3.1 Main electrical part



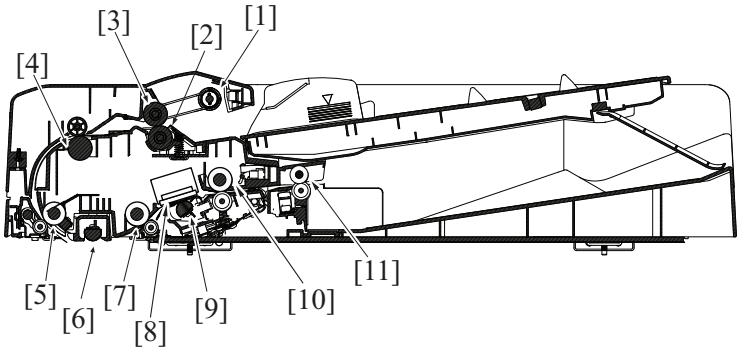
[1]	Reading roller release motor (M4)	[2]	Document reading motor (M1)
[3]	Document feed motor (M2)	[4]	CIS cleaning motor (M5)
[5]	DF cooling fan motor (FM1)	[6]	DF control board (DFCB)
[7]	Stamp Unit (SP-501) * option	[8]	CIS module (CIS)
[9]	Document reading glass cleaning motor (M6)	[10]	CIS power supply (CISPU)
[11]	Registration motor (M3)	-	-

1.3.2 Sensor



[1]	CIS cleaning sensor (PS7)	[2]	Upper door sensor (PS14)
[3]	Document empty sensor (PS1)	[4]	Document length sensor/1 (PS8)
[5]	Document length sensor/2 (PS9)	[6]	Document width sensor (VR1)
[7]	Document exit sensor (PS5)	[8]	CIS cover sensor (PS15)
[9]	Document reading glass cleaning sensor (PS13)	[10]	Mixed original sensor/3 (PS12)
[11]	Mixed original sensor/2 (PS11)	[12]	Mixed original sensor/1 (PS10)
[13]	Document reading sensor (PS6)	[14]	After separate sensor (PS2)
[15]	Registration sensor (PS3)	[16]	Reading roll position sensor (PS4)

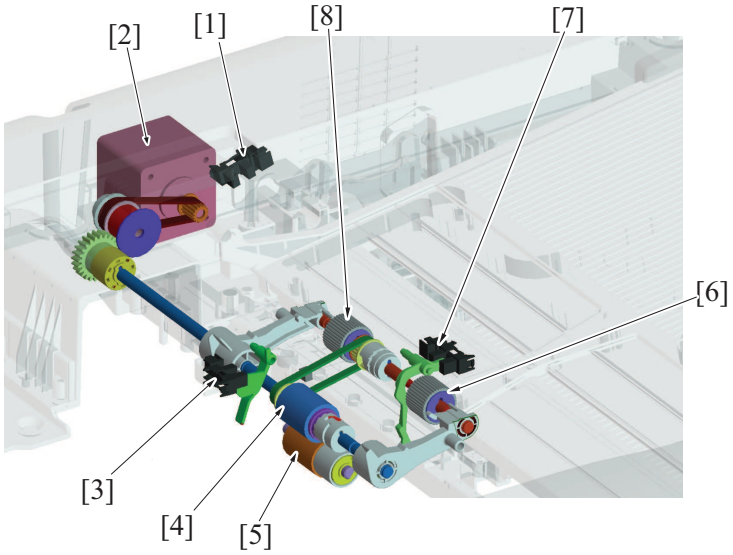
1.3.3 Roller placement



[1]	Document pick-up roller	[2]	Document separation roller
[3]	Document feed roller	[4]	Registration roller
[5]	Document reading roller/1	[6]	Document reading glass cleaning roller
[7]	Document reading roller/2	[8]	CIS module (CIS)
[9]	CIS cleaning brush	[10]	Document reading roller/3
[11]	Document exit roller	-	-

2. DRIVE

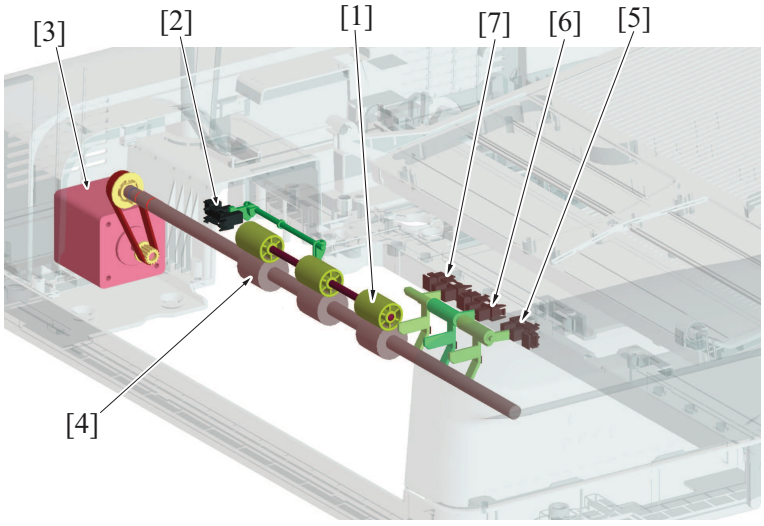
2.1 Paper feed drive



[1]	Upper door sensor (PS14)	[2]	Document feed motor (M2)
[3]	After separate sensor (PS2)	[4]	Document feed roller
[5]	Document separation roller	[6]	Document pick-up roller
[7]	Document empty sensor (PS1)	[8]	Document pick-up roller

- The document feed section consists of the document pick-up roller, document feed roller, as well as the document separation roller, and is directly driven by the document feed motor.
- When the start key is pressed, the document pick-up roller lowers to press the original, and the original is taken up and fed in. The original is transported to the registration roller by the document pick-up roller and document feed roller.
- After the take-up and feeding sequence, the document feed motor is rotated backward, which raises the document pick-up roller.

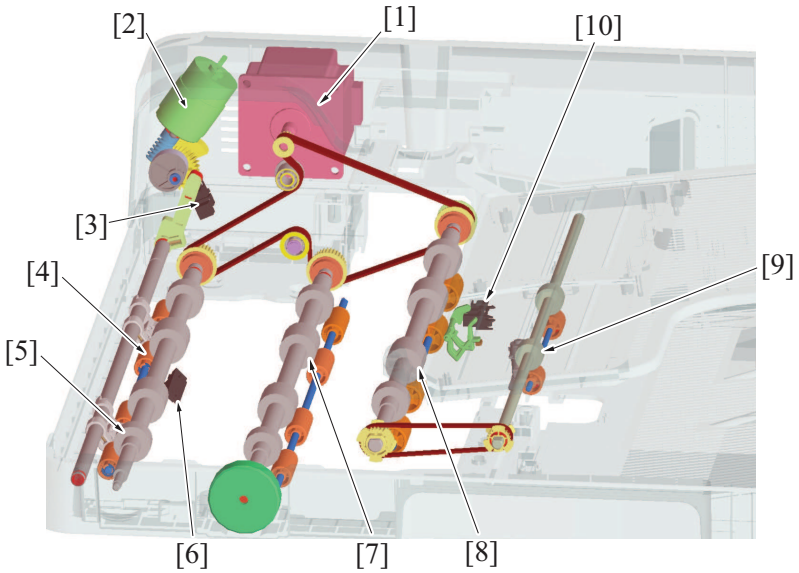
2.2 Registration drive



[1]	Registration roll	[2]	Registration sensor (PS3)
[3]	Registration motor (M3)	[4]	Registration roller
[5]	Mixed original sensor/3 (PS12)	[6]	Mixed original sensor/2 (PS11)
[7]	Mixed original sensor/1 (PS10)	-	-

- Timing at which to start transporting the original is controlled using the registration motor.
- The original is pressed against the registration roller and registration roll. This forms a loop in the original to thereby correct any skew in the original.
- Mixed original sensors/1, 2/, and 3/ detect width of the originals in the mixed original mode.

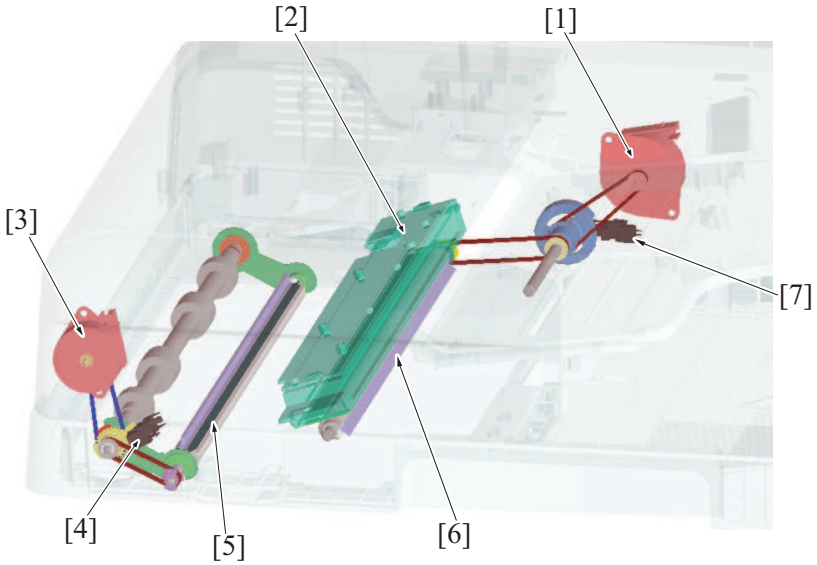
2.3 Document reading drive



[1]	Document reading motor (M1)	[2]	Reading roller release motor (M4)
[3]	Reading roll position sensor (PS4)	[4]	Document reading roll
[5]	Document reading roller/1	[6]	Document reading sensor (PS6)
[7]	Document reading roller/2	[8]	Document reading roller/3
[9]	Document exit roller	[10]	Document exit sensor (PS5)

- The document reading motor drives the document reading section and document exit section.
- The document reading roll is equipped with a pressure/release mechanism. The pressure is released when the trailing edge of the original moves past the roller.

2.4 Document reading glass / CIS glass cleaning drive



[1]	CIS cleaning motor (M5)	[2]	CIS module (CIS)
[3]	Document reading glass cleaning motor (M6)	[4]	Document reading glass cleaning sensor (PS13)
[5]	Document reading glass cleaning brush	[6]	CIS glass cleaning brush
[7]	CIS cleaning sensor (PS7)	-	-

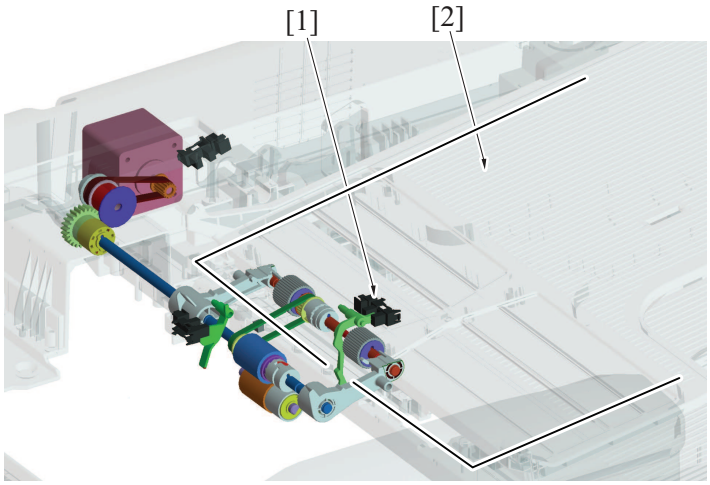
- The document reading glass cleaning brush is rotated by the document reading glass cleaning motor and the glass surface is thereby cleaned.
- The CIS cleaning brush is rotated by the CIS cleaning motor and the CIS surface is thereby cleaned.
- The position of the cleaning brush is detected by the document reading glass cleaning sensor and the CIS cleaning sensor.

3. OPERATION

3.1 Document feed section

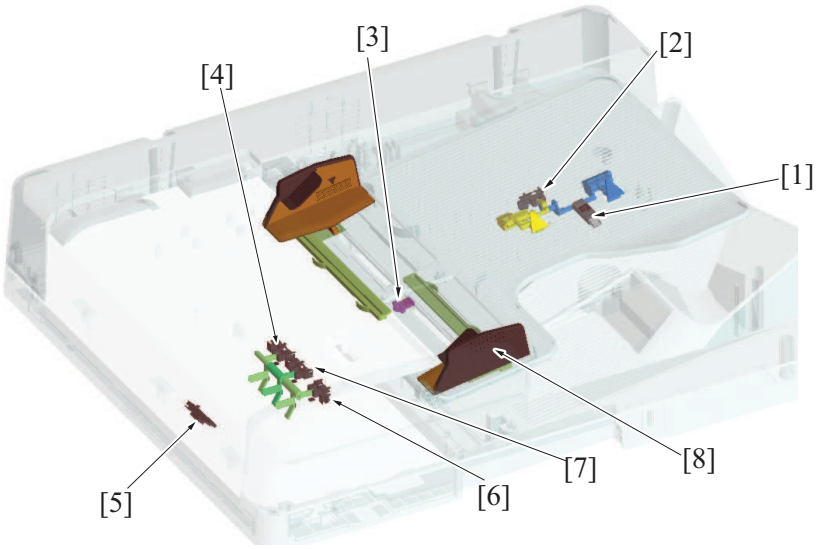
3.1.1 Document set/empty detection

- When an original is loaded on the document feed tray, the document empty sensor detects that there is original.
- If no original is loaded when the document pick-up roller is in the standby position, the actuator blocks the document empty sensor and it is detected that no original is loaded.
- When an original is loaded on the document feed tray, the leading edge of the original pushes the actuator so that the document empty sensor is unblocked. It is detected that an original is loaded.
- When all pages of the original are fed in, the document empty sensor detects that there is no original on the document feed tray.

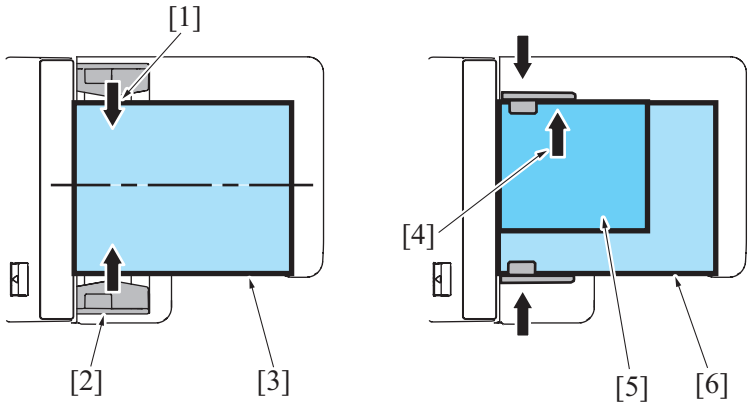


[1]	Document empty sensor (PS1)	[2]	Original

3.1.2 Document size detection mechanism



[1]	Document length sensor/2 (PS9)	[2]	Document length sensor/1 (PS8)
[3]	Document width sensor (VR1)	[4]	Mixed original sensor/1 (PS10)
[5]	Document reading sensor (PS6)	[6]	Mixed original sensor/3 (PS12)
[7]	Mixed original sensor/2 (PS11)	[8]	Document width guide



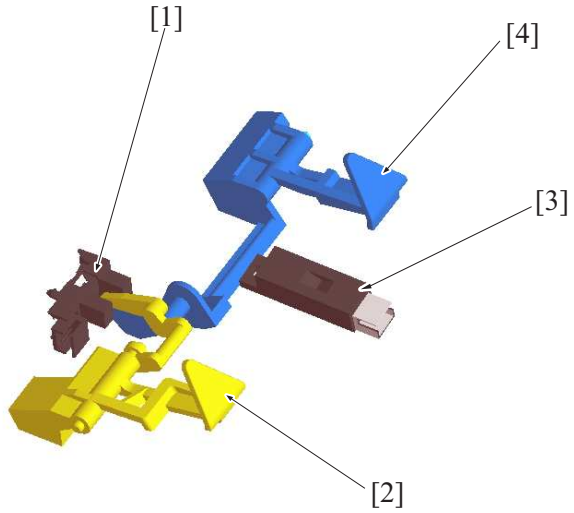
[1]	Adjust the document width guide plates (center alignment)	[2]	Document width guide plates
[3]	Original (standard mode)	[4]	Align the original with narrow width with the rear side of the document width guide plates (rear alignment)
[5]	Original with narrow width (mixed original mode)	[6]	Original with wide width (mixed original mode)

(1) Detecting the width of the original

- The width of the original is set on the document feed tray will be detected by the document width sensor.
- A variable resistor is incorporated in the document width sensor. Its resistance value varies in association with the movement of the document width guide.
- The original is to be loaded in the document feed tray by aligning it with reference to the center of the document feed tray in the standard mode. In the mixed original mode, the original is aligned to the rear side.

(2) Detecting the length of the original

- The length of the original is set on the document feed tray will be detected by the document length sensors/1 and /2.
- The document length sensor/1 is a transmission type, while document length sensor/2 is a reflection type. The document length sensor/1 is detected by two actuators, that is, actuator/1 and actuator/2.
- When the document feed tray is not loaded with any originals, document length sensor/1 is blocked. When an original is loaded and only actuator/1 is pressed, document length sensor/1 is unblocked. When both actuator/1 and actuator/2 are pressed, a blocked document length sensor/1 is detected by actuator/2.



[1]	Document length sensor/1 (PS8)	[2]	Actuator/1
[3]	Document length sensor/2 (PS9)	[4]	Actuator/2

(3) Detecting the width of the original (in the mixed original/AMS mode)

- In the mixed original/AMS mode, no width is determined on the document feed tray; rather, the width is detected while the originals are being fed. Three mixed original sensors are disposed at positions immediately after the document feed section, functioning to detect the width of the original.

(4) Detecting the length of the original (in the mixed original/AMS mode)

- In the mixed original/AMS mode, no length is determined on the document feed tray; rather, the length of the original is calculated and determined based on the period of time during which the document reading sensor remains activated.

(5) Document feed tray size detection

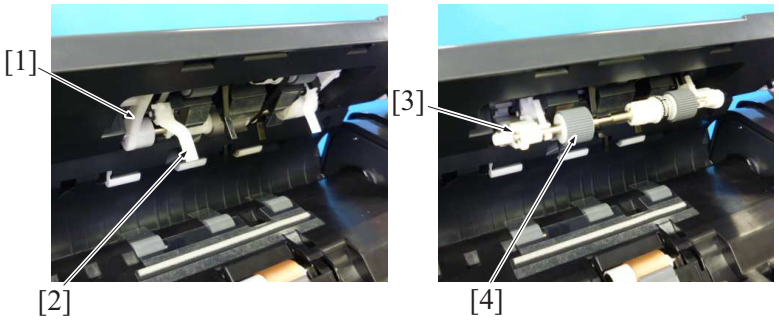
- The original size is determined by the combination of the results of detection made of the width and length of the original.

Document length sensor/2 (PS9)		OFF	OFF	Reflector	Reflector
Document length sensor/1 (PS8)		Blocked	Unblocked	Unblocked	Blocked
Document width sensor (VR1)	114.5	Postcard	B5S	A4S	A3
	136	B6S	B5S	A4S	A3
	163	A5S	B5S	A4S	A3
	190.6	B5S	B5S	A4S	A3
	236.5	A5	Letter S	A4S	Foolscap
	266.2	B5	B4	B4	B4
	286.2	Letter	Ledger	Ledger	Ledger
	(307)	A4	A3	A3	A3

3.1.3 Pick-up roller up/down control

(1) Up control

- When a job is completed, the document feed motor starts rotating backward. Then, the swing arm mounted on the same shaft as the document feed roller is rotated backward to thereby raise the document pick-up roller to the standby position.
- The document pick-up roller is fixed at the raised position by a torque limiter of the paper drive section.
- When the swing arm is raised to the standby position, the document stopper is lowered by its own weight and fixed by the lock pawl of the swing arm. The document stopper is unlocked when the swing arm lowers.
- The document stopper has two functions: one, to align the leading edges of the originals loaded in the standby state; and, two, to prevent the leading edge of the original from advancing over the pick-up position into the feed section.



[1]	Swing arm (standby position)	[2]	Document stopper
[3]	Swing arm (feed position)	[4]	Document pick-up roller

(2) Down control

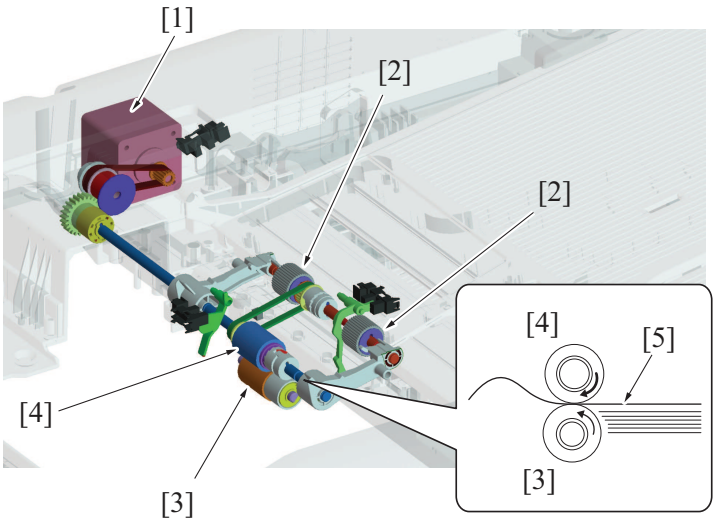
- When the start key is pressed, the document feed motor starts rotating forward. The rotation shaft of the swing arm mounted on the same shaft as the document feed roller is rotated forward, so that the document pick-up roller is lowered to the feed position.
- The document stopper is unlocked when the swing arm lowers.

3.1.4 Document feed/separation control

- When the start key is pressed, the document feed motor starts rotating forward, so that the document feed roller rotates forward.
- The rotation shaft of the swing arm mounted on the same shaft as the document feed roller is rotated forward, so that the document pick-up roller is lowered to the feed position. The document pick-up roller is rotated by a drive belt to thereby feed the original onto the document feed roller.

(1) Separation/feed operation

1. The document separation roller is pressed up against, and driven by, the document feed roller. A torque limiter is mounted on the shaft of the document separation roller.
2. The acting pressure of the document feed roller/document separation roller/torque limiter serves as the limit torque for preventing double feed.
3. When there is no original or only one sheet of original between the document separation roller and the document feed roller, the limit torque is exceeded and the document separation roller follows the rotation of the document feed roller.
4. If there are two or more sheets of original between the document separation roller and the document feed roller, the limit torque is greater than the friction force of the original, so that the document separation roller stops rotating.
5. Because of the stationary document separation roller, the lower sheet of original in contact with the document separation roller is not fed in, so that the first sheet of original is original separated from the second sheet of original.



[1]	Document feed motor (M2)	[2]	Document pick-up roller
[3]	Document separation roller	[4]	Document feed roller
[5]	Original	-	-

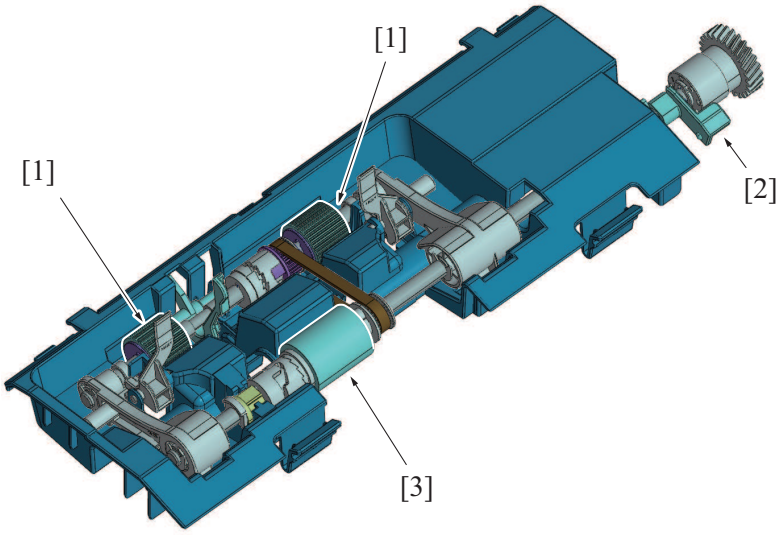
(2) Periodically replaced parts

- The document pick-up roller, document feed roller, and document separation roller are periodically replaced parts.
- At replacing the rollers, the paper feed assembly (document pick-up roller + document feed roller) and document separation roller must be replaced at the same time.
- Otherwise, the document pick-up roller, document feed roller, and document separation roller must be replaced at the same time.
- None of the document pick-up rollers, document feed rollers, and document separation roller are provided with a new article detection mechanism. When the three rollers are replaced with new ones, the “ADF Feed” counter must be reset to zero using “Counter / Life” of the Service Mode.
- The number of times the DF has been subjected to paper feed operations can be checked with the “ADF Feed” counter of the Service Mode.

Periodical replacement cycle	Paper feed operations 200,000 times

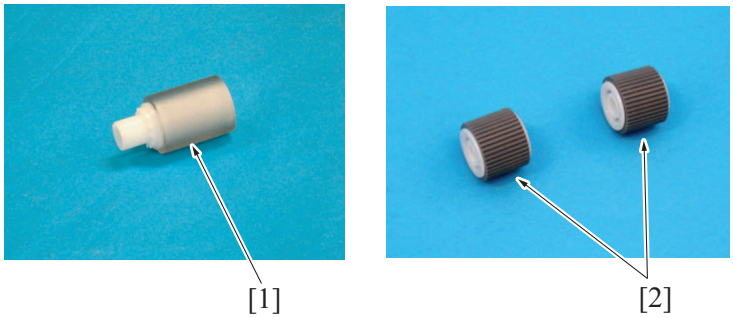
- For details of the applicable replacement procedures for the document pick-up roller, document feed roller, and document separation roller and the Service Mode, see “ F.11.1.3 Replacing the paper feed assy.” and “ F.11.1.5 Replacing the separation roller assy.”

(a) Paper feed roller assembly



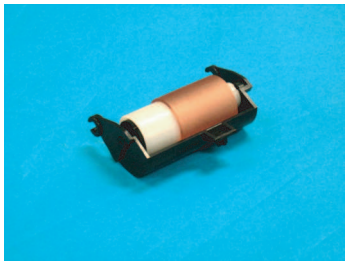
[1]	Document pick-up roller	[2]	Paper feed assembly lock lever
[3]	Document feed roller	-	-

(b) Document feed roller / Document pick-up roller



[1]	Document feed roller	[2]	Document pick-up roller

(c) Document separation roller



3.1.5 Document separation roller pressure switching mechanism

- As a solution to misfeed problems when they occur, the pressure of the document separation roller can be changed as necessary.
- Inserting a spacer into a space below the spring that applies pressure to the document separation roller will increase the pressure.
- The pressure may be set in two steps selectable according to the direction in which the spacer is inserted.
- The spacer is disposed beside the document separation roller.
- For details, see " I.15.1.4 Adjusting the pressure of the separation roller".

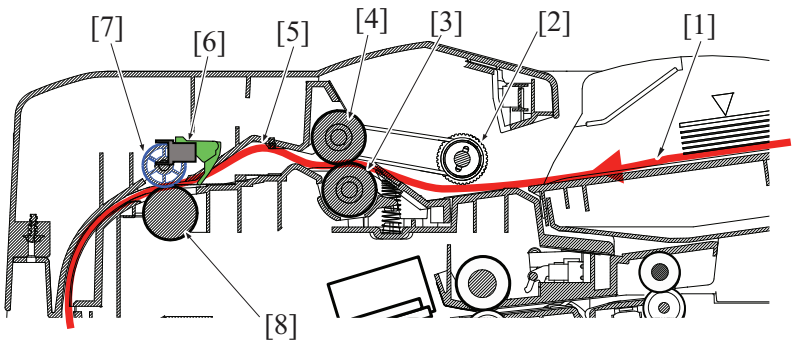
3.2 Document registration section

3.2.1 Document registration outline

- The registration motor provides the drive for the registration roller.
- The original will create a loop between the document feed roller and the registration roller when the original is being conveyed in order to correct the skew.

3.2.2 Document registration loop formation process

1. The registration sensor detects the leading edge of the original.
2. The registration roller remains stationary.
3. Because the document feed roller continues rotating to feed the original, a loop is formed at the leading edge of the original.
4. The loop corrects skew in the original.
5. The registration roller is started to rotate to transport the original.



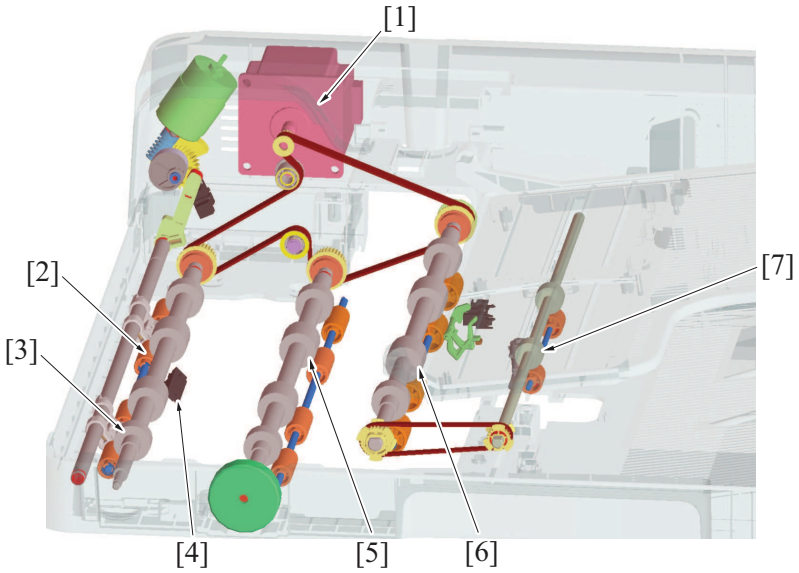
[1]	Original	[2]	Document pick-up roller
[3]	Document separation roller	[4]	Document feed roller
[5]	Loop formation	[6]	Registration sensor (PS3)
[7]	Registration roll	[8]	Registration roller

3.3 1-sided document reading section

3.3.1 Document reading section

- The document reading motor provides the drive for document reading roller/1/2/3, and the document exit roller.
- The original transported from the document registration section will be transported to the document exit section by document reading roller/1/2/3, and the document exit roller.

- When the leading edge of the original moves past the document reading roller/1, the document reading sensor (reflector type) disposed downstream of the roller detects the original. The length of the original is also detected based on the period of time during which the sensor remains activated.



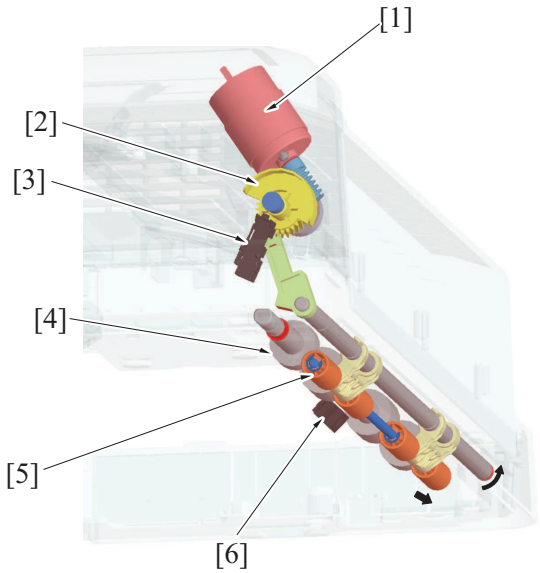
[1]	Document reading motor (M1)	[2]	Document reading roll
[3]	Document reading roller/1	[4]	Document reading sensor (PS6)
[5]	Document reading roller/2	[6]	Document reading roller/3
[7]	Document exit roller	-	-

3.3.2 Document reading roll pressure/release control

- When the trailing edge of the original moves past document reading roller/1, document reading roller/1 acts to push the original, so that the document transport speed increases instantaneously. This results in an image being read unevenly. (Fluctuations in the document transport speed)
  To prevent this problem from occurring, the document reading roll is released using the reading roller release motor. When the document reading roll is released, no thrust force is transmitted to the original.
- After the document reading roll is released, the original is transported only by rollers locating downstream of a reading position.

(1) Pressure/release operation

- When the reading roller release motor is energized, the pressure/release gear is rotated and the cam mounted on the same shaft as the pressure/release gear is rotated.
- Then, the cam pushes down the rotation shaft of the document reading roll, so that the document reading roll is released from the document reading roller.
- The pressure/release gear is provided with a semi-circular light blocking plate. When the gear rotates a half turn, the reading roll position sensor is unblocked and blocked. Then, a condition is detected in which the document reading roll is released. (Blocked: released; unblocked: pressed)

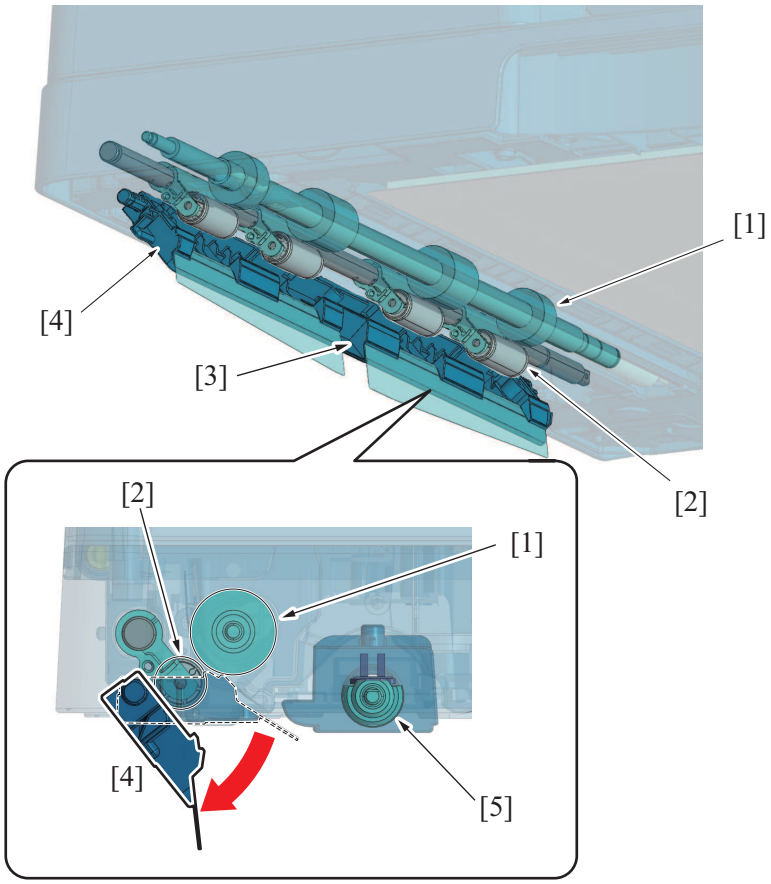


[1]	Reading roller release motor (M4)	[2]	Pressure/release gear
[3]	Reading roll position sensor (PS4)	[4]	Document reading roller/1
[5]	Document reading roll	[6]	Document reading sensor (PS6)

3.3.3 Document reading front guide

- Open the document reading guide to free documents that are trapped between the document reading roller/1 and the document reading roll.
- Open the original reading guide to clean the original reading roller/1 and the original reading sensor flock fabric.
- A spring is mounted to the document reading guide, therefore holding it by one hand is required at the time of handling a document. After you finished handling the document, release the hand holding the guide and return the guide to its normal position.
- No open-close sensor is mounted to the document reading guide.

Scanner side-view drawing

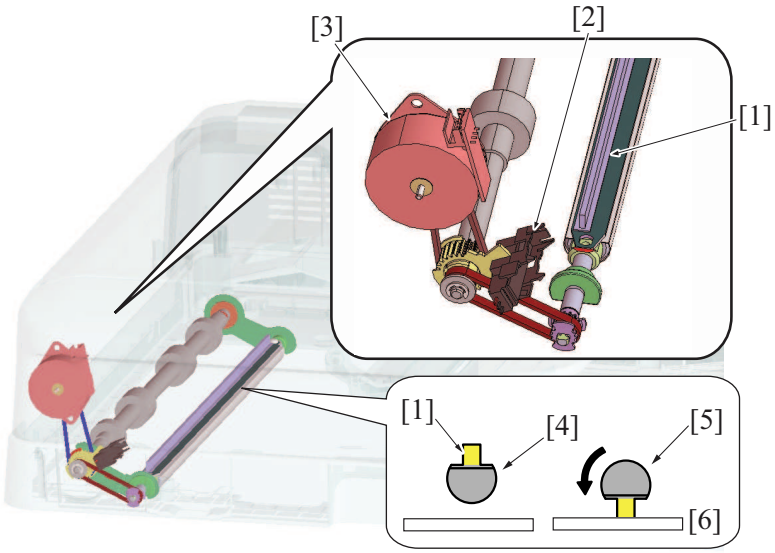


[1]	Document reading guide	[2]	Document reading roller/1
[3]	Flock fabric	[4]	Document reading roll
[5]	Document reading glass cleaning roller	-	-

3.3.4 Document reading glass cleaning mechanism

(1) DF original glass cleaning

- A line can occur in the image read from the original if the DF original glass is contaminated with dust or dirt. The DF original glass cleaning mechanism prevents this fault from occurring.
- A half face of the document reading glass cleaning roller is provided with the document reading glass cleaning brush. While the original is being read, the document reading glass cleaning brush faces up. When the DF original glass is to be cleaned, the document reading glass cleaning roller rotates, so that the document reading glass cleaning brush faces the DF original glass.
- The document reading glass cleaning roller rotates to remove dust sticking to the DF original glass.
- The document reading glass cleaning roller is rotated by the document reading glass cleaning motor. During cleaning, the document reading glass cleaning roller rotates forward (counterclockwise in the illustration) and, when the job is completed, it rotates backward (clockwise in the illustration).
- The drive coupling gear is provided with a light blocking plate. As the gear rotates, the document reading glass cleaning sensor is unblocked and blocked. This detects the document reading glass cleaning brush at its home position. (Unblocked: original reading position; Blocked: home position)

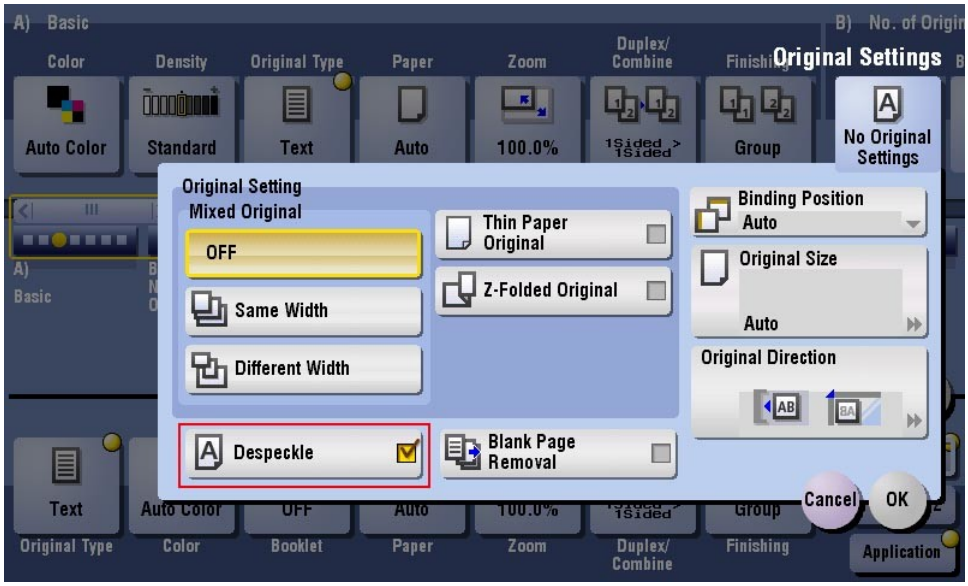


[1]	Document reading glass cleaning brush	[2]	Document reading glass cleaning sensor (PS13)
[3]	Document reading glass cleaning motor (M6)	[4]	Document reading glass cleaning roller (home position)
[5]	Document reading glass cleaning roller (cleaning position)	[6]	DF original glass

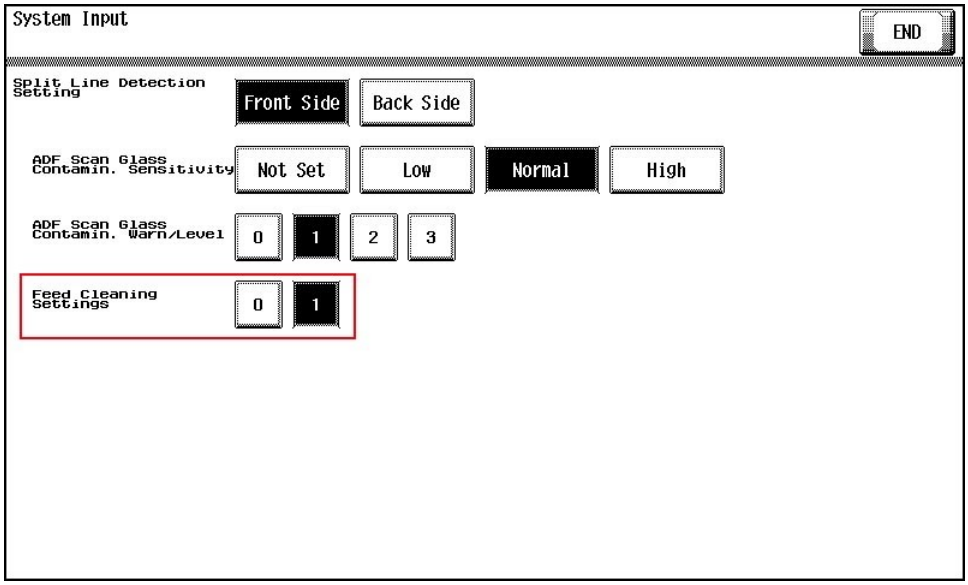
(2) DF original glass cleaning operation

Condition		Cleaning operation
Predrive	Power ON	Rotates the document reading glass cleaning brush one complete turn to check for its correct operation. (forward rotation)
	Exiting from sleep	
Start key ON	Before starting reading	Rotates the document reading glass cleaning brush one complete turn to perform cleaning. (forward rotation: default setting)
	During reading	Rotates the document reading glass cleaning brush one complete turn to perform cleaning for every two originals during continuous reading of originals. (forward rotation)
		Rotates the document reading glass cleaning brush three complete turns to perform cleaning for each original during continuous reading of originals, if [Original Settings] -> [Despeckle] *1 is selected. (forward rotation) Because the document reading glass cleaning brush is rotated three complete turns to perform the cleaning, however, the original-to-original distance is widened than at normal timing. This results in reduced productivity in reading the originals.
		No original glass cleaning sequence is performed between originals during continuous reading of originals, if [System2] -> [ADF Scan Glass Contamin. Set.] -> [Feed Cleaning Settings] -> [0] *2 is selected in the Service Mode.
	After completing reading last original	The document reading glass cleaning brush tends to curl if repeatedly operated in one direction only, resulting in poor cleaning performance. To straighten the brush, it is rotated one complete turn in the backward direction when reading of the last original is completed. (backward rotation)

(a) *1: Despeckle mode setting screen



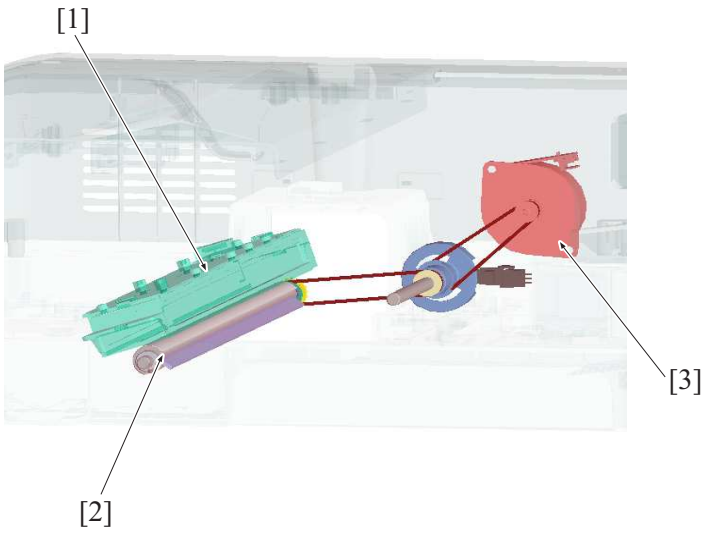
(b) *2: Feed cleaning settings screen



3.4 2-sided document reading section

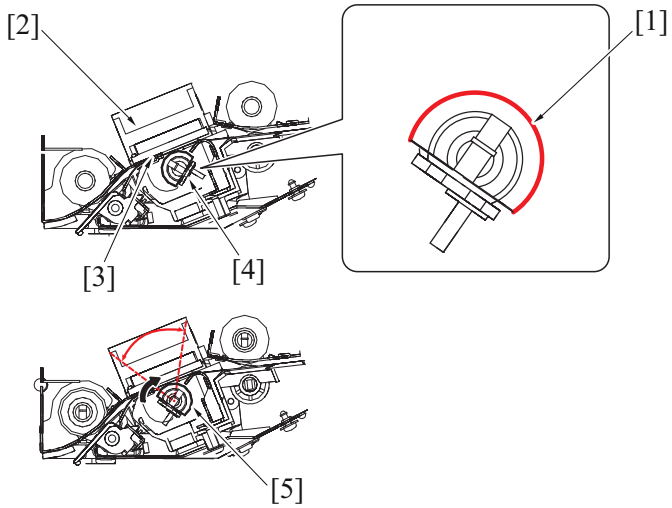
3.4.1 CIS original reading mechanism

- The back side of the original is read by the CIS (contact image sensor) module. The image data read by the CIS is transferred to the main body.
- The CIS original reading section consists of the CIS module and CIS power supply.
- The light source of CIS module has used LED.



[1]	CIS module (CIS)	[2]	Cleaning brush
[3]	CIS cleaning motor (M5)	-	-

- A cleaning brush to which a white plate is affixed is disposed on the side opposite the CIS module.
- “Document passage” is performed at the home position.
- “Shading correction”, “gain adjustment”, and “ADF Scan Glass Contamin. Sensitivity” are made using the shading surface.

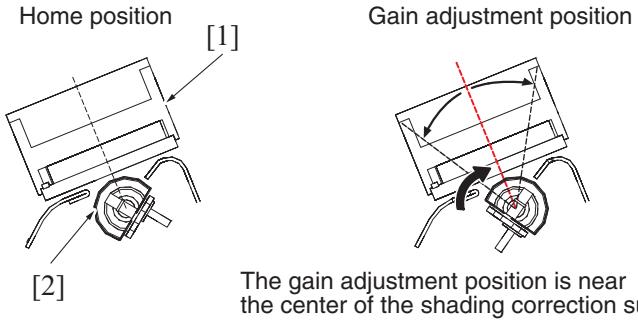


[1]	White plate affixed	[2]	CIS module (CIS)
[3]	CIS glass	[4]	Cleaning brush (Home position)
[5]	Cleaning brush (Shading correction surface)	-	-

3.4.2 CIS control when power is turned ON

1. The LEDs of CIS are turned ON.
2. The cleaning brush is detected at its home position.
3. The cleaning brush is rotated and brought to a stop at the gain adjustment position.
   The gain adjustment is made twice with the cleaning brush at that position.
4. After the adjustments, the LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

* The same control is performed when the main body exits from the sleep mode.



[1]	CIS module (CIS)	[2]	Cleaning brush

3.4.3 CIS control when the document is loaded

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS are turned ON.
3. The cleaning brush is rotated one complete turn.
4. The LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

NOTE

- **No operation is performed when the document is loaded if the following function is selected using the service mode: [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set].**

3.4.4 CIS control when the start key is pressed

- This control is performed only in the 2-sided original reading mode.

(1) Before a print cycle / back side reading

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS are turned ON.
3. The cleaning brush is rotated three complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn.
4. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).
5. The back side of the original is read as the original moves over the CIS.

(2) During a print cycle (operation between originals after reading)

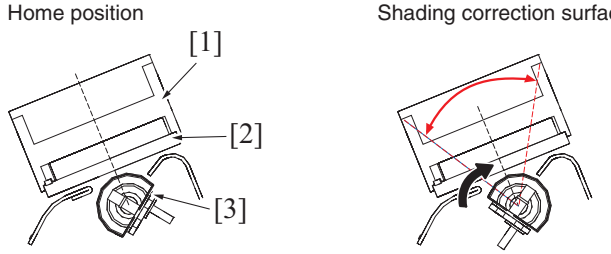
The brush cleaning operation is normally performed each time the original is read.
If a print cycle produces a large number of printed pages continuously, however, either the cleaning operation or the shading correction operation is performed.
The shading correction operation is performed at predetermined intervals during a multiprint cycle in order to maintain an appropriate shading correction value.

(a) Cleaning operation

1. The cleaning brush is rotated one complete turn.
   (The cleaning brush normally makes one turn, but makes three turns in the despeckle mode.)
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).

(b) Shading correction operation

1. The cleaning brush is rotated three complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).



[1]	CIS module (CIS)	[2]	CIS glass
[3]	Cleaning brush	-	-

(c) After the print cycle

1. After the reading sequence, the LEDs are turned OFF.
2. The cleaning brush is turned backward (to tame the brush).
3. The cleaning brush is brought to a stop when its home position is detected.
4. The cleaning brush perform “ADF Scan Glass Contamin. Sensitivity”.
   - The LEDs are turned ON. The cleaning brush is rotated four complete turns.
   - The cleaning brush cleans the CIS glass during its first turn.
   - The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
   - The cleaning brush uses the shading correction surface to perform “ADF Scan Glass Contamin. Sensitivity” during its fourth turn.
   - The cleaning brush is brought to a stop at its home position.
   - The LEDs are turned OFF.

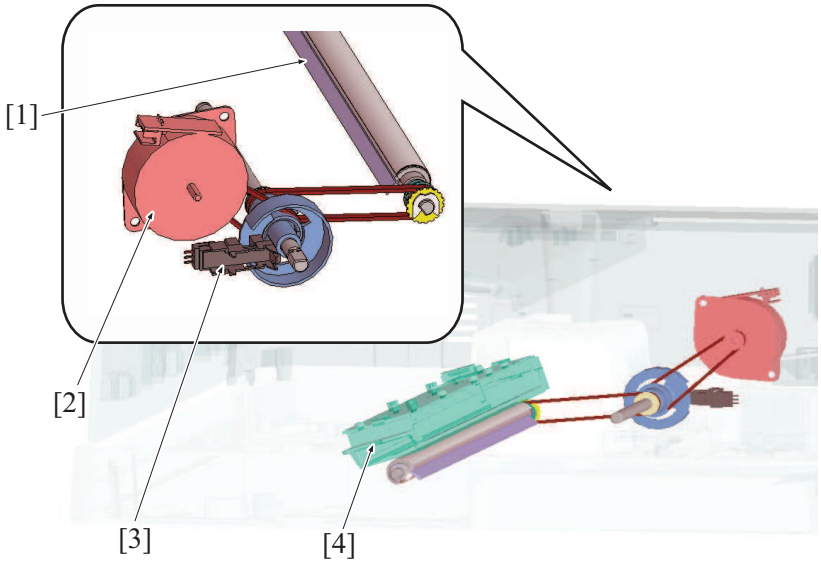
NOTE

- **Steps of 4 is not performed if [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set] is selected**

3.4.5 CIS glass contamination prevention control

(1) CIS glass cleaning

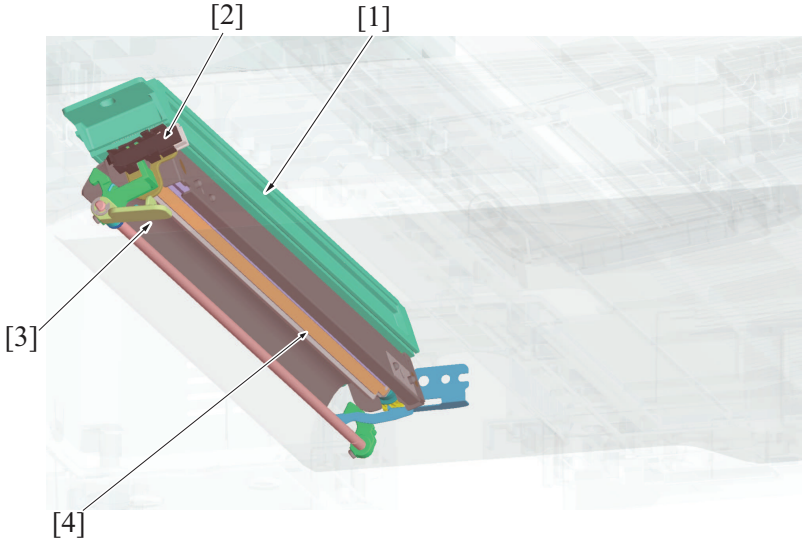
- The CIS glass is cleaned only when two sides of the original are to be read.
- When the back side cleaning motor is energized, the cleaning brush is rotated to remove dust and dirt from the surface of the CIS glass.
- Cleaning of the front side takes place at timing different from that of cleaning of the back side and the cleaning of the back side sources its power drive differently from the front side.
- The cleaning brush at its home position is detected by the CIS cleaning sensor.
- For details, see “ PC.3.4.4 CIS control when the start key is pressed”.



[1]	Cleaning brush	[2]	CIS cleaning motor (M5)
[3]	CIS cleaning sensor (PS7)	[4]	CIS module (CIS)

3.4.6 CIS cover

- During a misfeed clearing procedure, the CIS cover can be opened by releasing the lever.
- The CIS cover sensor is unblocked when the lever is released.

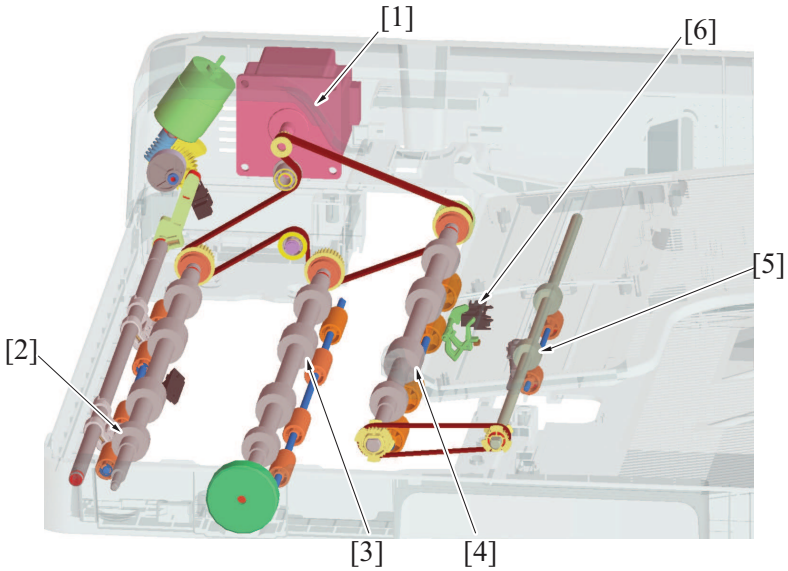


[1]	CIS module (CIS)	[2]	CIS cover sensor (PS15)
[3]	Lever	[4]	CIS cleaning roller

3.5 Document exit section

3.5.1 Document exit mechanism

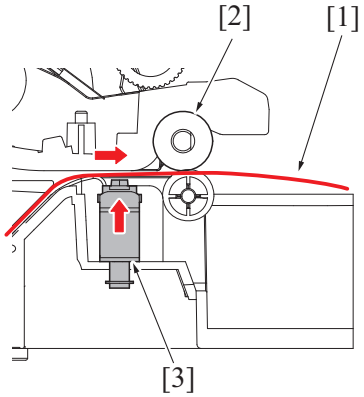
- The document reading motor provides the drive for the document exit roller. (the same drive source as that for the document reading section)
- As the document exit roller rotates forward, the original fed off from the document reading section is fed into the document exit tray.
- The original is exited to be detected by the document exit sensor.



[1]	Document reading motor (M1)	[2]	Document reading roller/1
[3]	Document reading roller/2	[4]	Document reading roller/3
[5]	Document exit roller	[6]	Document exit sensor (PS5)

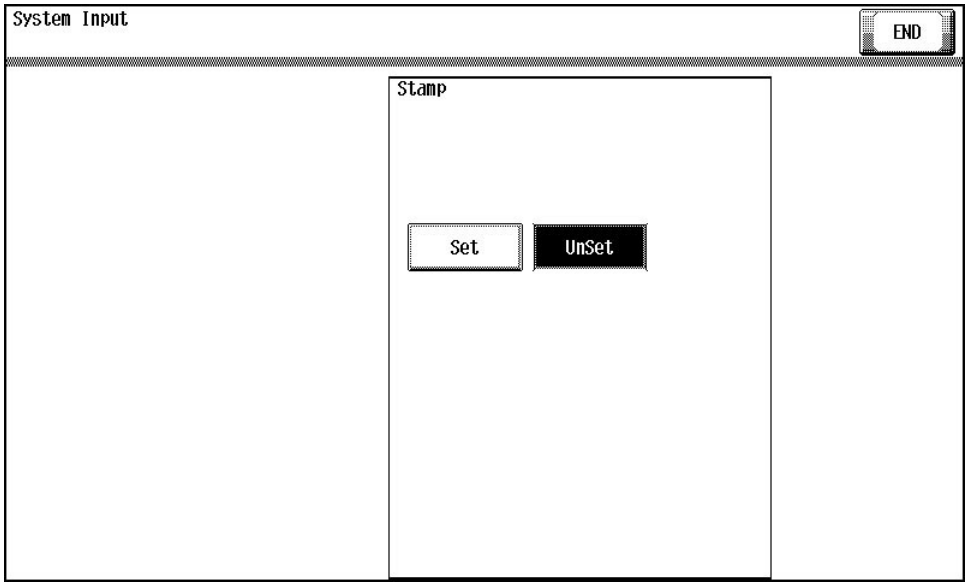
3.5.2 Faxed document stamp function

- Mounting optional “Stamp unit SP-501” allows a stamp to be placed on a faxed document.
- The stamp solenoid located upstream of the document exit roller is energized when the original is about to be fed out and the stamp mounted on the solenoid plunger is pressed against the surface of the original. This places a faxed mark (+) on the surface of the original.
- This function is enabled when “System2/Stamp/Set*1 (default setting: Unset)” is turned ON using the Service Mode and the user selects “Application/TX Stamp*2 (default setting: OFF)” on the “Scan/Fax” screen.
- This function is not used for “Copy” or “Scan”.



[1]	Original	[2]	Document exit roller
[3]	Stamp unit (SP-501)	-	-

(1) *1: Stamp mounting setting screen

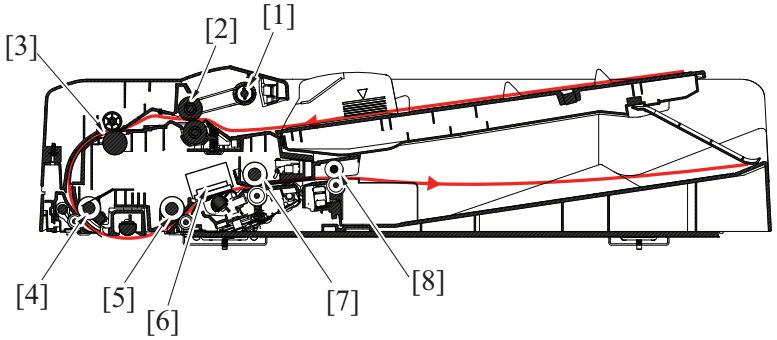


(2) *2: TX Stamp setting screen



3.6 Paper path operation

Reading of the back side of the original by the CIS is not done in the 1-sided mode. All other paper feed operations in the 1-sided mode are the same as those in the 2-sided mode.



[1]	Document pick-up roller	[2]	Document feed roller
[3]	Registration roller	[4]	Document reading roller/1
[5]	Document reading roller/2	[6]	CIS module (CIS)
[7]	Document reading roller/3	[8]	Document exit roller

1. When the original is set, the document empty sensor detects the leading edge of the original.
2. Pressing the start key will lower the document pick-up roller and the document reading roller/1 will be pressed.
3. The document feed motor is energized, and the document pick-up roller and document feed roller are rotated to start feeding the first original.
4. When the registration sensor detects the leading edge of the original, a loop is formed in the original.

5. After the loop has been formed in the original, the registration motor is energized. The drive of the registration motor rotates the registration roller, so that the original is transported onto the reading section.
6. The document reading motor is energized after the lapse of a predetermined period of time after the registration motor has been energized. The drive of the document reading motor rotates document reading roller/1, document reading roller/2, document reading roller/3, and document exit roller.
7. After the lapse of a predetermined period of time after the document reading sensor has detected the leading edge of the original, reading of the front side of the original is started by the scanner.
8. The document reading roller/1 is retracted immediately before the trailing edge of the original moves past document reading roller/1. The document reading roller/1 in the retracted position is pressed again as soon as the trailing edge of the original moves past the front side reading position so as to be prepared for the next original.
9. When the leading edge of the original moves past the document reading roller/2, reading of the back side of the original is started by the CIS. (Reading of the back side of the original is done only in the 2-sided mode.)
10. The document reading roller/3 is driven to transport the original onto the document exit section.
11. The document exit roller is driven to feed the original out.
12. The document reading motor is deenergized after the lapse of a predetermined period of time after the trailing edge of the original has deactivated the document exit sensor.

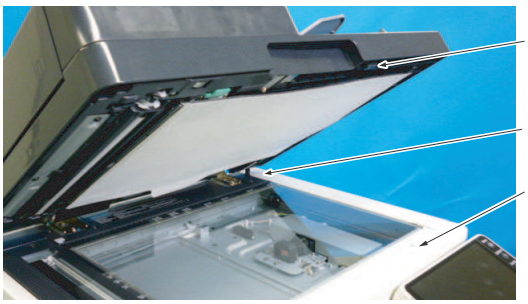
3.7 DF open/close detection mechanism

3.7.1 Document exchange detection control

- An angle detection mechanism is provided to detect the operation of exchanging originals when the DF is used as the original cover of the main body.
- When the DF is raised to an angle of about 14.5 degrees or more, the detection lever is pushed up by a spring. The angle sensor that has been blocked by the detection lever is now unblocked. It is, as a result, detected that the DF “is raised to an angle of 14.5 degrees or more”.
- When, on the other hand, the DF is lowered to an angle of about 14.5 degrees or less, the detection lever is pushed down. Then, the angle sensor, which has been unblocked, is blocked, so that it is detected that the DF “is lowered to an angle of 14.5 degrees or less”.
- When the DF state undergoes changes from a condition of being fully lowered to a condition of “being raised to an angle of 14.5 degrees or more” and then to a condition of “being lowered to an angle of 14.5 degrees or less”, it is determined that “an original is placed manually on the original glass”. Then the original size detection control will be started.

3.7.2 DF open/close detection

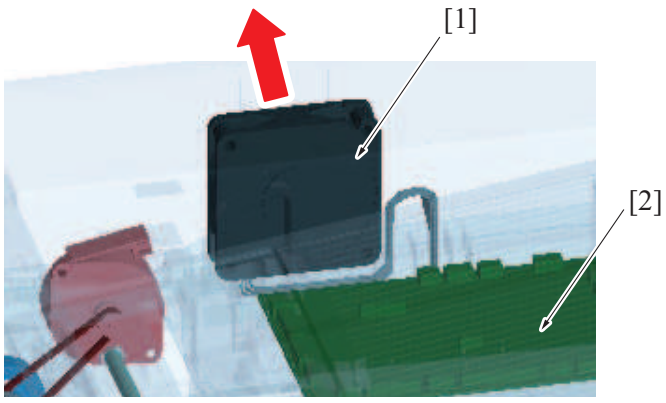
- The magnet is installed to detect the open/close status of the DF on the main body side.
- The original cover sensor on the main body will turn ON by the magnet when lowering the DF.



[1]	Angle sensor (PS202)	[2]	Original cover sensor (RS201)
[3]	Magnet	-	-

3.8 Cooling inside the unit mechanism

- The DF cooling fan motor functions to cool the inside of DF, DF control board, and document feed motor in the DF.
- It discharges heat generated inside the DF out through the exhaust port.



[1]	DF cooling fan motor (FM1)	[2]	DF control board (DFCB)

3.9 DF skew adjustment mechanism

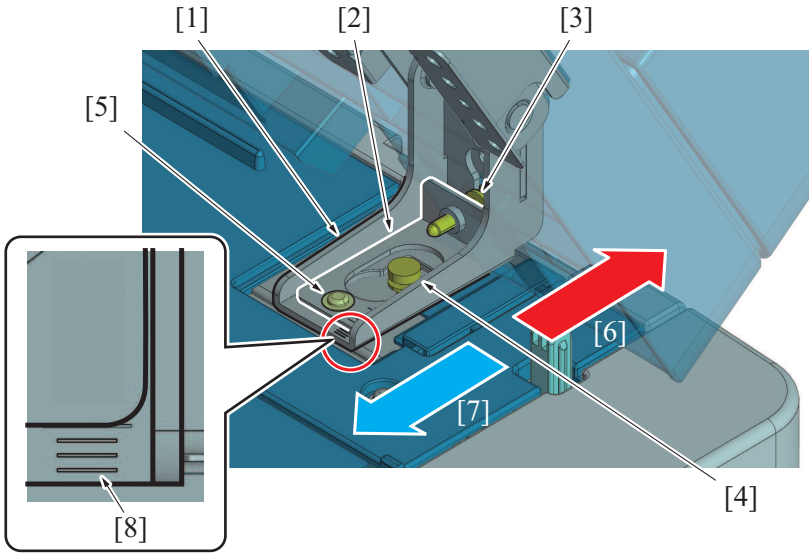
3.9.1 DF Skew(Front) adjustment mechanism

- The document feeder is installed to the scanner section of the machine and fixed with two hinges.

- The hinge on the right side of the machine is equipped with a DF skew (Front) adjustment mechanism.
- Turn the adjusting screw to move hinges backward or forward. It changes the relative installing position of the machine and DF. Also, it corrects the inclination of the first side image that is scanned using the CCD unit on the scanner section of the machine.

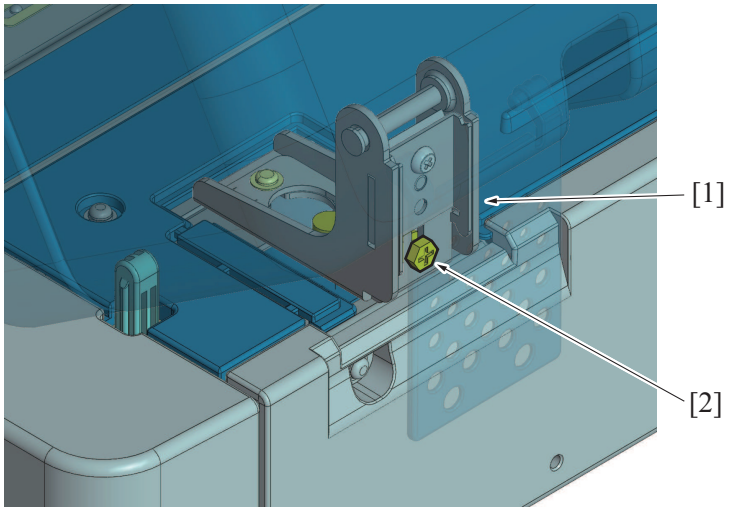
(1) Hinge on the right side of the machine (front)

- Tighten the hinge fixing screw and turn the adjustment screw to move the hinge forward or backward. (The DF mounting plate is secured to the machine, therefore the hinge moves forward and backward)
- If the hinge moves towards the front side of the machine, the scale that is engraved on the hinge appears. (+ direction)
- If the hinge moves towards the rear side of the machine, the scale that is engraved on the hinge is hidden. (- direction)
- The amount of adjustment is read on a scale. (Default: 4 scales)
- The amount of correction to the hinge can be automatically measured through reading the adjustment chart in "ADF/DFSkew (Front)" of Service Mode.
  See " I.15.1.2 Adjusting front side skew feed on ADF" for details about the "ADF/DFSkew (Front)".



[1]	Machine right-side hinge	[2]	DF mounting plate
[3]	Adjustment screw	[4]	DF mounting plate fixing screw: Fixes the DF fixing plate to the machine.
[5]	Hinge fixing screw: Fixes the hinge to the DF mounting plate.	[6]	Hinge movement direction: -
[7]	Hinge movement direction: +	[8]	Adjustment scale

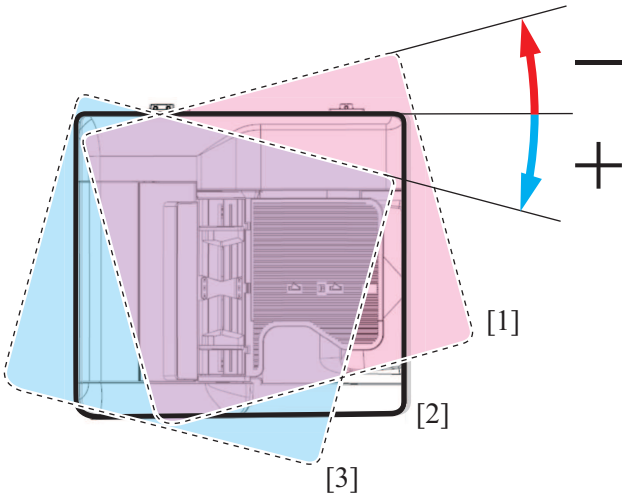
(2) Hinge on the right side of the machine (rear)



[1]	Machine right-side hinge	[2]	Adjustment screw: Turn the adjustment screw to move the hinge backward or forward. • Amount of adjustment + direction: Clockwise turn • Amount of adjustment - direction: Counterclockwise turn

(3) Adjustment direction conceptual drawing

Upper view



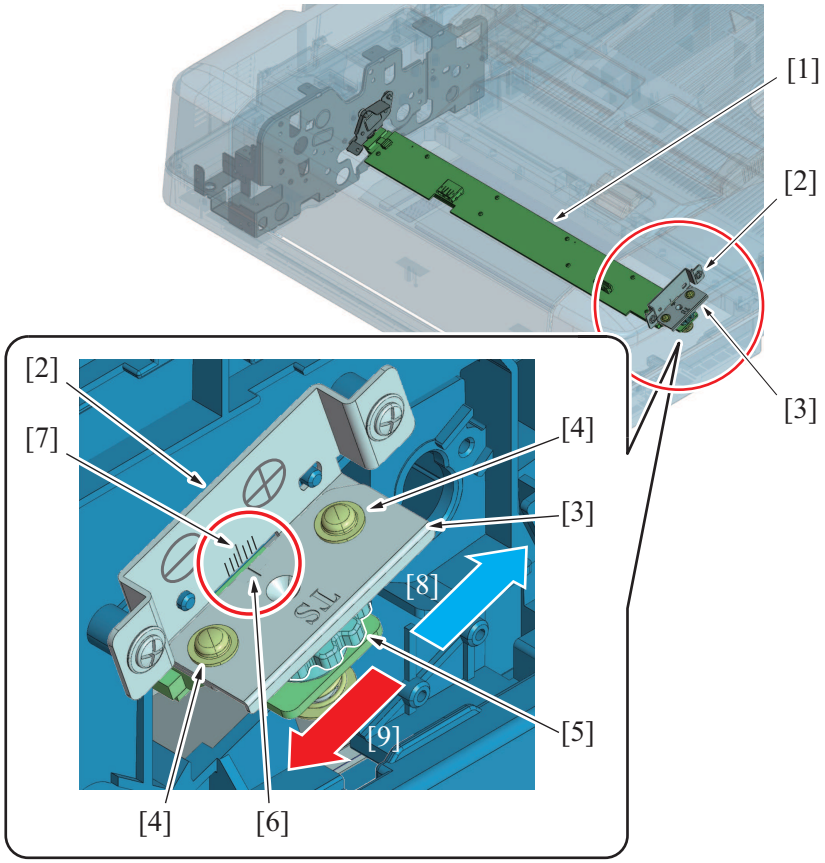
[1]	DF movement direction (hinge movement direction): -	[2]	Home position
[3]	DF movement direction (hinge movement direction): +	-	-

3.9.2 DF Skew(Back) adjustment mechanism

- The DF skew (Back) adjustment mechanism is provided in the CIS module mounting area on the front DF frame.
- Rotation of the adjusting dial moves the CIS module left-right. It changes the relative position of the DF frame and CIS module. Also, it corrects the inclination of the second-side image that is scanned from the CIS module.

(1) CIS module mounting area

- Loosen the two CIS adjusting plate fixing screws and turn the adjusting dial to move the adjusting plate left-right. The CIS module moves together.
- Turn the adjusting dial to the right to move the adjusting plate (CIS module) right (+)
- Turn the adjusting dial to the left to move the adjusting plate (CIS module) left (-)
- Read the adjustment amount from the reference line position. (Default: Center)
- The CIS adjusting plate correction amount can be measured automatically through scanning the adjustment chart in Service Mode "ADF/DFSkew (Back)".
  See " I.15.1.3 Adjusting back side skew feed on ADF" for details about the "ADF/DFSkew (Back)".

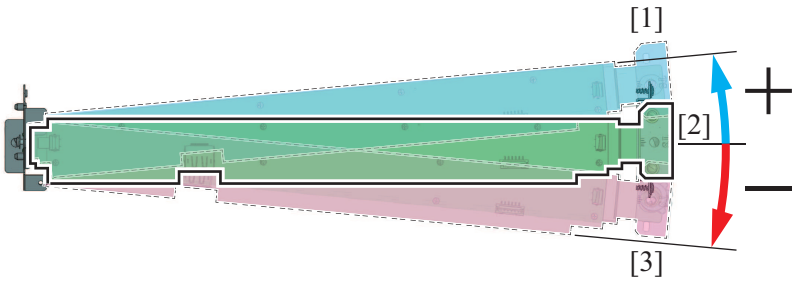


[1]	CIS module (CIS)	[2]	Reference plate

[3]	CIS adjusting plate	[4]	CIS adjusting plate fixing screw
[5]	Adjusting dial	[6]	Reference line
[7]	Adjustment scale	[8]	CIS module movement direction: + (right)
[9]	CIS module movement direction: - (left)	-	-

(2) Adjustment direction conceptual drawing

Upper view

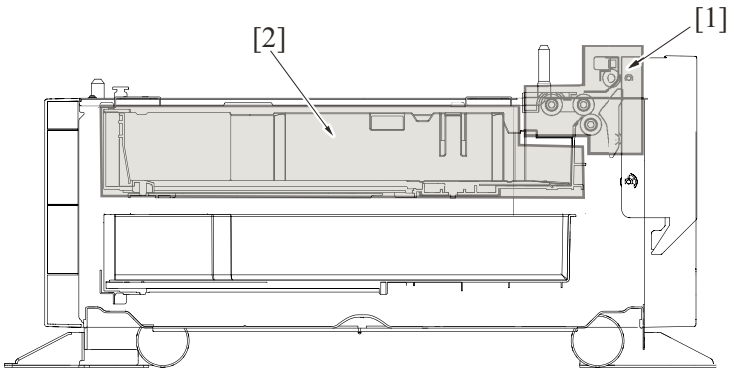


[1]	CIS module movement direction: + (right)	[2]	Home position
[3]	CIS module movement direction: - (left)	-	-

PD THEORY OF OPERATION PC-110/PC-210/PC-115/PC-215

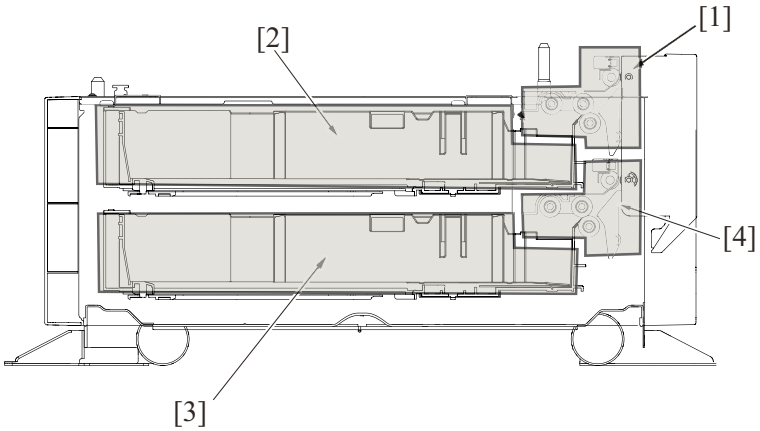
1. CONFIGURATION

PC-110/PC-115



[1]	Tray 3 paper feed section	[2]	Paper feed tray section (tray 3)

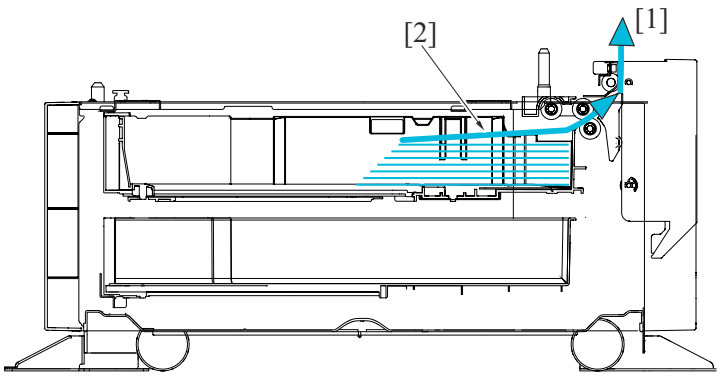
PC-210/PC-215



[1]	Tray 3 paper feed section	[2]	Paper feed tray section (tray 3)
[3]	Paper feed tray section (tray 4)	[4]	Tray 4 paper feed section

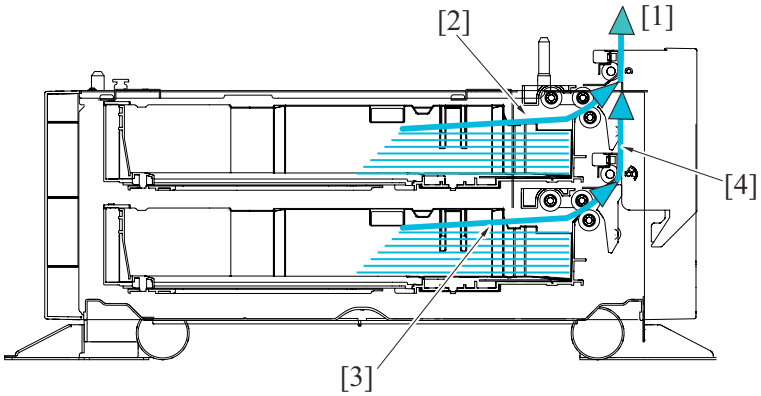
2. PAPER PATH

PC-110/PC-115



[1]	Transportation to main body	[2]	Paper feed from tray 3

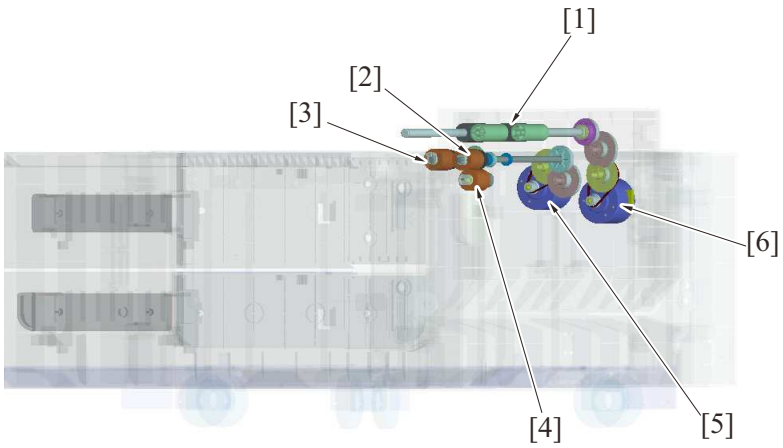
PC-210/PC-215



[1]	Transportation to main body	[2]	Paper feed from tray 3
[3]	Paper feed from tray 4	[4]	Vertical transport

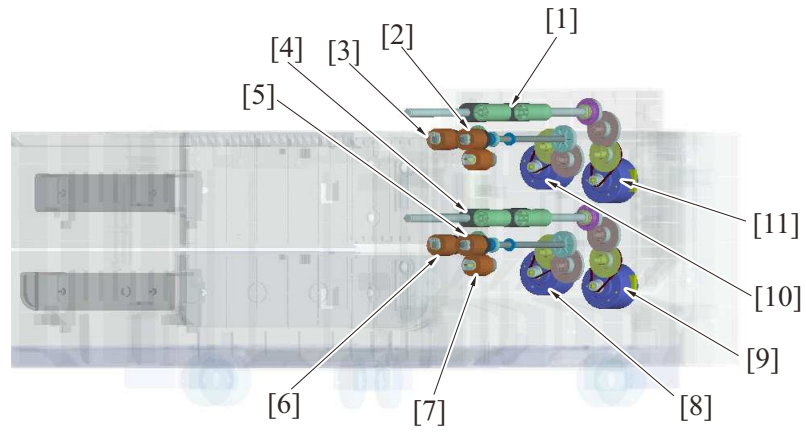
3. DRIVE

PC-110/PC-115



[1]	Tray 3 vertical transport roller	[2]	Tray 3 feed roller
[3]	Tray 3 pick-up roller	[4]	Tray 3 separation roller
[5]	Tray 3 paper feed motor (M111)	[6]	Tray 3 vertical transport motor (M112)

PC-210/PC-215



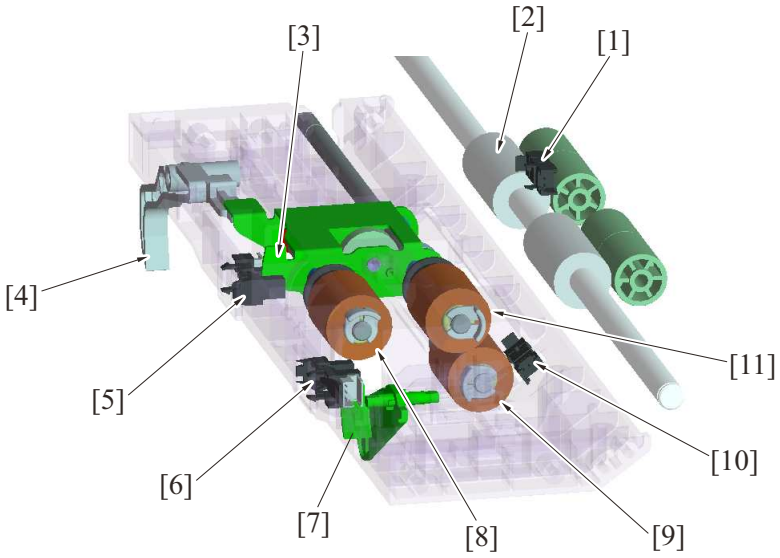
[1]	Tray 3 vertical transport roller	[2]	Tray 3 feed roller
[3]	Tray 3 pick-up roller	[4]	Tray 4 vertical transport roller
[5]	Tray 4 feed roller	[6]	Tray 4 pick-up roller
[7]	Tray 4 separation roller	[8]	Tray 4 paper feed motor (M121)
[9]	Tray 4 vertical transport motor (M122)	[10]	Tray 3 paper feed motor (M111)
[11]	Tray 3 vertical transport motor (M112)	-	-

4. OPERATION

4.1 Paper feed section

4.1.1 Paper feed drive mechanism

- Tray 3 has a paper feed drive mechanism having the same arrangement as that of tray 4. The paper feed drive mechanism is structured in the same manner as in tray 1 and tray 2 of the main body.
- Whereas operation is controlled using a clutch in tray 1 and tray 2, tray 3 and tray 4 incorporates a paper feed motor that drives the pick-up roller and feed roller to feed the paper.
- Then, the vertical transport motor transports the paper through the vertical transport section.
- The pick-up roller takes up sheets of paper and the feed roller and separation roller ensure that only one sheet of paper is separated and fed into the main body.
- When the drawer is slid in, the lever is pushed to lower the pick-up roller.
- The tray is raised to cause the paper to push the feed roller. This raises the upper limit detection actuator, so that the upper limit is detected.
- The paper empty sensor detects when paper in the drawer runs out.

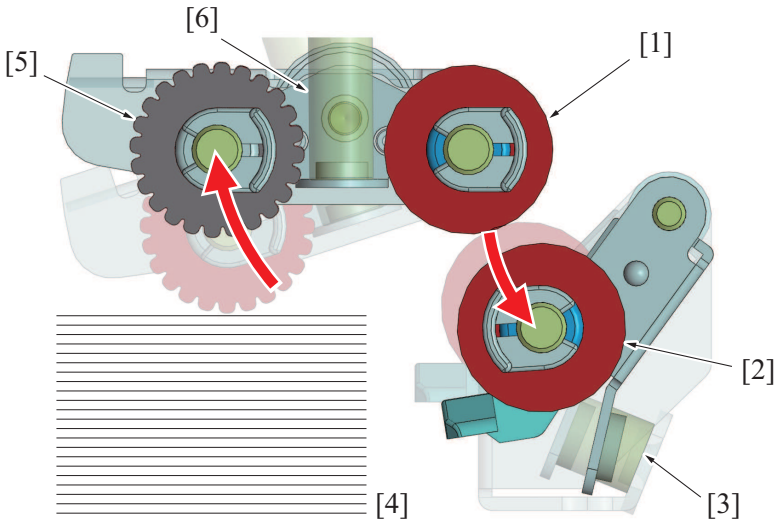


[1]	Tray 3/4 vertical transport sensor (PS113/PS123)	[2]	Vertical transport roller
[3]	Upper limit detection actuator	[4]	Lever
[5]	Tray 3/4 upper limit sensor (PS116/PS126)	[6]	Tray 3/4 paper empty sensor (PS114/PS124)
[7]	Empty detection actuator	[8]	Pick-up roller
[9]	Separation roller	[10]	Tray 3/4 paper feed sensor (PS112/PS122)
[11]	Feed roller	-	-

4.1.2 Roller retract mechanism

- When the paper feed tray is inserted or pulled out, there is a mechanism which retracts the pick-up roller and the separation roller.
- The pick-up roller retracts from the paper.
- The separation roller retracts from the feed roller.

Front view



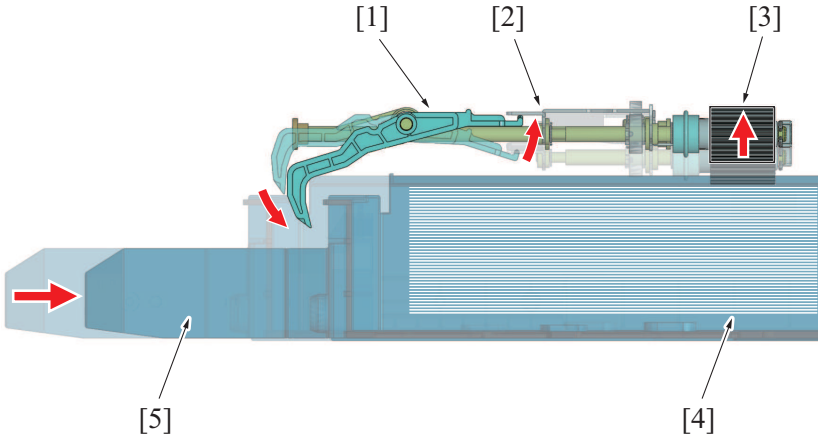
[1]	Feed roller	[2]	Separation roller
[3]	Separation roller pressure spring	[4]	Paper

[5]	Pick-up roller	[6]	Pick-up roller pressure spring

(1) Pick-up roller retract mechanism

- When the paper feed tray is inserted or pulled out, the pick-up roller prevents the paper from being damaged.
- The pick-up roller comes down through spring pressure when the paper feed tray is closed. When paper is placed, the roller is pressed against the paper surface. (Paper feed position)
- If the paper feed tray lock is released, the roller lifting lever is also released and the pick-up roller holder is pushed up to the retraction position. This structure prevents the paper surface from being damaged even if the paper feed tray is pulled out.

Left side view

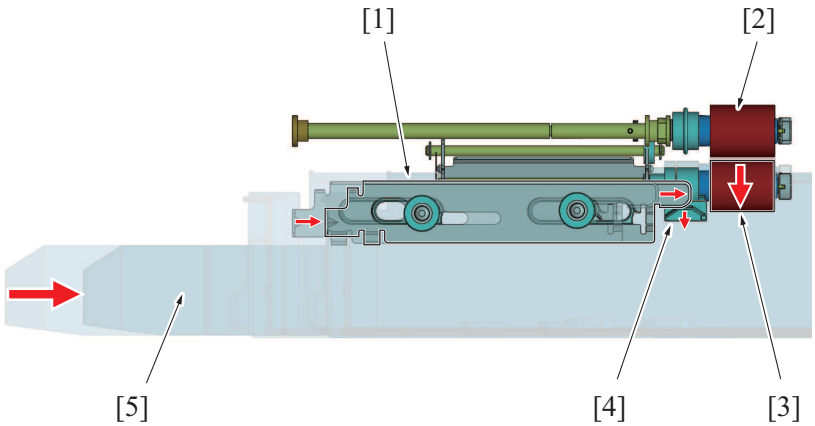


[1]	Roller lifting lever	[2]	Pick-up roller holder
[3]	Pick-up roller (retracted position)	[4]	Paper
[5]	Paper feed tray (lock released)	-	-

(2) Separation roller retract mechanism

- When a paper jam occurs and paper is caught between rollers where the feed roller is pressing the separation roller, paper will be left inside the machine through pulling out the paper feed tray. If you insert the paper feed tray in that state, the paper may get torn in pieces which may fall off and scatter inside the machine. It prevents paper from being torn or falling off through retracting the separation roller.
- The separation roller is pressed against the feed roller by spring pressure when the paper feed tray is closed. (Paper feed position)
- Release the paper feed tray lock, the roller pushdown lever is also released and the separation roller retract lever is pushed down to the retracting position. It releases the paper from the rollers even if it is jammed between the rollers.

Left side view



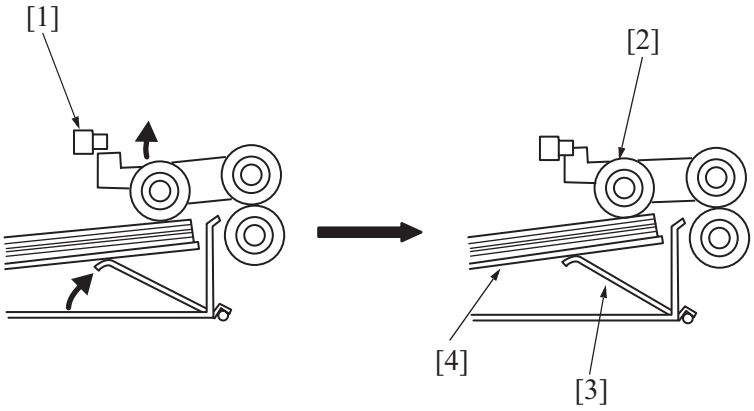
[1]	Roller pushdown lever	[2]	Feed roller
[3]	Separation roller (retract position)	[4]	Separation roller retract lever
[5]	Paper feed tray (lock released)	-	-

4.1.3 Paper lifting motion

- The FD paper size board of each tray detects whether the drawer is slid in or out.
- When the FD paper size board is activated, the lift-up motor is energized to thereby raise the paper lifting plate.
- The paper stack of the tray pushes up the pick-up roller.
- When the upper limit position is detected by the upper limit sensor, it stops raising the paper lifting plate.
- As paper is consumed during the print cycle and the pick-up roller is lowered, the lift-up motor is energized until the upper limit sensor is blocked again.

(1) When the drawer is slid in

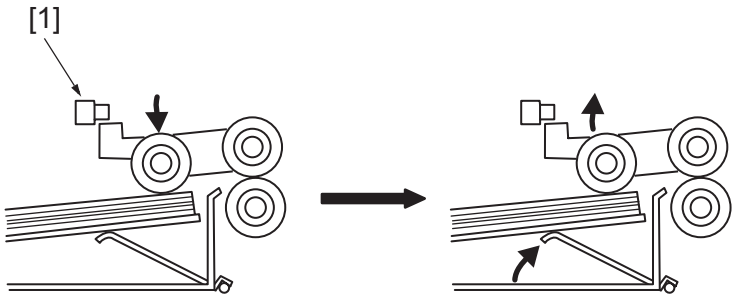
1. The paper lifting plate goes up and the top surface of the paper stack pushes up the pick-up roller.
2. The lifting motion stops as soon as the upper limit sensor detects the upper limit position.



[1]	Tray 3/4 upper limit sensor (PS116/PS126)	[2]	Pick-up roller
[3]	Paper lifting plate B	[4]	Paper lifting plate A

(2) During a print cycle

1. As the paper is consumed, the upper limit sensor is unblocked. Then the paper lifting plate goes up.

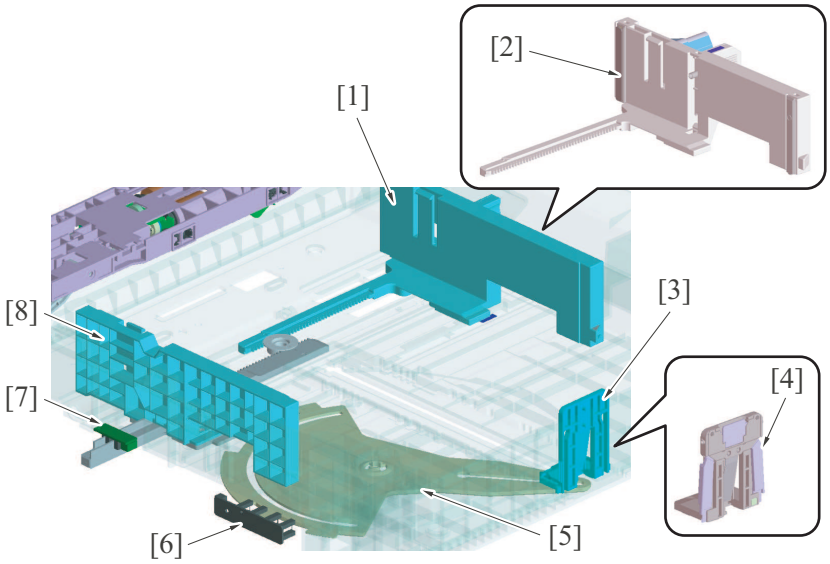


[1]	Tray 3/4 upper limit sensor (PS116/PS126)	-	-

4.2 Paper feed tray section

4.2.1 Paper size detection

- When the paper length guide of the drawer is moved, the circular paper length detection plate located on the bottom of the drawer turns.
- The paper length is detected by the lever that operates in conjunction with the paper length detection plate, and four paper length detection sensors on the FD paper size board.
- Moving the paper width guide plate activates or deactivates two paper width detection sensors on the CD paper size board through the cutout in the lever.
- The combination of the four paper length detection sensors and two paper width detection sensors that are either activated or deactivated, determines the size of the paper loaded in the drawer.
- The FD paper length detection sensor detects that the drawer is slid into position as it is slid in.



[1]	Paper width guide plate (front) (PC-110/C210)	[2]	Paper width guide plate (front) (PC-115/PC-215)
[3]	Paper width guide plate (rear) (PC-110/C210)	[4]	Paper width guide plate (rear) (PC-115/PC-215)
[5]	Tray 3/4 CD paper size board (CDPSB/3, CDPSB/4)	[6]	Tray 3/4 FD paper size board (FDPSB/3, FDPSB/4)

[7]	Paper length detection plate	[8]	Paper length guide

4.2.2 Paper feed tray locking mechanism

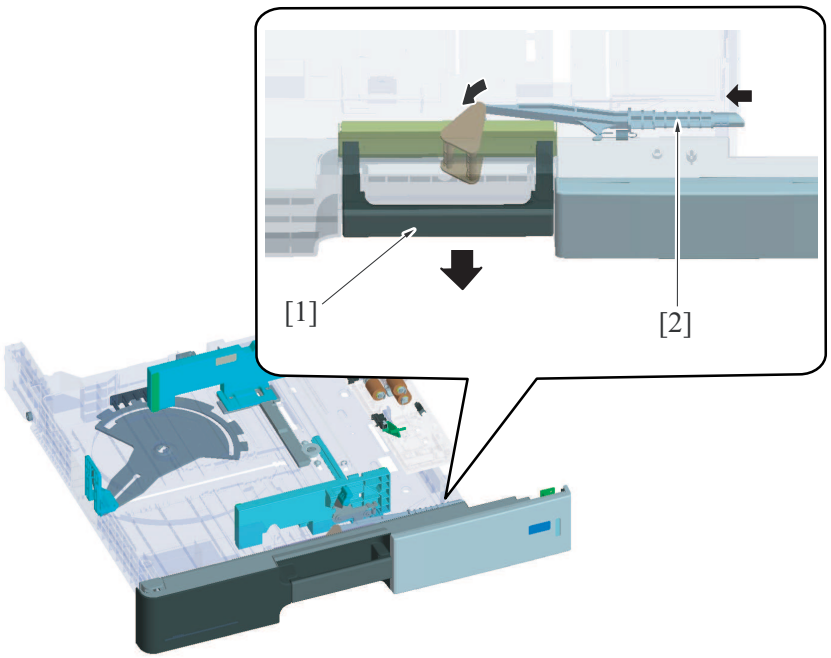
- The paper feed tray is provided with a locking mechanism.

(1) Unlocking the paper feed tray

- With drawing the lever of the paper feed tray to the front will disengage the tray lock lever equipped on the right side of the paper feed tray.
- The paper feed tray can be pulled out of the machine by continuing pulling the lever with the tray lock lever disengaged.
- Rollers are provided for the right and left tray rails. They reduce the operating force required for sliding in/out the paper feed tray.

(2) Locking the paper feed tray

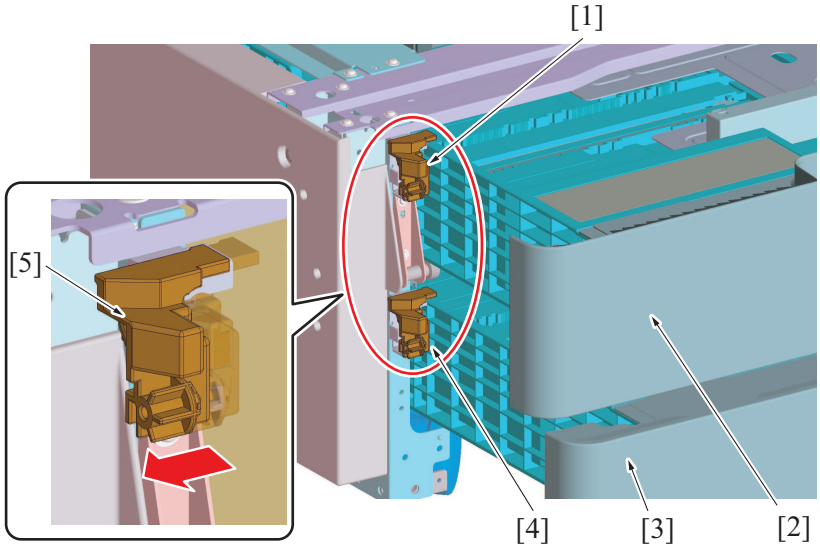
- Pushing the lever of the paper feed tray all the way toward the rear will allow the paper feed tray to be slid into the machine.
- When the paper feed tray is inserted all the way in place, the tray lock lever equipped on the right side of the paper feed tray locks the tray in place.
- To prevent false detection, the paper feed tray is equipped with a spring in the rear that pushes the tray back out if the tray is not inserted all the way in place.



[1]	Lever of the paper feed tray	[2]	Lock lever

4.2.3 Paper feed tray stopper release mechanism (PC-115/PC-215)

- The paper feed tray is equipped with a stopper mechanism.
- When paper is placed, the stopper prevents the paper feed tray from falling off from the machine even if it is pulled out.
- The paper feed tray can be removed if paper is remained inside the machine at the time of handling a paper jam or a misfeed.



[1]	Tray 3 stopper	[2]	Tray 3

[3]	Tray 4	[4]	Tray 4 stopper
[5]	Tray stopper release	-	-

(1) Releasing the paper feed tray stopper

- Press the stopper on its left side, the stopper lock will be released.

(2) Locking the paper feed tray stopper

- Press the stopper on its right side, the stopper lock will be locked.

NOTE

- **A mechanism is provided to push and lock the stopper through closing the paper feed tray to its home position even if you forget to lock it. (Mechanism to prevent forgetting lock)**

4.2.4 Remaining paper display mechanism

- The amount of remaining paper is indicated by the LED on the right side of each tray and by the screen of the control panel.
- The estimate amount of paper for near empty is around 50 sheets.

(1) Display state

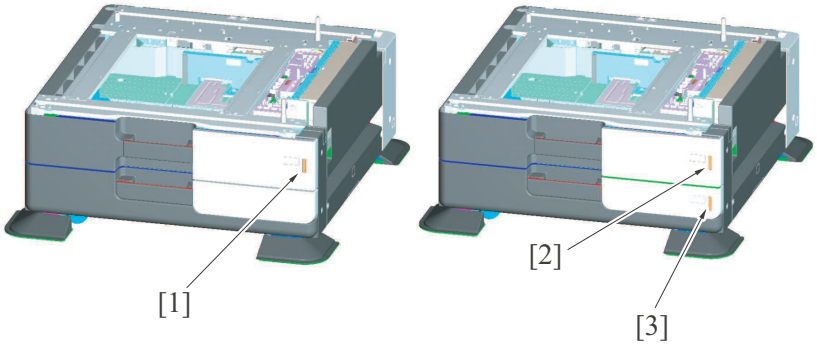
Tray status	Empty	Near empty	Other status (During lifting-up and with tray not being set included)
LED status	Lit	OFF/Blink *	Unlit

NOTICE

- The near empty display may be OFF or Blink as set for within “Machine State LED Setting” of the service mode. (The default setting is OFF.)

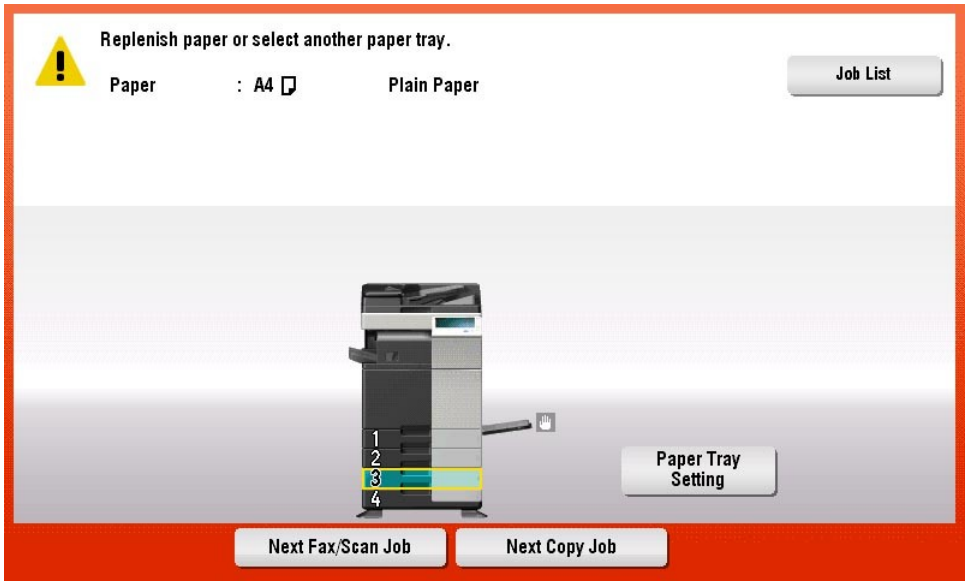
Tray paper remaining amount display LED

PC-110/PC-115 PC-210/PC-215



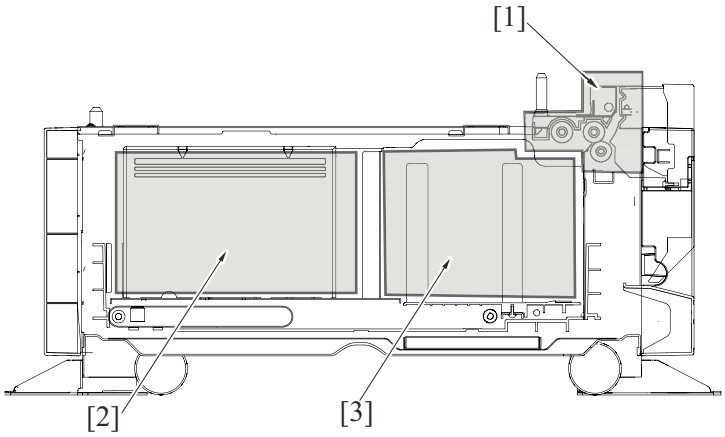
[1]	Tray 3 paper remaining amount display LED (PC-110/ PC-115)	[2]	Tray 3 paper remaining amount display LED (PC-210/ PC-215)
[3]	Tray 4 paper remaining amount display LED	-	-

Display on the control panel when paper empty is occurred



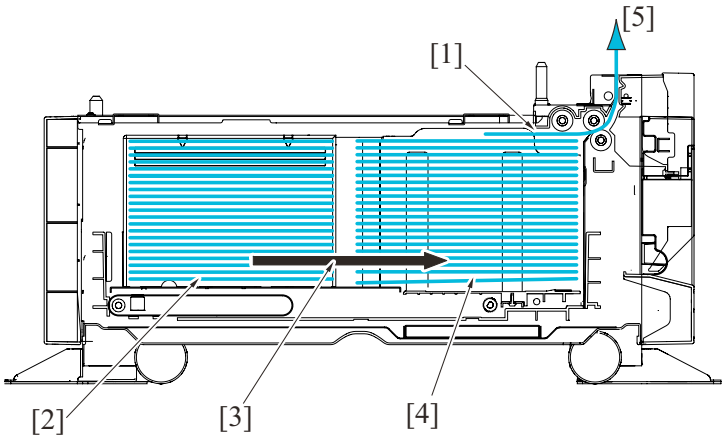
PE THEORY OF OPERATION PC-410/PC-415

1. CONFIGURATION



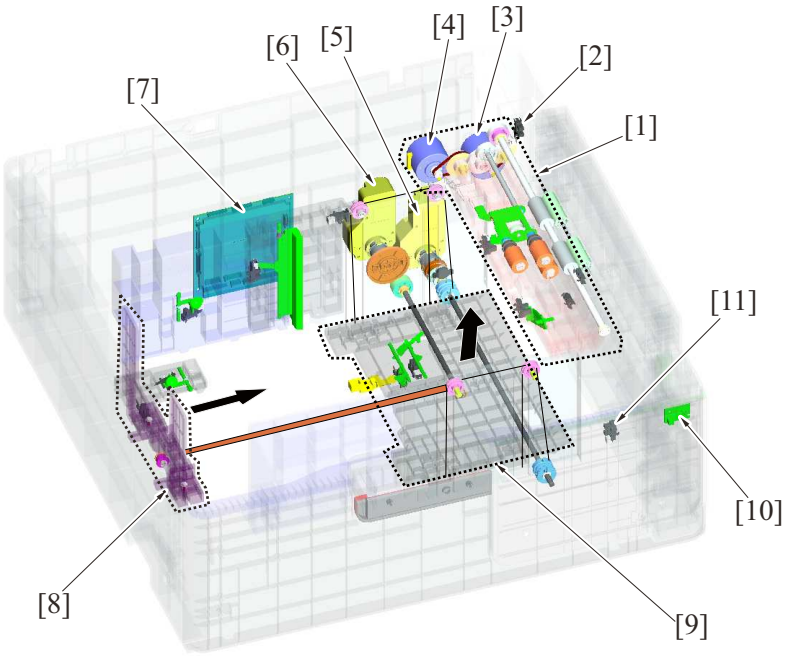
[1]	Paper feed section	[2]	Sub tray
[3]	Main tray	-	-

2. PAPER PATH



[1]	Paper feed from main tray	[2]	Sub tray
[3]	Move from the sub tray to the main tray	[4]	Main tray
[5]	Transportation to main body	-	-

3. DRIVE



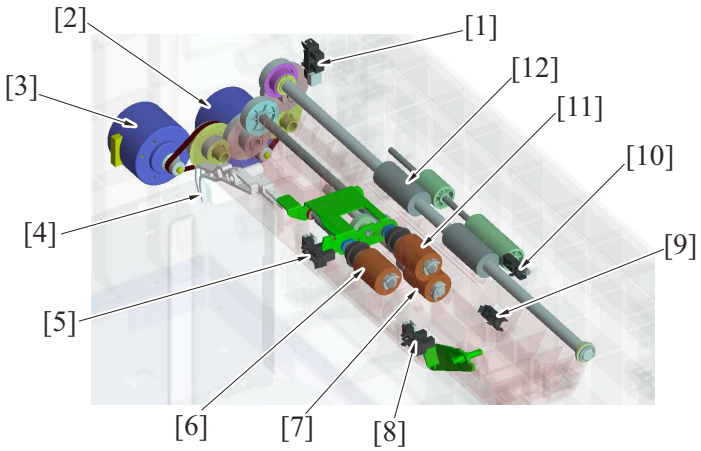
[1]	Paper feed section	[2]	Right bottom door sensor (PS131)
[3]	Vertical transport motor (M132)	[4]	Paper feed motor (M131)
[5]	Elevator motor (M134)	[6]	Shifter motor (M133)
[7]	PC control board (PCCB)	[8]	Shifter
[9]	Elevator tray	[10]	Tray 3 paper empty indicator board (PEIB/3)
[11]	Cassette set sensor (PS143)	-	-

4. OPERATION

4.1 Paper feed section

4.1.1 Paper feed drive mechanism

- The same paper feed drive mechanism as that found in PC-210/110 is incorporated.
- The paper feed motor drives the pick-up roller and feed roller to take up and feed a sheet of paper into the main body.
- Then, the vertical transport motor transports the paper through the vertical transport section.
- The pick-up roller takes up sheets of paper and the feed roller and separation roller ensure that only one sheet of paper is separated and fed into the main body.
- When the drawer is slid in, the lever is pushed to lower the pick-up roller.
- The tray is raised to cause the paper to push the feed roller. The tray is brought to a stop when the main tray upper limit sensor detects the upper limit.
- The main tray upper paper empty sensor detects whether paper is loaded on the main tray at the upper limit position.

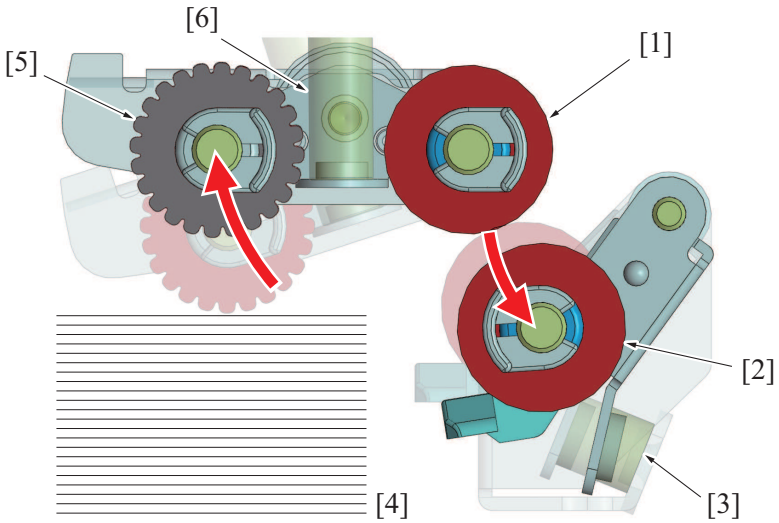


[1]	Right bottom door sensor (PS131)	[2]	Vertical transport motor (M132)
[3]	Paper feed motor (M131)	[4]	Lever
[5]	Main tray upper limit sensor (PS136)	[6]	Pick-up roller
[7]	Separation roller	[8]	Main tray upper paper empty sensor (PS137)
[9]	Paper feed sensor (PS132)	[10]	Vertical transport sensor (PS133)
[11]	Feed roller	[12]	Vertical transport roller

4.1.2 Roller retract mechanism

- When the paper tray is inserted or pulled out, there is a mechanism which retracts the pick-up roller and the separation roller.
- The pick-up roller retracts from the paper.
- The separation roller retracts from the feed roller.

Front view



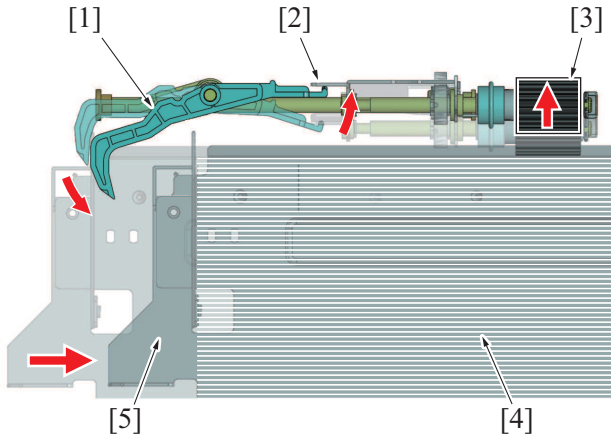
[1]	Feed roller	[2]	Separation roller
[3]	Separation roller pressure spring	[4]	Paper
[5]	Pick-up roller	[6]	Pick-up roller pressure spring

(1) Pick-up roller retract mechanism

- When the paper tray is inserted or pulled out, the pick-up roller prevents the paper from being damaged.

- The pick-up roller comes down through spring pressure when the paper tray is closed. When paper is placed, the roller is pressed against the paper surface. (Paper feed position)
- If the paper tray lock is released, the roller lifting lever is also released and the pick-up roller holder is pushed up to the retraction position. This structure prevents the paper surface from being damaged even if the paper tray is pulled out.

Left side view

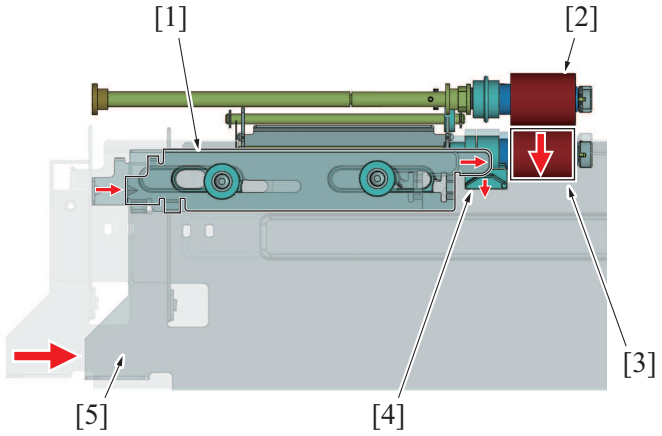


[1]	Roller lifting lever	[2]	Pick-up roller holder
[3]	Pick-up roller (retract position)	[4]	Paper
[5]	Paper tray (lock released)	-	-

(2) Separation roller retract mechanism

- When a paper jam occurs and paper is caught between rollers where the feed roller is pressing the separation roller, paper will be left inside the machine through pulling out the paper tray. If you insert the paper tray in that state, the paper may get torn in pieces which may fall off and scatter inside the machine. It prevents paper from being torn or falling off through retracting the separation roller.
- The separation roller is pressed against the feed roller by spring pressure when the paper tray is closed. (Paper feed position)
- Release the paper tray lock, the roller pushdown lever is also released and the separation roller retract lever is pushed down to the retracting position. It releases the paper from the rollers even if it is jammed between the rollers.

Left side view

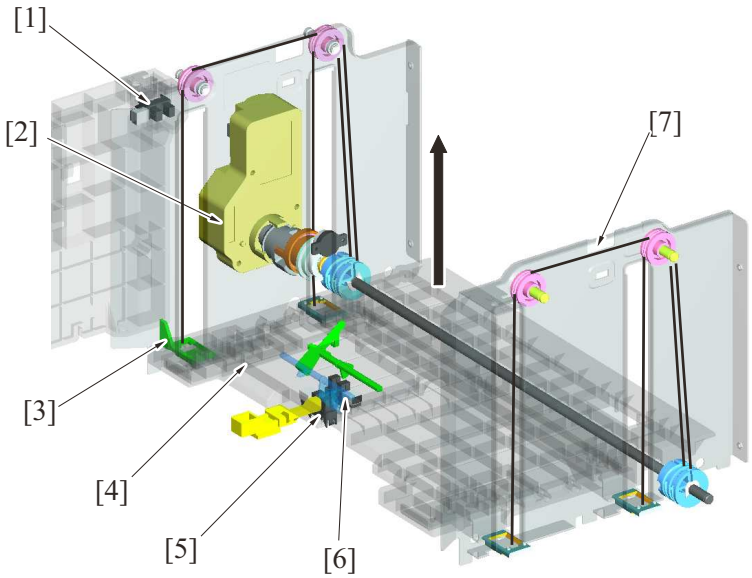


[1]	Roller pushdown lever	[2]	Feed roller
[3]	Separation roller (retract position)	[4]	Separation roller retract lever
[5]	Paper tray (lock released)	-	-

4.2 Main tray section

4.2.1 Main tray up / down mechanism

- The elevator tray is suspended by the cables at the front and rear.
- As the elevator motor turns forward or backward, the cables are wound to raise or lower the tray.
- The amount of paper left in the main tray is calculated using time for the lifting motion (period of time through which the elevator motor is kept energized).
- When the amount of paper becomes small, the near empty detection actuator blocks the main tray paper near empty sensor.
- When paper in the main tray runs out, the main tray paper empty sensor detects that condition and a descent motion of the main tray is started.
- The shifter stop/lower limit position sensor detects the main tray at its lower limit position.

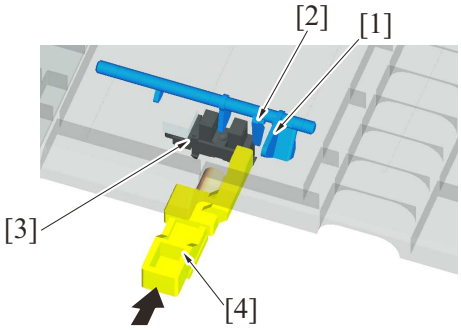


[1]	Main tray paper near empty sensor (PS135)	[2]	Elevator motor (M134)
[3]	Near empty detection actuator	[4]	Main tray
[5]	Shifter stop / lower limit position sensor (PS138)	[6]	Main tray paper empty sensor (PS134)
[7]	Wire	-	-

4.2.2 Main tray lower limit detection

(1) Main tray lower limit detection

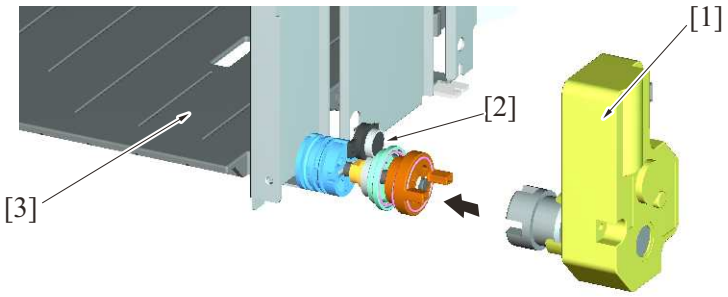
- If the sub tray is detected to be loaded with paper when paper on the main tray runs out, the descent motion of the main tray is started.
- The shifter stop/lower limit position sensor detects the lower limit position of the main tray.
- This sensor has two functions and detects also the stop position of the shifter.
- The shift stop position detection actuator portion detects the shifter stop position when it is pushed as a result of the lever being pushed by the shifter.



[1]	Lower limit detection actuator portion	[2]	Shifter stop position detection actuator portion
[3]	Shifter stop / lower limit position sensor (PS138)	[4]	Lever

(2) Main tray lower operation

- If the sub tray is detected to be not loaded with paper when paper on the main tray runs out, the descent motion of the main tray is not performed. The main tray is lowered when the drawer is slid out.
- When the drawer is slid out, the elevator motor is disengaged from the gear, so that the main tray lowers by its own weight.
- At this time, an effect of the damper connected to the gear prevents the main tray from lowering swiftly and ensures a slow descent motion.

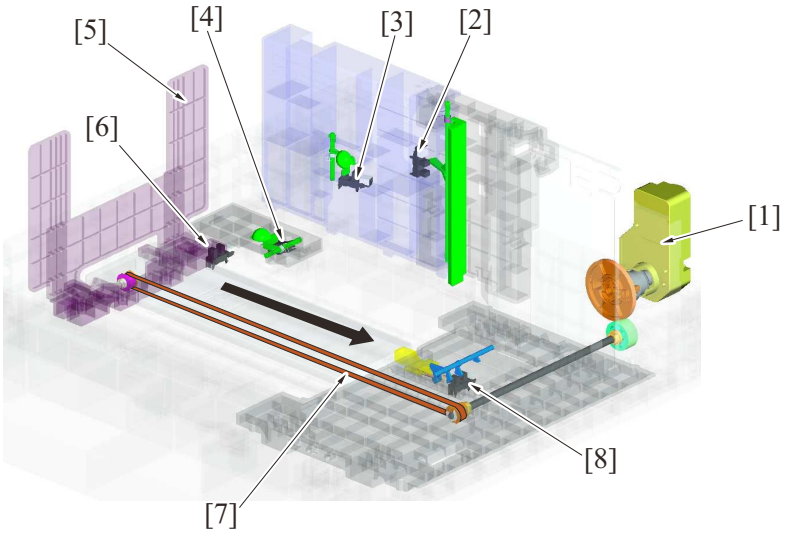


[1]	Elevator motor (M134)	[2]	Damper
[3]	Main tray	-	-

4.3 Sub tray section

4.3.1 Shifter drive mechanism

- If the main tray runs out of paper, while the sub tray is loaded with paper, the paper stack on the sub tray is moved to the main tray.
- The shifter motor drives the belt, which moves the shifter to thereby move the paper stack.
- The shifter moves to the position of the shifter stop/lower limit position sensor. Then, the shifter motor is rotated backward to return the shifter to, and stop it at, the position at which the shifter home sensor is blocked.

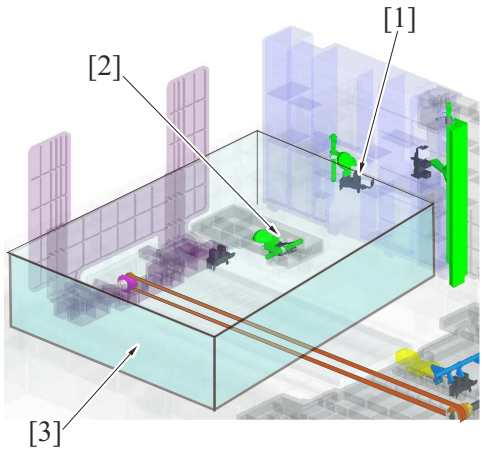


[1]	Shifter motor (M133)	[2]	Division board sensor (PS142)
[3]	Sub tray paper remaining amount sensor (PS141)	[4]	Sub tray paper empty sensor (PS140)
[5]	Shifter	[6]	Shifter home sensor (PS139)
[7]	Belt	[8]	Shifter stop / lower limit position sensor (PS138)

4.3.2 Sub tray paper remaining amount

- The amount of paper left on the sub tray, is detected by the combination of states of the sub tray paper remaining amount sensor and the sub tray paper empty sensor. The amount of paper left is detected at three different levels.
- Roughly speaking, the sub tray paper remaining amount sensor is deactivated from the activated state when the amount of paper left is about half the capacity of the tray.

Paper remaining amount	Sub tray paper remaining amount sensor	Sub tray paper empty sensor
Large	ON	ON
Small	OFF	ON
None	OFF	OFF



[1]	Sub tray paper remaining amount sensor (PS141)	[2]	Sub tray paper empty sensor (PS140)
[3]	Paper	-	-

4.4 Remaining paper amount displayed mechanism

- The amount of remaining paper is indicated by the LED on the right side of each tray and by the screen of the control panel.
- The estimate amount of paper for near empty is around 100 as 64 g/m^2 (17 lb) paper.

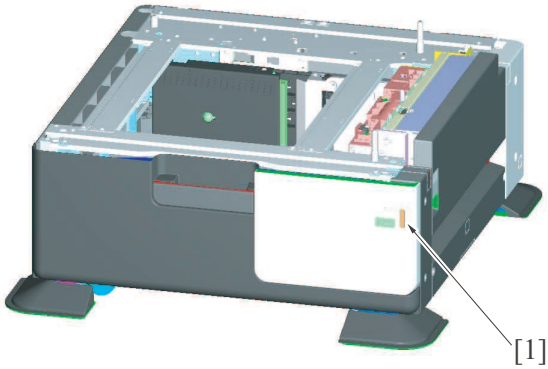
4.4.1 Display state

Tray status	Empty	Near empty	Other status

			(During lifting-up and with tray not being set included)
LED status	Lit	OFF/Blink *	Unlit

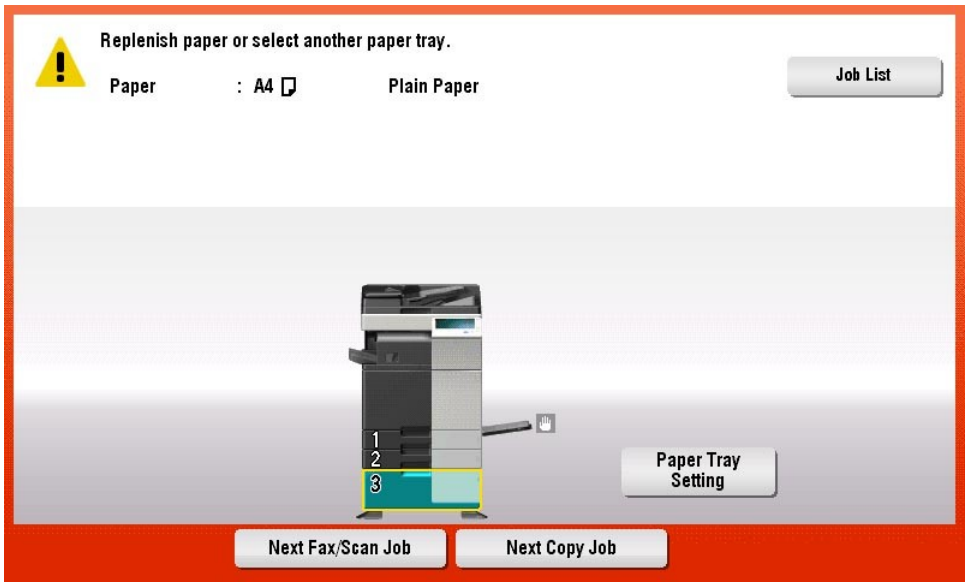
NOTICE
- The near empty display may be OFF or Blink as set for within “Machine State LED Setting” of the service mode. (The default setting is OFF.)
- The LED is OFF regardless of the amount of paper left in the tray in the energy save mode.

Tray paper remaining amount display LED



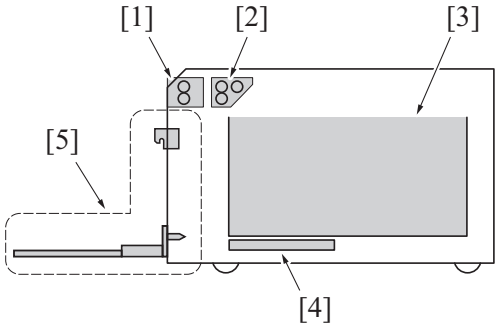
[1]	Tray paper remaining amount display LED	-	-

Display on the control panel when paper empty is occurred



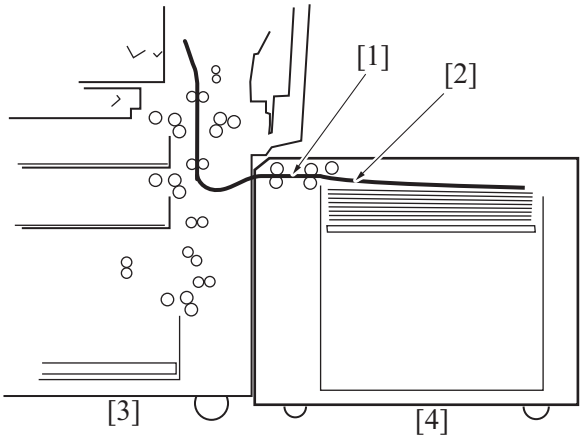
PF THEORY OF OPERATION LU-207

1. SECTION CONFIGURATION



[1]	Paper transport section	[2]	Paper feed section
[3]	Paper storage section	[4]	Dehumidification heater
[5]	Unit open/close section	-	-

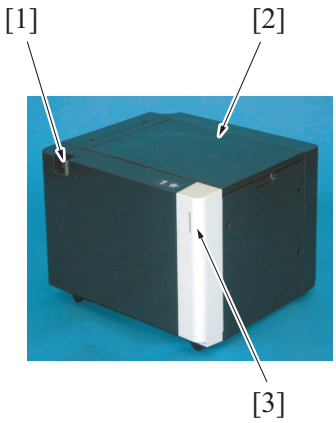
2. PAPER PATH



[1]	Transportation to main body	[2]	Paper feed from the tray
[3]	Main body	[4]	LU-207

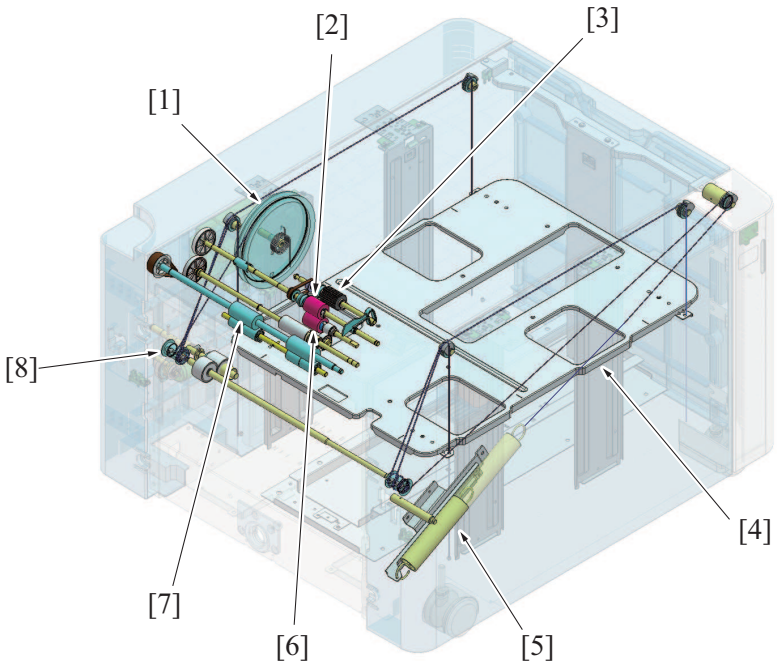
3. CONFIGURATION

3.1 Appearance



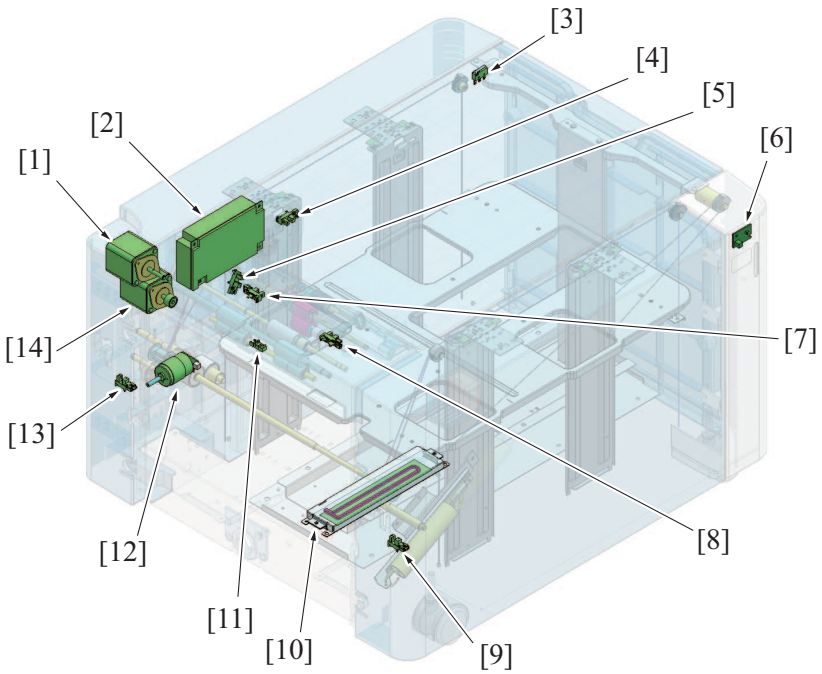
[1]	Unit release lever	[2]	LU door
[3]	Tray LED	-	-

3.2 Main part



[1]	Remaining paper detection plate	[2]	Feed roller
[3]	Pick-up roller	[4]	Paper tray
[5]	Drive assist spring	[6]	Separation roller
[7]	Transport roller	[8]	Lift-up axis

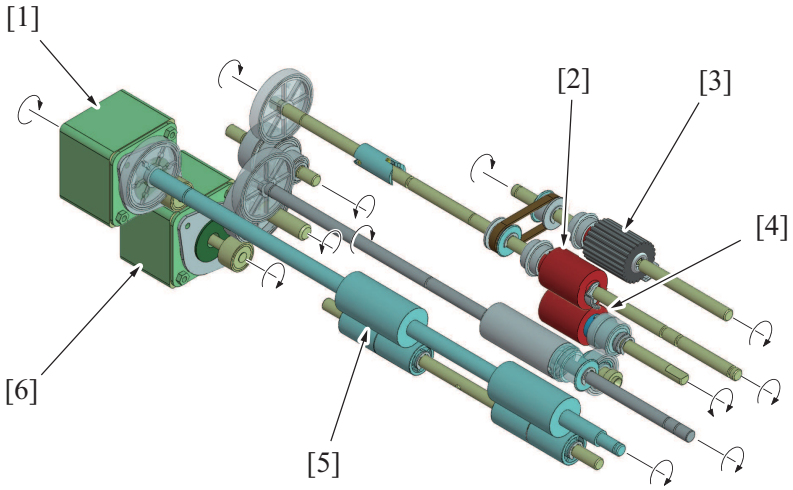
3.3 Electrical part



[1]	LU transport motor (M3)	[2]	LU drive board (LUDB)
[3]	LU door switch (MS1)	[4]	LU near empty sensor/1 (PS5)
[5]	LU near empty sensor/2 (PS6)	[6]	Tray LED (LED)
[7]	LU upper limit sensor (PS2)	[8]	LU paper empty sensor (PS4)
[9]	LU set sensor/Fr (PS7)	[10]	Dehumidification heater (DH)
[11]	LU paper feed sensor (PS3)	[12]	LU lift-up motor (M1)
[13]	LU set sensor/Rr (PS1)	[14]	LU paper feed motor (M2)

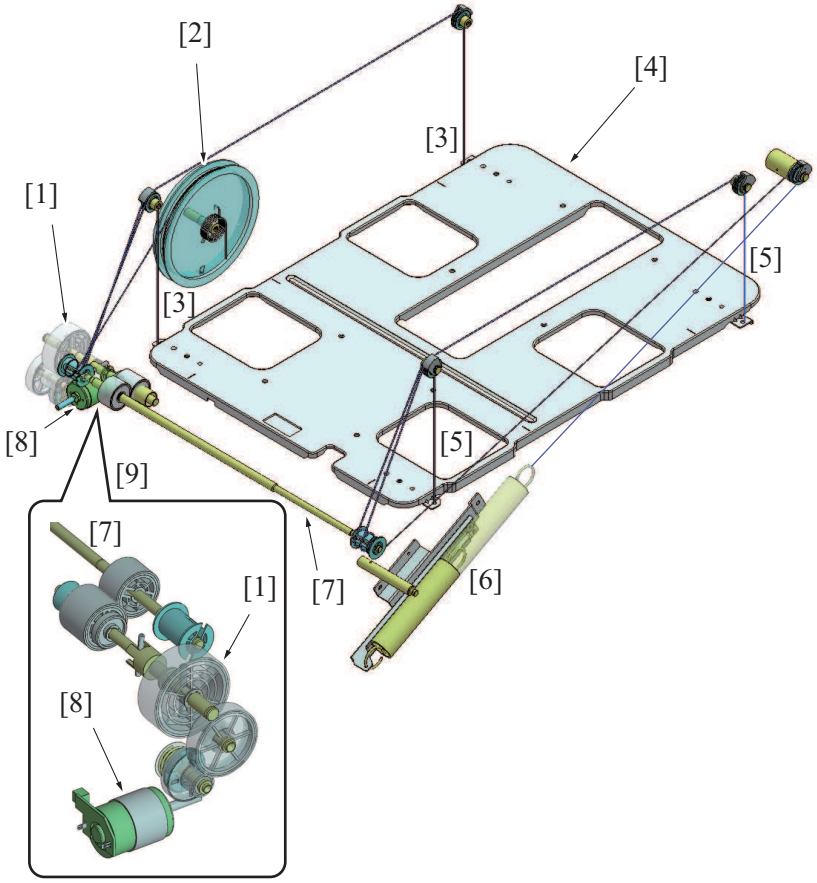
4. DRIVE

4.1 Paper feed transport drive



[1]	LU transport motor (M3)	[2]	Feed roller
[3]	Pick-up roller	[4]	Separation roller
[5]	Transport roller	[6]	LU paper feed motor (M2)

4.2 Paper lift-up drive



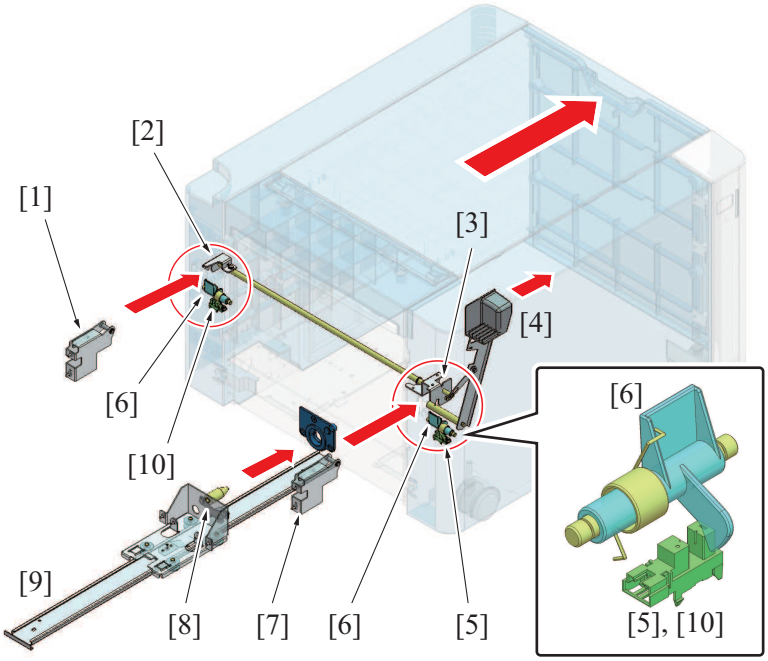
[1]	Lift-up drive section	[2]	Remaining paper detection plate
[3]	Wire (rear side)	[4]	Paper tray
[5]	Wire (front side)	[6]	Drive assist spring
[7]	Lift-up axis	[8]	LU lift-up motor (M1)
[9]	LU lift-up motor around (rear view)	-	-

5. OPERATION

5.1 Unit open/close section

5.1.1 Unit lock mechanism

- The link between the paper feed unit and MFP can be released.
- If the sensor determines that the paper feed unit is released, printing from the paper feed unit is prohibited.



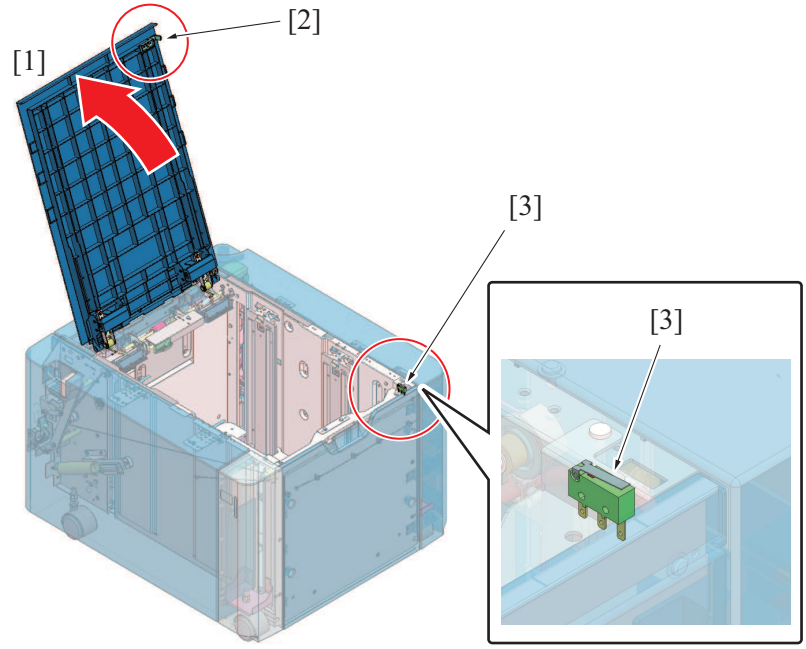
[1]	Mounting plate (back): On the MFP	[2]	Lock (back)
[3]	Lock (front)	[4]	Unit release lever
[5]	LU set sensor/Fr (PS7)	[6]	Actuator
[7]	Mounting plate (front): On the MFP	[8]	Lock pin (on the MFP)
[9]	Coupling rail	[10]	LU set sensor/Rr (PS1)

(1) Description

- Operate the unit release lever in the front side of the large capacity paper feed unit (hereinafter referred to as paper feed unit), the locks (on both sides of front and back) attached to the left side of the paper feed unit will be released. It releases the link between the paper feed unit and the MFP, which makes it possible to slide the paper feed unit to the right.
- The paper feed unit is connected to the MFP via the coupling rail. The unit slides to the right side along the rail.
- When the paper feed unit link is released, the LU set sensor/Fr and the LU set sensor/Rr will be unblocked. As a result, the sensor determines that paper feed unit has been released.
- The LU set sensor is installed in the front and rear sides. These sensors are used to prevent the paper feed unit from being linked to the MFP at an angle.
- If the sensor determines that the paper feed unit is released, printing from the paper feed unit is prohibited. (Printing from other paper feed ports is still possible.)
- The paper feed unit is linked to the MFP through sliding the unit to the left. The home position when the paper feed unit is linked is fixed with the lock pin on the MFP.
- Link the paper feed unit, printing from the paper feed unit will be enabled.

5.1.2 LU door open/close detection mechanism

- The LU door is equipped with a door switch.
- Open the LU door, the paper tray lift-up drive section link will be released.



[1]	LU door	[2]	LU door open/close detection lever
[3]	LU door switch (MS1)	-	-

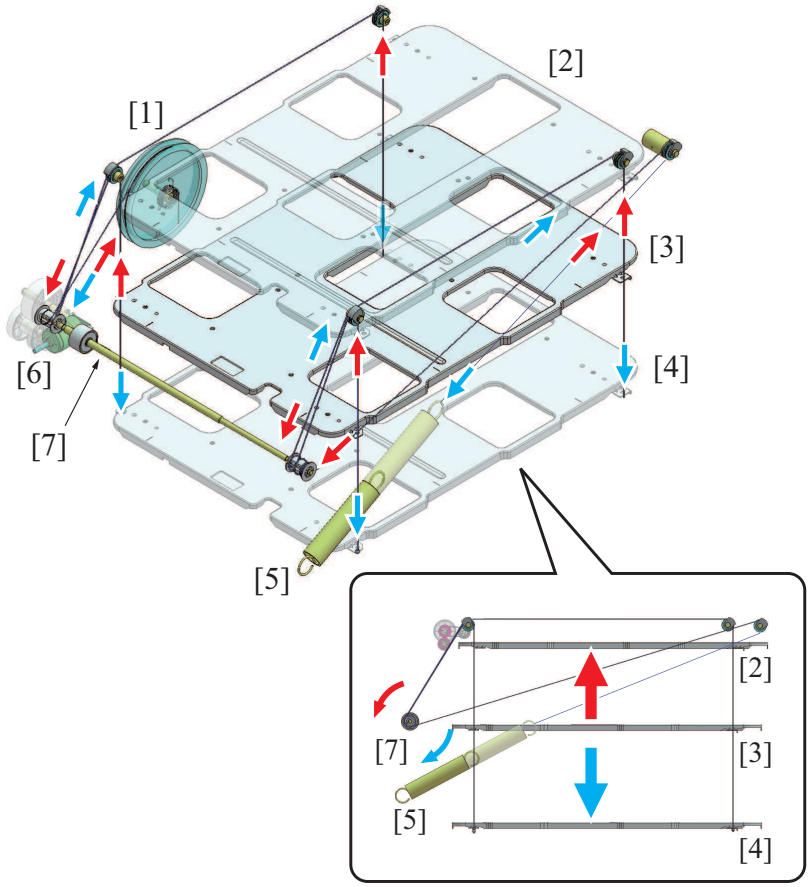
(1) Description

- An LU door switch is provided at the top-right-rear side of the paper feed unit and detects the opening and closing of the LU door.
- When the LU door is closed, the open/close detection lever on the LU door pushes down the LU door switch. (ON)
- If the sensor determines that the LU door is open, printing from the paper feed unit is prohibited. (Printing from other paper feed ports is still possible.)
- Open the LU door, the paper tray lift-up drive link will be released.
- Close the LU door, the paper tray lift-up drive section will be connected and printing from the paper feed unit will be enabled.

5.2 Paper storage section

5.2.1 Paper tray lifting mechanism

- When the LU door is closed, the wire is wound around the lift-up axis, which raises the paper tray.
- Detection of the upper limit of paper stops the wire winding process to complete the paper tray lifting operation.



[1]	Remaining paper detection plate	[2]	Paper tray (upper limit position)
[3]	Paper tray (home position)	[4]	Paper tray (lower limit position)
[5]	Drive assist spring	[6]	LU lift-up motor (M1)
[7]	Lift-up axis	-	-

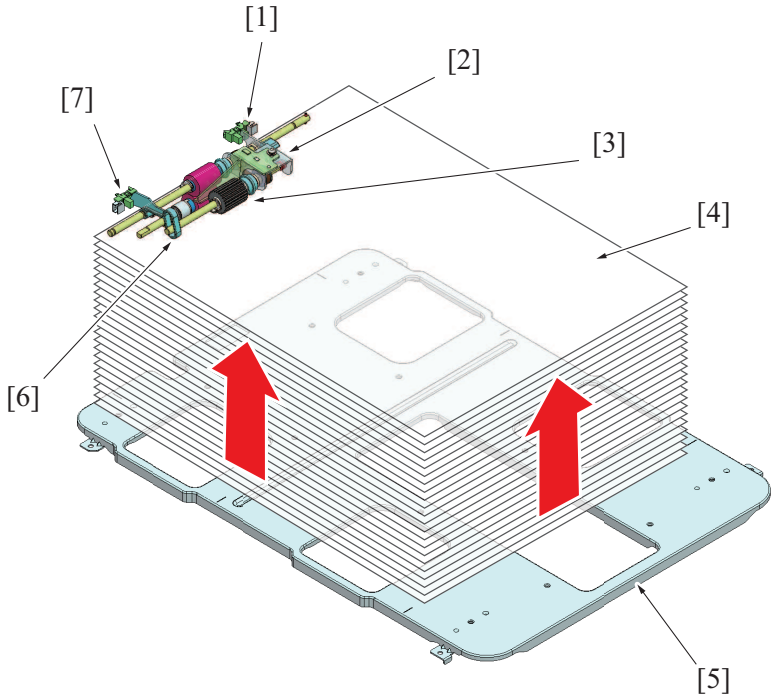
(1) Description

- Four wires are connected to the paper tray which lifts up the tray into its home position.
- Each wire is wound around the lift-up axis. Roll up a lift-up axis, the paper tray will be lifted up.
- The wire in the lift-up axis which is connected to the drive assist spring is also wound in the same direction. By the force of the drive assist spring, the unloaded paper tray (with no paper placed) is lifted up into the home position. (It does not go down to the lowest position)
- With the weight of the paper that is placed on the paper tray, the paper tray will be lowered down. The amount of lowering of the paper tray varies by paper weight.
- When the paper tray is lowered from the home position, upward force is applied to the paper tray by the drive assist spring. It decreases the load on the lift-up axis when paper is lifted up.
- This machine does not have a mechanism to detect the home position and lower limit position of the paper tray.
- Close the LU door, so that the LU lift-up motor and paper tray lifting mechanism are linked together.
- The LU lift-up motor rotates to wind the wires around the lift-up axis and lift up the paper tray. Thus, the surface of the paper is pressed against the pick-up roller.
- Open the LU door, the coupling of the LU lift-up motor and paper tray lifting mechanism will be disconnected. Thus, the paper tray will fall down with its own weight, which releases the pressure between the pick-up roller and the paper.
- The remaining paper detection plate also rotates together with the vertical movement of the paper tray. (The wire in the lift-up axis which is connected to the remaining paper detection plate is wound in the opposite direction)

(2) Operation timing

When paper is placed

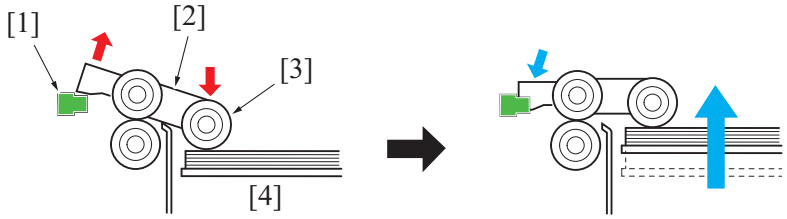
1. The LU door is opened and paper is placed. (The LU door switch detects whether the LU door is closed or not)
2. With the LU door closed, the LU upper limit sensor signal is checked. When the paper tray is being lowered (LU upper limit sensor is unblocked), the LU lift-up motor is rotated and the paper tray lift-up is started.
3. The pick-up roller is pushed up by paper surface that was lifted up. The pick-up roller holder blocks the LU upper limit sensor, which detects the paper raising up to the upper limit position.
4. If the LU upper limit sensor detects the paper raising up to the upper limit position, the LU lift-up motor stops to end the lift-up operation of the paper tray.



[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper
[5]	Paper tray	[6]	LU paper empty sensor actuator
[7]	LU paper empty sensor (PS4)	-	-

During a print cycle

1. When the amount of paper decreases during a print cycle, the pick-up roller will gradually come down. Thus, the LU upper limit sensor that was blocked by the pick-up roller holder becomes unblocked.
2. The LU lift-up motor will rotate again to start lifting up the paper tray.
3. The pick-up roller is pushed up by paper surface that was lifted up. Thus, the pick-up roller holder will block the LU upper limit sensor.
4. If the LU upper limit sensor gets blocked, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

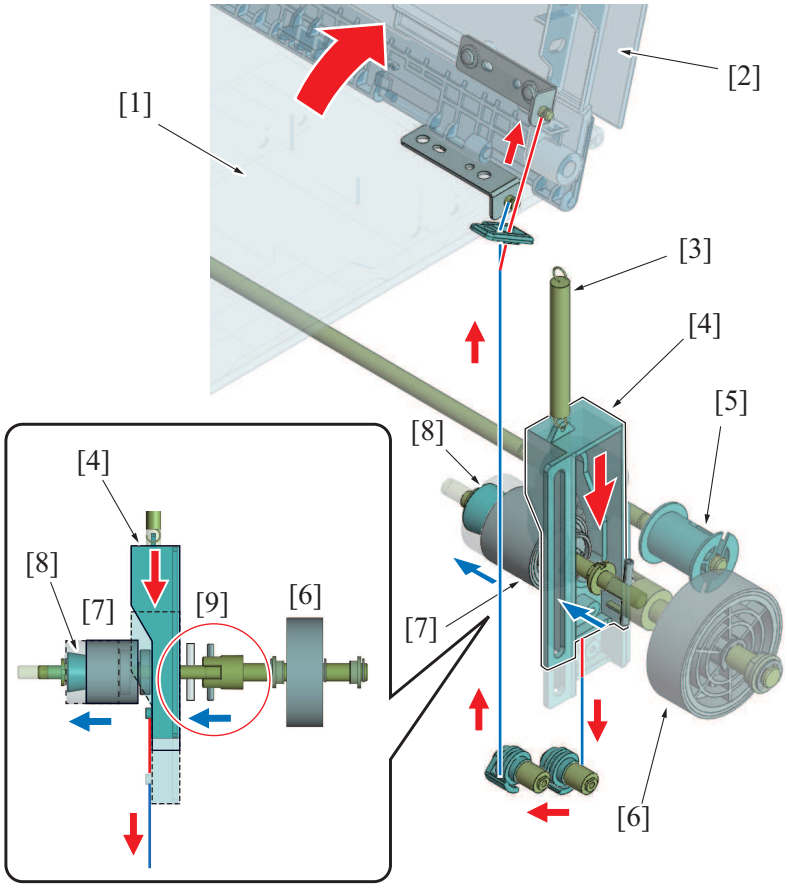


[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper tray

5.2.2 Paper tray lift-up drive release mechanism

- The paper tray lift-up drive section is equipped with a drive release mechanism.
- Release the drive, the paper tray will come down.
- The contact of the pick-up roller on the paper is released when the paper tray comes down.

Rear view



[1]	LU door (close)	[2]	LU door (open)
[3]	Link release plate spring	[4]	Link release plate
[5]	Lift-up axis	[6]	Drive gear
[7]	Connecting gear	[8]	Spring
[9]	Coupling	-	-

(1) Drive release operation

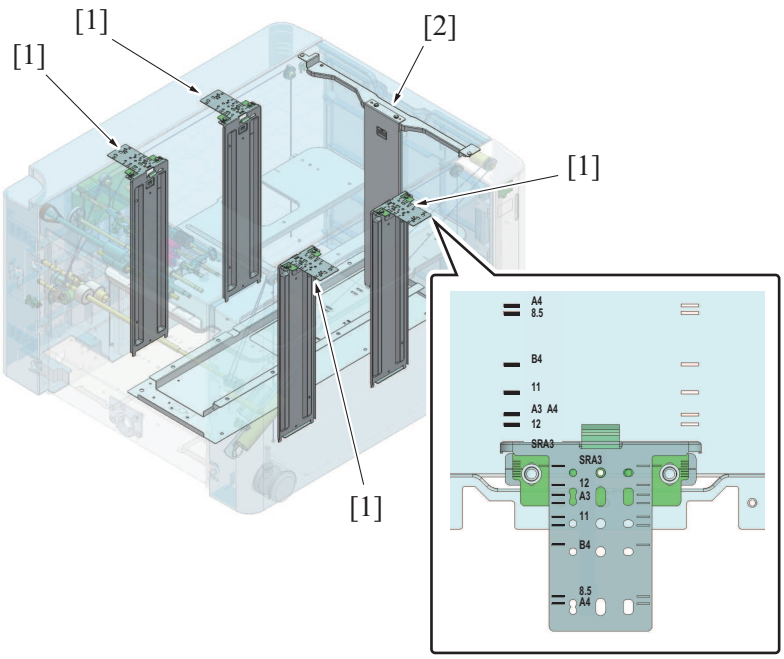
1. The wire linked to the LU door pulls down the link release plate when the door is opened.
2. The link release plate pushes out the link gear towards the front of the main body. It releases the link to the drive gear coupling.
3. Release the LU lift-up motor driving force, the weight of the load on the paper tray will pull out the wire wound in the lift-up axis. (The lift-up axis rotates on the opposite direction). This movement lowers the paper tray.

(2) Drive link operation

1. Close the LU door, the spring that is linked to the link release plate will pull up the link release plate.
2. The link gear pushes it back inside the machine through the spring force. It completes the link to the drive gear coupling.

5.2.3 Paper guide plate

- Change of the installation position of the paper guide plate allows the size of actual paper to be changed.
- The large capacity unit is not equipped with a mechanism to automatically detect paper size.



[1]	Paper guide plate (width)	[2]	Paper guide plate (length)

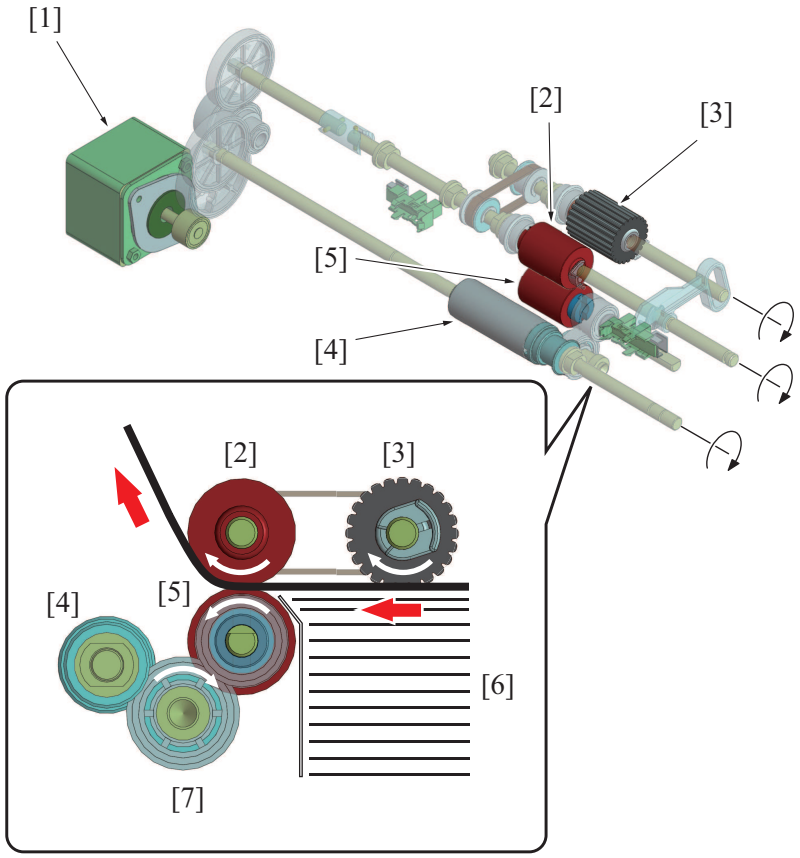
(1) Description

- Change of the installation position of the paper guide plate allows the size of actual paper to be changed.
- If the installation position of the paper guide plate has been changed, configure the paper size from [Service Mode] -> [System 2] -> [LCT Paper Size Setting].
- Available paper sizes: A3, B4, A4/A4S, A3 Wide (12 1/4 x 18), and SRA3

5.3 Paper feed/transport section

5.3.1 Paper feed control

- The LU paper feed motor drives the rollers to feed paper.



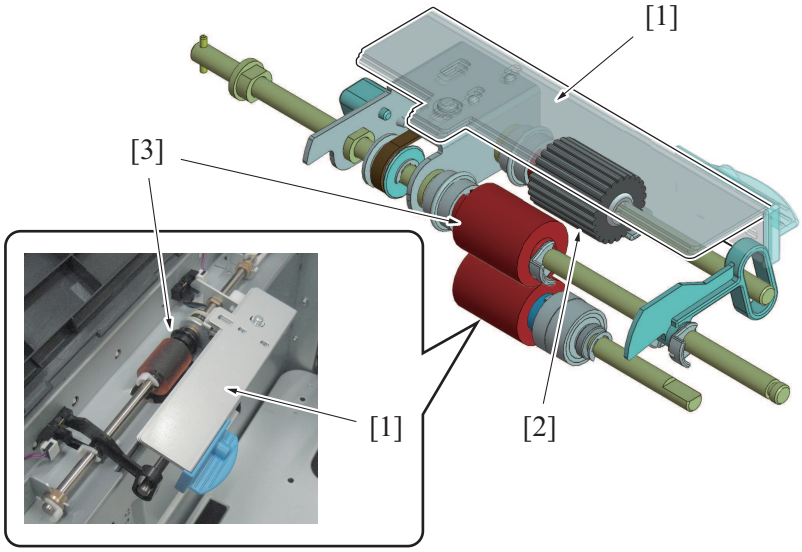
[1]	LU paper feed motor (M2)	[2]	Feed roller
[3]	Pick-up roller	[4]	Torque limiter

[5]	Separation roller (Only one sheet of paper in the sample illustration so it is in driven rotation)	[6]	Paper
[7]	Drive relay gear	-	-

(1) Description

- The LU paper feed motor drives the pick-up roller, feed roller and separation roller to take up and feed a sheet of paper into the main body.
- The weight is applied to the pick-up roller holder. The pick-up roller is pressed against the paper by the weight.
- Sheets of paper are separated and fed individually into the machine by the feed roller and separation roller.
- A torque limiter is connected to the separation roller which controls the driving force of the LU paper feed motor.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If multiple sheets of paper are fed between the separation roller and feed roller, the limit torque gets greater than the frictional force of the paper. Thus, the separation roller rotates reversely. The lower sheets of paper which are in contact with the separation roller are pushed back to the paper tray and separated.

(a) Feed roller pressure mechanism

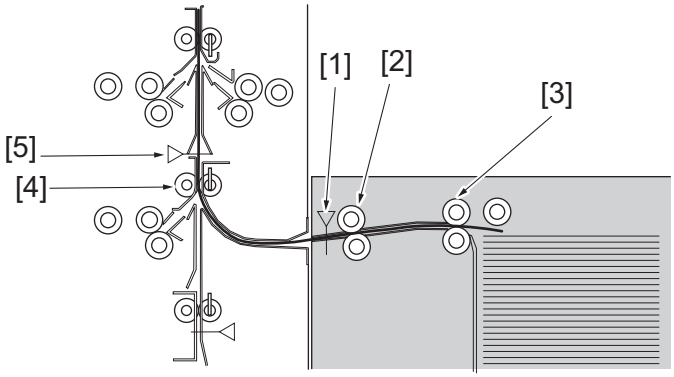


[1]	Weight	[2]	Pick-up roller
[3]	Feed roller	-	-

5.3.2 Paper feed control

- The transport roller is driven following the rotation of the LU transport motor to transport paper to the paper feed section of the main body.

Layout of sensors and rollers



[1]	LU paper feed sensor (PS3)	[2]	Transport roller
[3]	Feed roller	[4]	Tray 2 vertical transport roller
[5]	Tray 2 vertical transport sensor	-	-

(1) Description

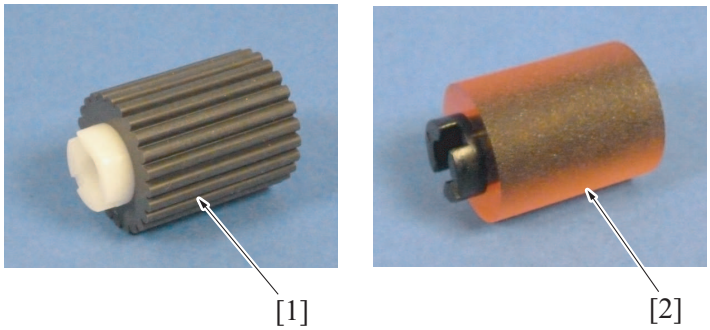
- In consecutive print, when the interval between the preceding and following sheets is below the specified value, the LCT transport rollers temporarily stop to ensure a predetermined interval.
- The paper transport speed is faster than the system speed.

5.3.3 Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts.

NOTE

- **These three rollers must be replaced with new ones at the same time.**



[1]	Pick-up roller	[2]	Feed roller and separation roller

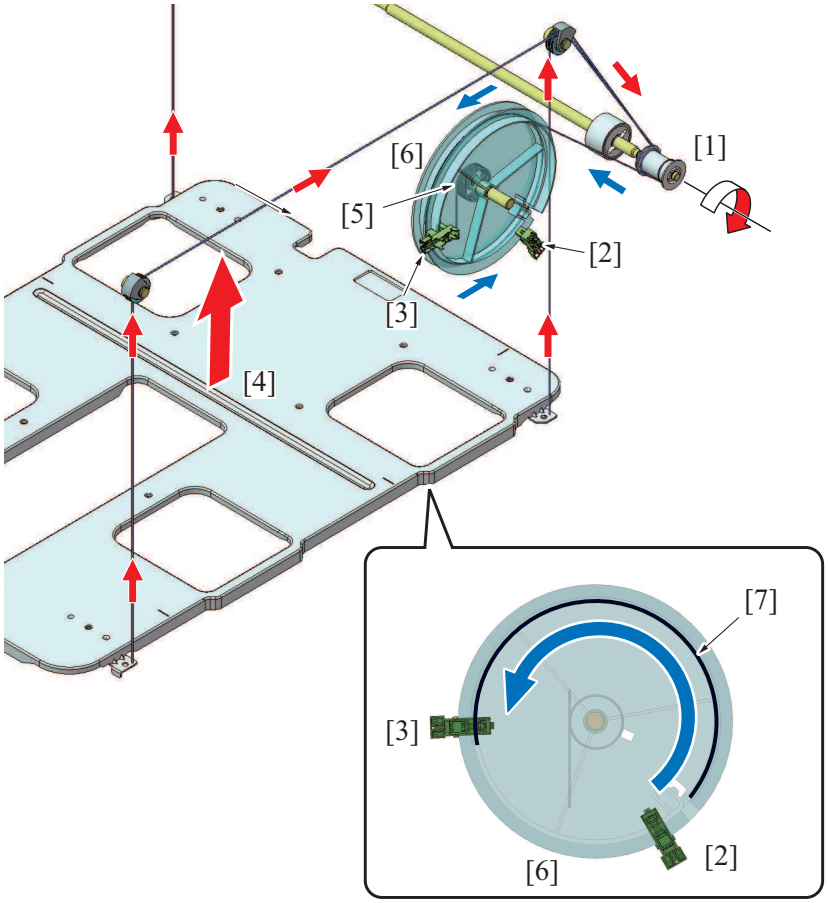
(1) Description

- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the [LCT Parts] counter must be reset from [Service Mode] -> [Counter] -> [Life].
- The number of times the paper feed unit has been subjected to paper feed operations can be checked with the “LCT Parts” counter of the Service Mode.

5.3.4 Remaining paper level detection

- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

Back view of the large capacity unit (paper full state)



[1]	Lift-up axis	[2]	LU near empty sensor /2 (PS6)
[3]	LU near empty sensor /1 (PS5)	[4]	Paper lift-up plate
[5]	Spring	[6]	Remaining paper detection plate
[7]	Sensor blocking plate	-	-

(1) Description

- The paper tray is equipped with a mechanism which detects the amount of remaining paper.
- The wire in the lift-up axis which is connected to the remaining paper detection plate is wound reversely against the paper tray wire. (If the paper tray wire is wound up the lift-up axis, the same amount of wire is pulled out.)

- A spring is attached to the rotation axis of the remaining paper detection plate. Rotational force is applied in the direction of winding of the wire into the remaining paper detection plate.
- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

(2) Remaining paper detection operation

1. If paper on the paper tray is consumed, the lift-up axis is rotated and the paper tray is lifted up.
2. If the lift-up axis is rotated in the lift direction of the paper tray, the wire that is connected to the remaining paper detection plate is pulled out from the lift-up axis.
3. The remaining paper detection plate rotates for an amount that the wire is pulled out, and winds up the wire.
4. The remaining paper detection plate is equipped with a blocking plate. The position of the blocking plate changes depending on the rotation amount of the remaining paper detection plate.
5. The amount of remaining paper is determined depending on the detection status of LU near empty sensors/1 and 2.

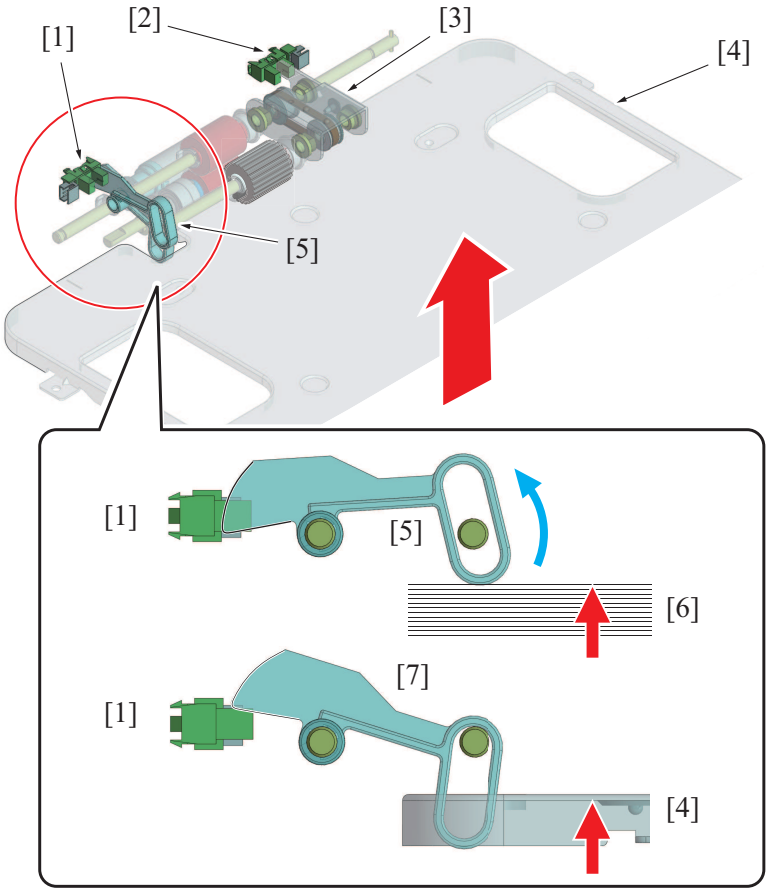
(3) Criteria for determining the amount of remaining paper

Condition	Paper full	LU near full	Paper present	LU near empty
Remaining paper level *	3000 to 2000 sheets	2000 to 1000 sheets	1000 to 51 sheets	50 to 1 sheets *2
LU near empty sensor /1 (PS5)	Blocked	Blocked	Unblocked	Unblocked
LU near empty sensor /2 (PS6)	Unblocked	Blocked	Blocked	Unblocked

- *1: Reference value when plain paper is placed
- *2: The accuracy of the determination of the near empty number is 50 sheets ± 20 sheets.

5.3.5 Paper empty detection

- The LU paper empty sensor detects the paper empty states.



[1]	LU paper empty sensor (PS4)	[2]	LU upper limit sensor (PS2)
[3]	Pick-up roller holder	[4]	Paper tray
[5]	Actuator (paper present)	[6]	Paper
[7]	Actuator (LU paper tray empty)	-	-

(1) Description

- The LU paper empty sensor detects the paper empty states.
- The absence of paper is determined when the paper tray is raised up to the upper limit position. (The LU upper limit sensor detects the upper limit position of the paper tray.)

(a) When paper is left on the paper tray

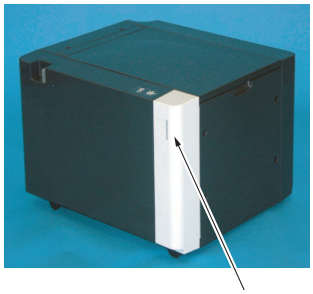
1. If the paper tray is raised up to the upper limit position, the actuator is pushed up by the top of the paper.
2. If the actuator blocks the LU paper empty sensor, the sensor determines that paper is remaining on the tray.

(b) When no paper is left on the paper tray

1. Since the paper tray has a notch, the actuator does not move from the LU paper empty position even if the paper tray is raised up to the upper limit position.
2. If the LU paper empty sensor remains unblocked, it determines that there is no paper left (LU paper empty).
3. When LU paper empty is detected, the paper tray stays at the upper limit position.

5.3.6 Remaining paper display

- An LED on the front right side displays the amount of remaining paper.



[1]	Tray LED display	-	-

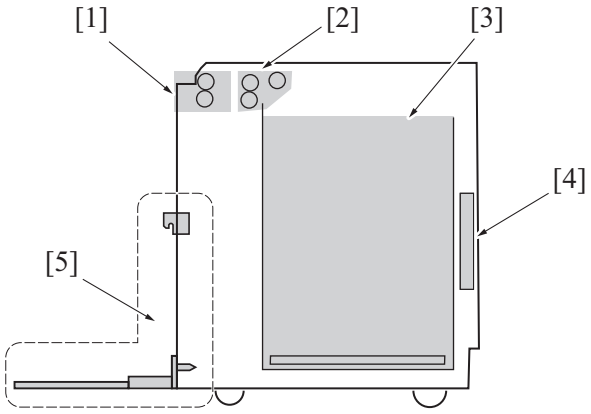
(1) Status indicator list

Paper feed port status	LED status
• Empty	Lit
• Near empty	Blinking
• Paper present • Other than near empty • Being lifted up	Unlit

PG THEORY OF OPERATION LU-302

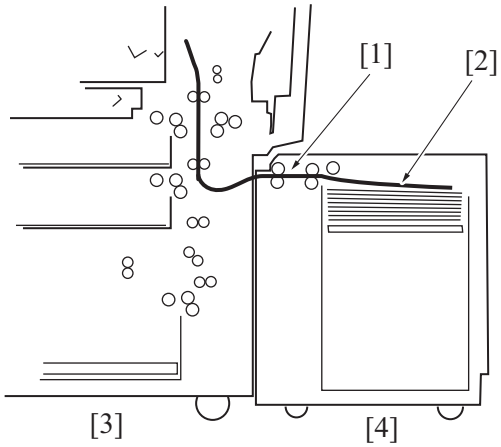
1. CONFIGURATION

1.1 Section configuration



[1]	Paper transport section	[2]	Paper feed section
[3]	Paper storage section	[4]	Dehumidifier heater section
[5]	Unit open/close section	-	-

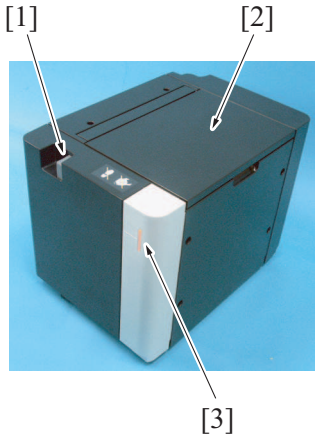
1.2 Paper path



[1]	Transportation to main body	[2]	Paper feed from the tray
[3]	Main body	[4]	LU-302

1.3 Main part configuration

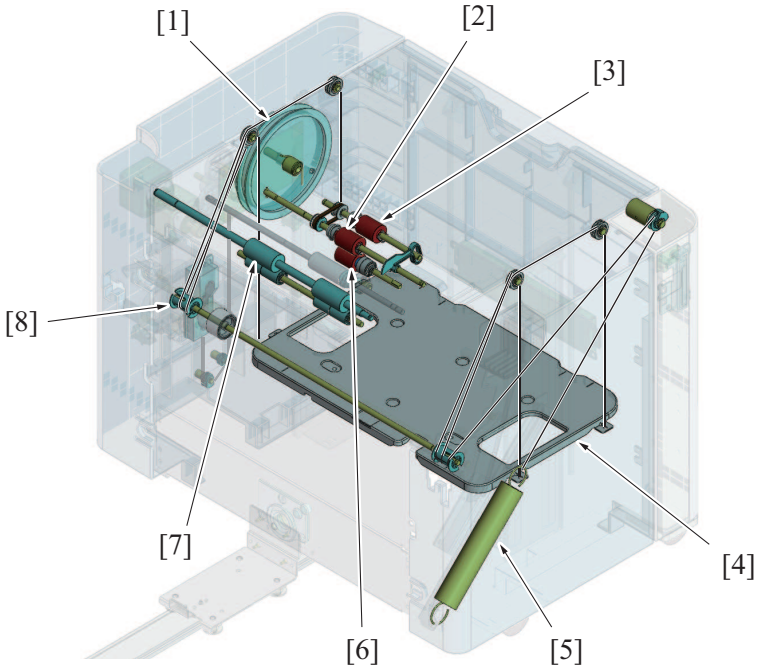
1.3.1 Appearance



[1]	Unit release lever	[2]	LU door

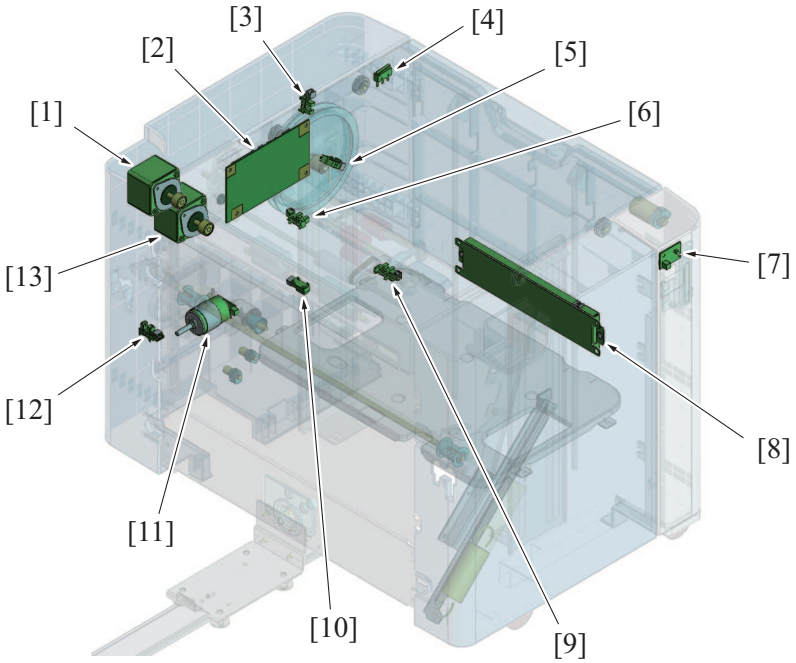
[3]	Tray LED	-	-

1.3.2 Main part



[1]	Remaining paper detection plate	[2]	Feed roller
[3]	Pick-up roller	[4]	Paper tray
[5]	Drive assist spring	[6]	Separation roller
[7]	Transport roller	[8]	Lift-up axis

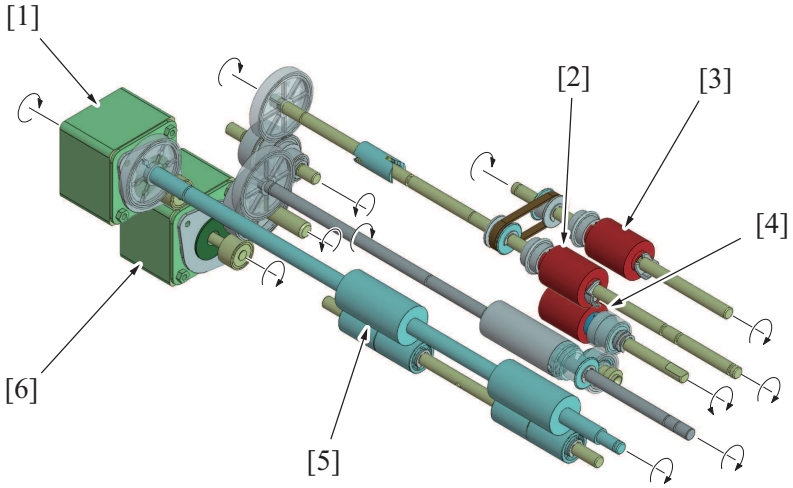
1.3.3 Electrical part



[1]	LU transport motor (M3)	[2]	LU drive board (LUDB)
[3]	LU near empty sensor/1 (PS5)	[4]	LU door switch (MS1)
[5]	LU near empty sensor/2 (PS6)	[6]	LU upper limit sensor (PS2)
[7]	Tray LED (LED)	[8]	Dehumidification heater (DH)
[9]	LU paper empty sensor (PS4)	[10]	LU paper feed sensor (PS3)
[11]	LU lift-up motor (M1)	[12]	LU set sensor (PS1)
[13]	LU paper feed motor (M2)	-	-

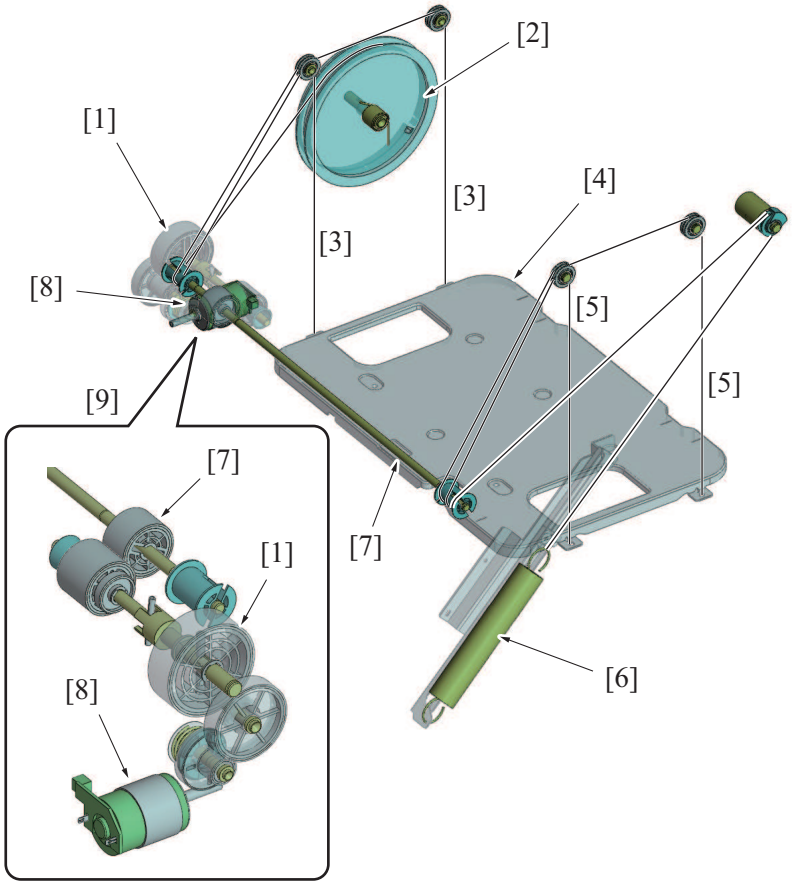
2. DRIVE

2.1 Paper feed transport drive



[1]	LU transport motor (M3)	[2]	Feed roller
[3]	Pick-up roller	[4]	Separation roller
[5]	Transport roller	[6]	LU paper feed motor (M2)

2.2 Paper lift-up drive



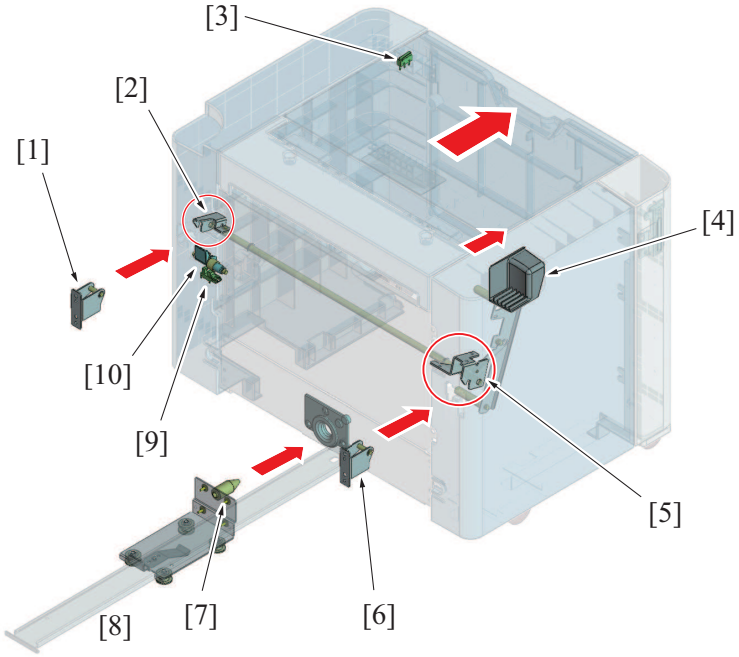
[1]	Lift-up drive section	[2]	Remaining paper detection plate
[3]	Wire (rear side)	[4]	Paper tray
[5]	Wire (front side)	[6]	Drive assist spring
[7]	Lift-up axis	[8]	LU lift-up motor (M1)
[9]	LU lift-up motor around (rear view)	-	-

3. OPERATION

3.1 Unit open/close section

3.1.1 Unit lock mechanism

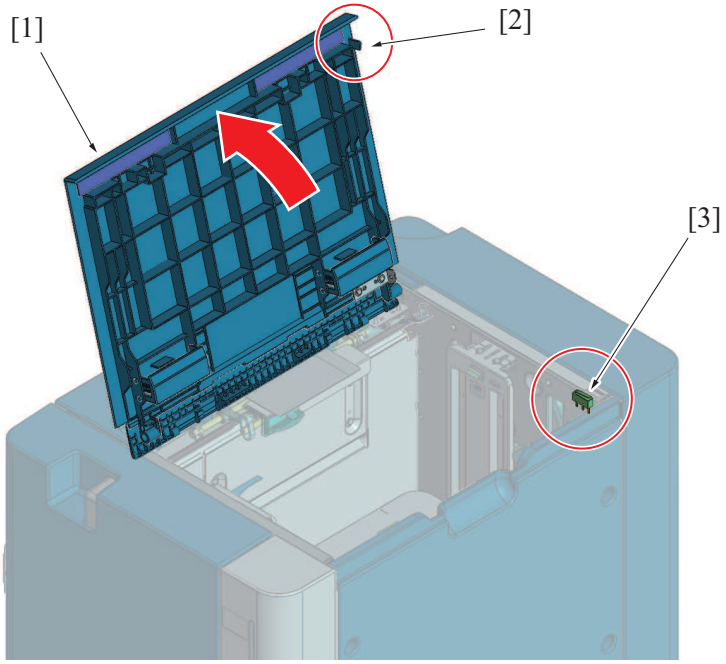
- Operate the unit release lever in the front side of the large capacity paper feed unit (hereinafter referred to as paper feed unit), the locks (on both sides of front and back) attached to the left side of the paper feed unit will be released. It releases the link between the paper feed unit and the MFP, which makes it possible to slide the paper feed unit to the right.
- The paper feed unit is connected to the MFP via the coupling rail. The unit slides to the right side along the rail.
- Release the paper feed unit link, the LU set sensor gets unblocked and the sensor determines that the paper feed unit is released.
- If the sensor determines that the paper feed unit is released, printing from the paper feed unit is prohibited. (Printing from other paper feed ports is still possible.)
- The paper feed unit is linked to the MFP through sliding the unit to the left. The home position when the paper feed unit is linked is fixed with the lock pin on the MFP.
- Link the paper feed unit, printing from the paper feed unit will be enabled.



[1]	Mounting plate (back): On the MFP	[2]	Lock (back)
[3]	LU door switch (MS1)	[4]	Unit release lever
[5]	Lock (front)	[6]	Mounting plate (front): On the MFP
[7]	Lock pin (on the MFP)	[8]	Coupling rail
[9]	LU set sensor (PS1)	[10]	Actuator

3.1.2 LU door open/close detection mechanism

- An LU door switch is provided at the top-right-rear side of the paper feed unit and detects the opening and closing of the LU door.
- When the LU door is closed, the open/close detection lever on the LU door pushes down the LU door switch. (ON)
- If the sensor determines that the LU door is open, printing from the paper feed unit is prohibited. (Printing from other paper feed ports is still possible.)
- Open the LU door, the paper tray lift-up drive section link will be released.
- Close the LU door, the paper tray lift-up drive section will be connected and printing from the paper feed unit will be enabled.

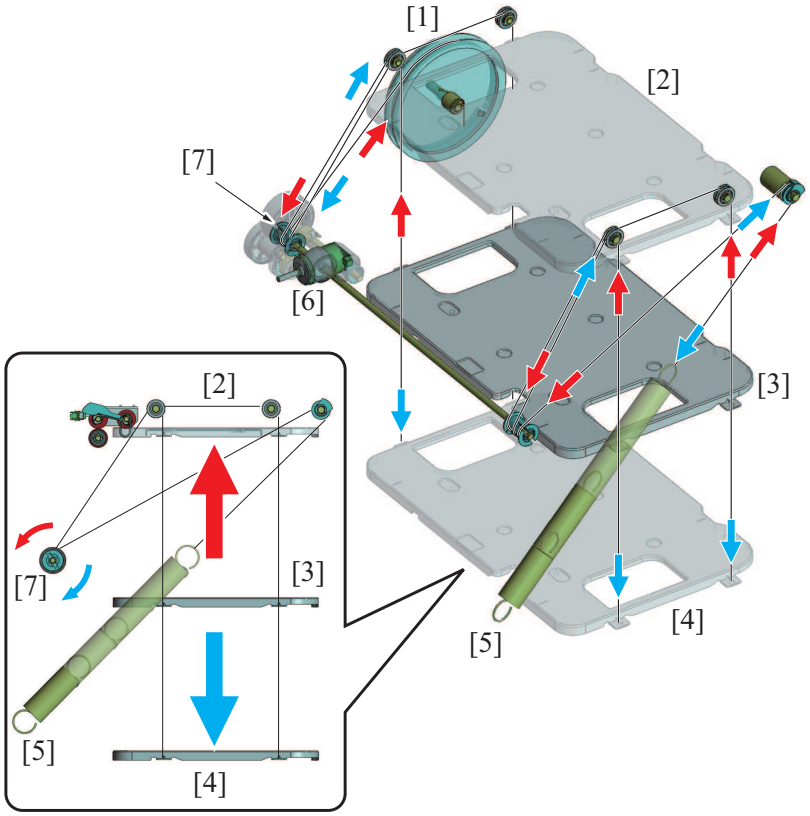


[1]	LU door	[2]	LU door open/close detection lever
[3]	LU door switch (MS1)	-	-

3.2 Paper storage section

3.2.1 Paper tray lifting mechanism

- Four wires are connected to the paper tray which lifts up the tray into its home position.
- Each wire is wound around the lift-up axis. Roll up a lift-up axis, the paper tray will be lifted up.
- The wire in the lift-up axis which is connected to the drive assist spring is also wound in the same direction. By the force of the drive assist spring, the unloaded paper tray (with no paper placed) is lifted up into the home position. (It does not go down to the lowest position)
- With the weight of the paper that is placed on the paper tray, the paper tray will be lowered down. The amount of lowering of the paper tray varies by paper weight.
- When the paper tray is lowered from the home position, upward force is applied to the paper tray by the drive assist spring. It decreases the load on the lift-up axis when paper is lifted up.
- This machine does not have a mechanism to detect the home position and lower limit position of the paper tray.
- Close the LU door, so that the LU lift-up motor and paper tray lifting mechanism are linked together.
- The LU lift-up motor rotates to wind the wires around the lift-up axis and lift up the paper tray. Thus, the surface of the paper is pressed against the pick-up roller.
- Open the LU door, the coupling of the LU lift-up motor and paper tray lifting mechanism will be disconnected. Thus, the paper tray will fall down with its own weight, which releases the pressure between the pick-up roller and the paper.
- The remaining paper detection plate also rotates together with the vertical movement of the paper tray. (The wire in the lift-up axis which is connected to the remaining paper detection plate is wound in the opposite direction)

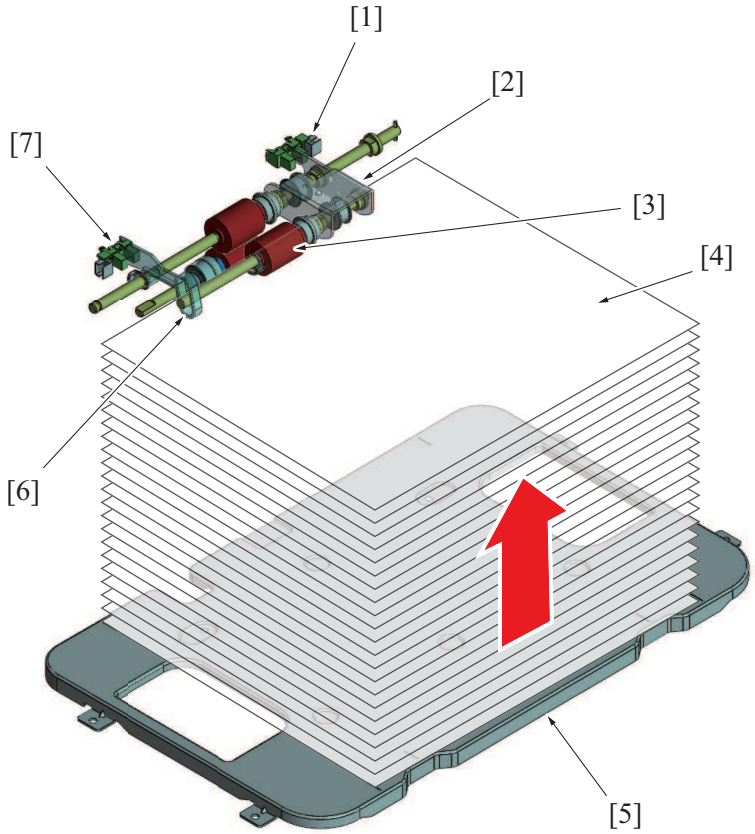


[1]	Remaining paper detection plate	[2]	Paper tray (upper limit position)
[3]	Paper tray (home position)	[4]	Paper tray (lower limit position)
[5]	Drive assist spring	[6]	LU lift-up motor (M1)
[7]	Lift-up axis	-	-

(1) Operation timing

(a) When paper is placed

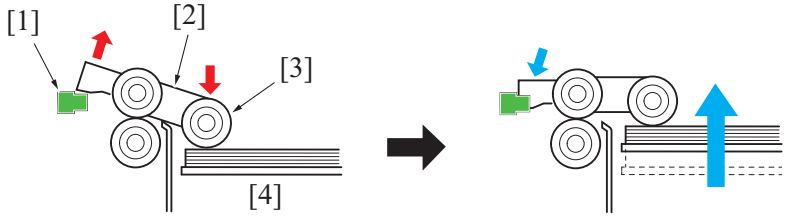
1. The LU door is opened and paper is placed. (The LU door switch detects whether the LU door is closed or not)
2. With the LU door closed, the LU upper limit sensor signal is checked. When the paper tray is being lowered (LU upper limit sensor is unblocked), the LU lift-up motor is rotated and the paper tray lift-up is started.
3. The pick-up roller is pushed up by paper surface that was lifted up. The pick-up roller holder blocks the LU upper limit sensor, which detects the paper raising up to the upper limit position.
4. If the LU upper limit sensor detects the paper raising up to the upper limit position, the LU lift-up motor stops to end the lift-up operation of the paper tray.



[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper
[5]	Paper tray	[6]	LU paper empty sensor actuator
[7]	LU paper empty sensor (PS4)	-	-

(b) During a print cycle

1. When the amount of paper decreases during a print cycle, the pick-up roller will gradually come down. Thus, the LU upper limit sensor that was blocked by the pick-up roller holder becomes unblocked.
2. The LU lift-up motor will rotate again to start lifting up the paper tray.
3. The pick-up roller is pushed up by paper surface that was lifted up. Thus, the pick-up roller holder will block the LU upper limit sensor.
4. If the LU upper limit sensor gets blocked, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

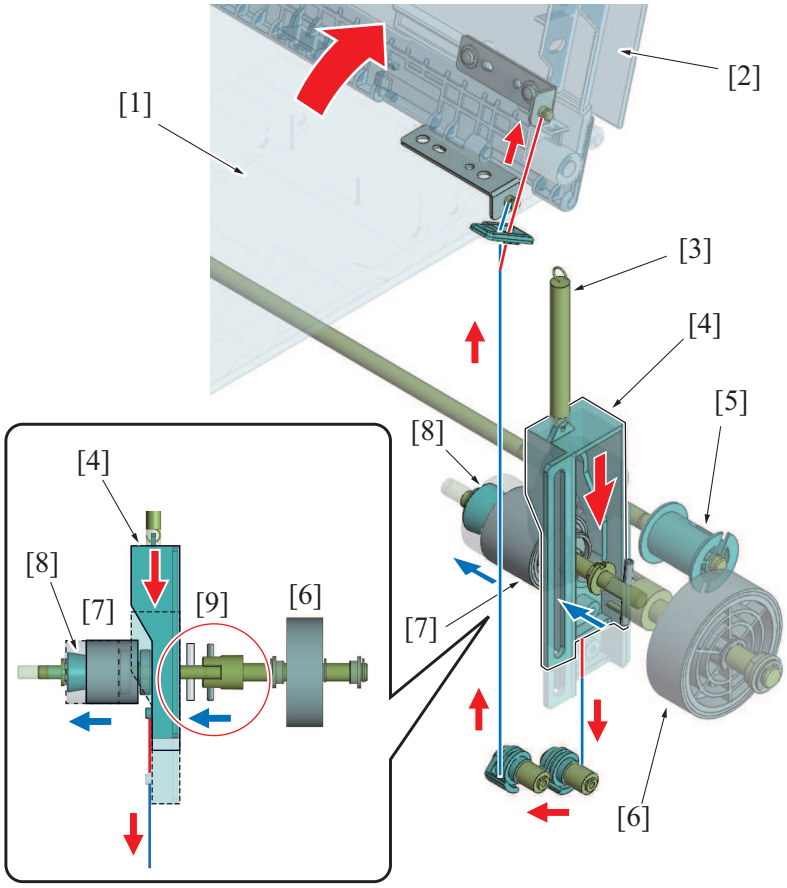


[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper tray

3.2.2 Paper tray lift-up drive release mechanism

- The paper tray lift-up drive section is equipped with a drive release mechanism.
- Release the drive, the paper tray will come down.
- The contact of the pick-up roller on the paper is released when the paper tray comes down.

Rear view



[1]	LU door (close)	[2]	LU door (open)
[3]	Link release plate spring	[4]	Link release plate
[5]	Lift-up axis	[6]	Drive gear
[7]	Connecting gear	[8]	Spring
[9]	Coupling	-	-

(1) Drive release operation

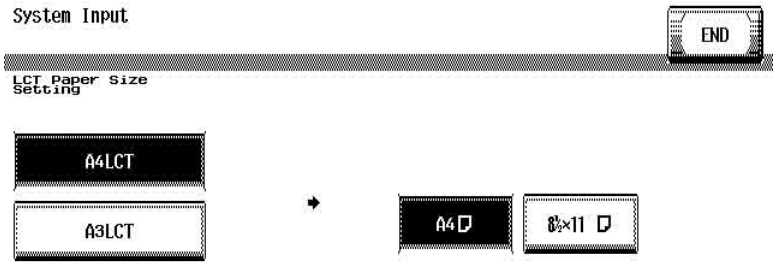
1. The wire linked to the LU door pulls down the link release plate when the door is opened.
2. The link release plate pushes out the link gear towards the front of the main body. It releases the link to the drive gear coupling.
3. Release the LU lift-up motor driving force, the weight of the load on the paper tray will pull out the wire wound in the lift-up axis. (The lift-up axis rotates on the opposite direction). This movement lowers the paper tray.

(2) Drive link operation

1. Close the LU door, the spring that is linked to the link release plate will pull up the link release plate.
2. The link gear pushes it back inside the machine through the spring force. It completes the link to the drive gear coupling.

3.2.3 Paper size detection

- The LCT does not have a function to detect the paper size.
- Specify the paper size in [Service Mode] -> [System 2] -> [LCT Paper Size Setting].

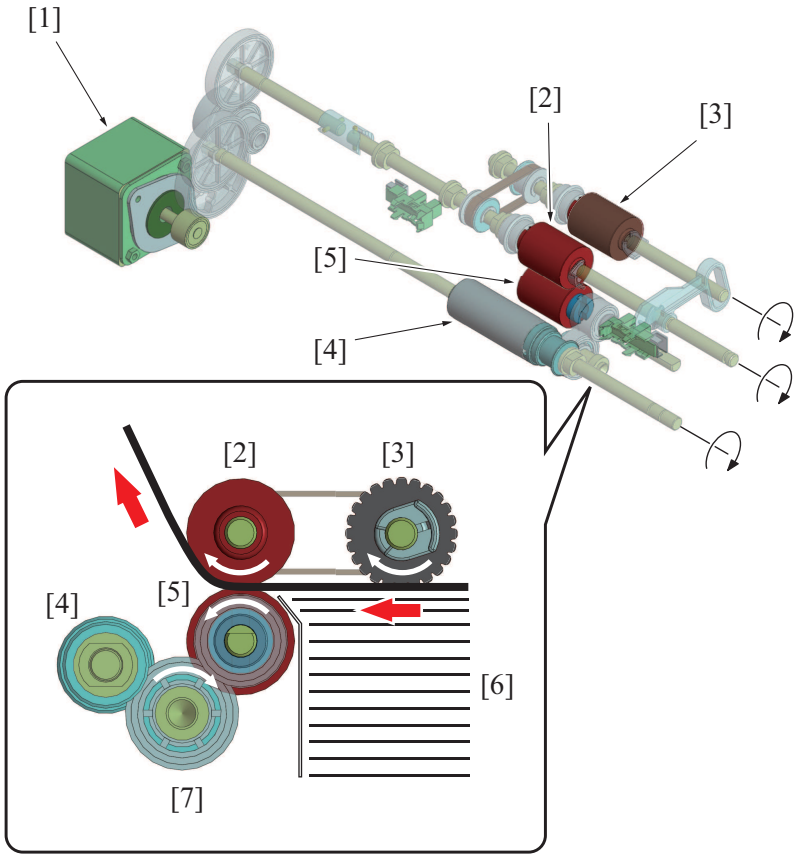


3.3 Paper feed/transport section

3.3.1 Paper feed and transport control

(1) Paper feed control

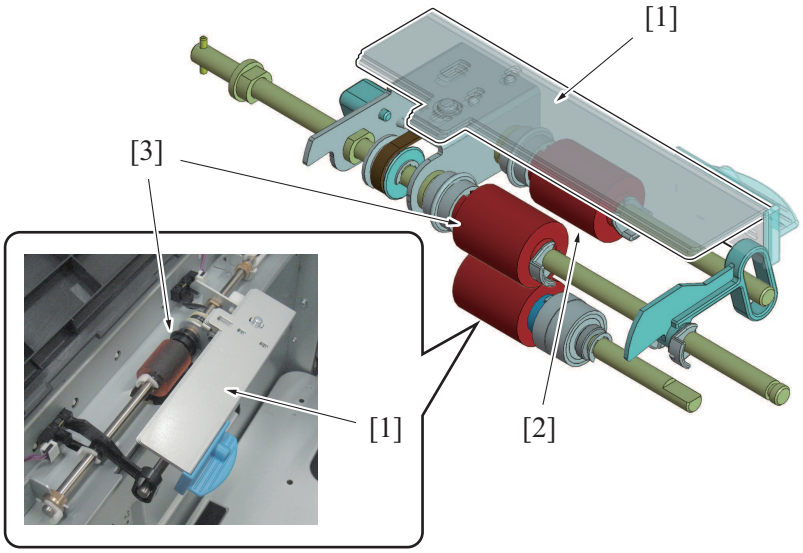
- The LU paper feed motor drives the pick-up roller, feed roller and separation roller to take up and feed a sheet of paper into the main body.
- The weight is applied to the pick-up roller holder. The pick-up roller is pressed against the paper by the weight.



[1]	LU paper feed motor (M2)	[2]	Feed roller
[3]	Pick-up roller	[4]	Torque limiter
[5]	Separation roller (Only one sheet of paper in the sample illustration so it is in driven rotation)	[6]	Paper
[7]	Drive relay gear	-	-

- Sheets of paper are separated and fed individually into the machine by the feed roller and separation roller.
- A torque limiter is connected to the separation roller which controls the driving force of the LU paper feed motor.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.

- If multiple sheets of paper are fed between the separation roller and feed roller, the limit torque gets greater than the frictional force of the paper. Thus, the separation roller rotates reversely. The lower sheets of paper which are in contact with the separation roller are pushed back to the paper tray and separated.

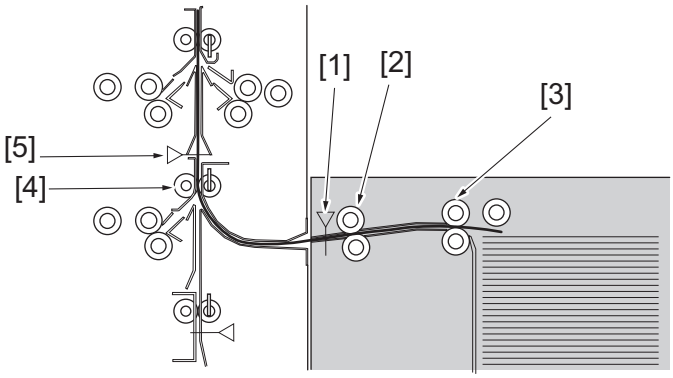


[1]	Weight	[2]	Pick-up roller
[3]	Feed roller	-	-

(2) Paper transport control

- The transport roller is driven following the rotation of the LU transport motor to transport paper to the paper feed section of the main body.
- In consecutive print, when the interval between the preceding and following sheets is below the specified value, the LCT transport rollers temporarily stop to ensure a predetermined interval.
- The paper transport speed is faster than the system speed.

Layout of sensors and rollers

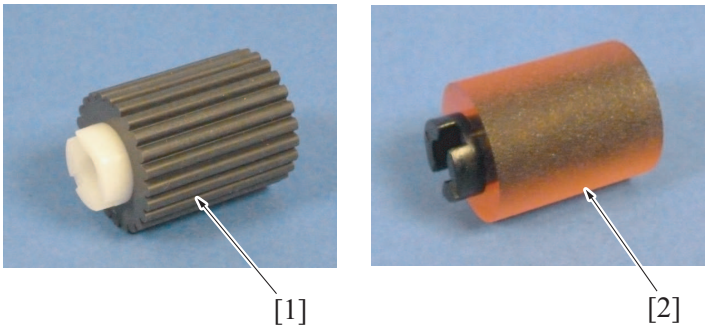


[1]	LU paper feed sensor (PS3)	[2]	Transport roller
[3]	Feed roller	[4]	Tray 2 vertical transport roller
[5]	Tray 2 vertical transport sensor	-	-

(3) Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts.
  NOTE
  - **These three rollers must be replaced with new ones at the same time.**
- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the [LCT Parts] counter must be reset from [Service Mode] -> [Counter] -> [Life].
- The number of times the paper feed unit has been subjected to paper feed operations can be checked with the “LCT Parts” counter of the Service Mode.

Feed roller/Pick-up roller/Separation roller

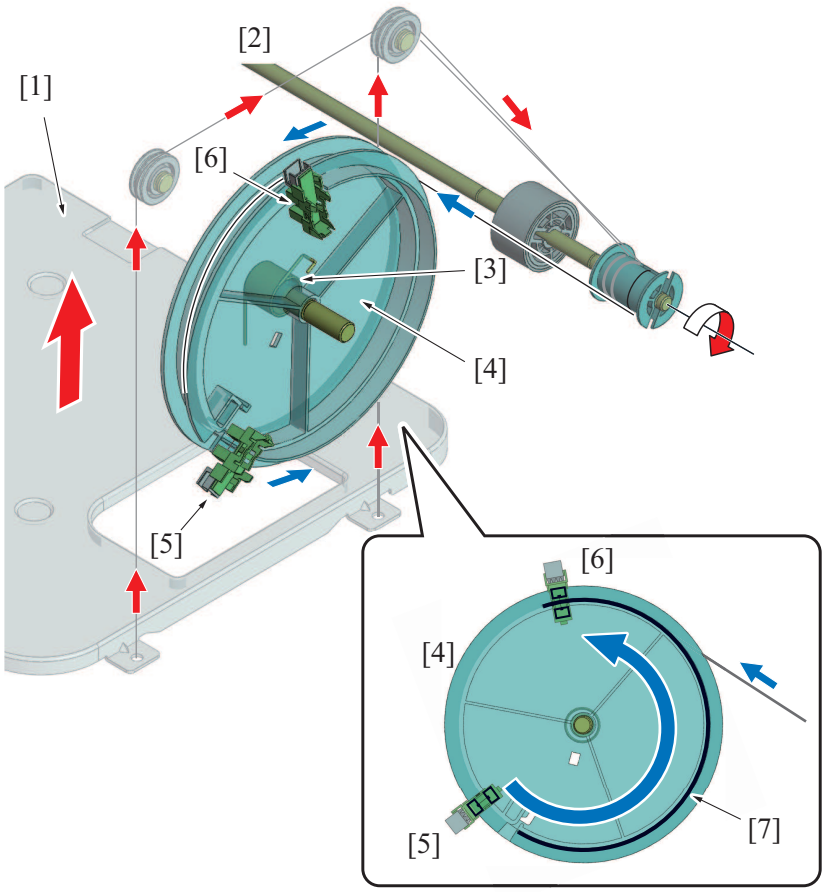


[1]	Pick-up roller	[2]	Feed roller/Separation roller

3.3.2 Remaining paper level detection

- The paper tray is equipped with a mechanism which detects the amount of remaining paper.
- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

Rear view



[1]	Paper lift-up plate	[2]	Lift-up axis
[3]	Spring	[4]	Remaining paper detection plate
[5]	LU near empty sensor/2 (PS6)	[6]	LU near empty sensor/1 (PS5)
[7]	Sensor blocking plate	-	-

(1) Remaining paper detection operation

1. If paper on the paper tray is consumed, the lift-up axis is rotated and the paper tray is lifted up.
2. The wire in the lift-up axis which is connected to the remaining paper detection plate is wound reversely against the paper tray wire. If the lift-up axis is rotated in the lift direction of the paper tray, the wire that is connected to the remaining paper detection plate is pulled out from the lift-up axis.
3. A spring is attached to the rotation axis of the remaining paper detection plate. Rotational force is applied in the direction of winding of the wire into the remaining paper detection plate. The remaining paper detection plate rotates for an amount that the wire is pulled out, and winds up the wire.
4. The remaining paper detection plate is equipped with a blocking plate. The position of the blocking plate changes depending on the rotation amount of the remaining paper detection plate.
5. The amount of remaining paper is determined depending on the detection status of LU near empty sensors/1 and 2.

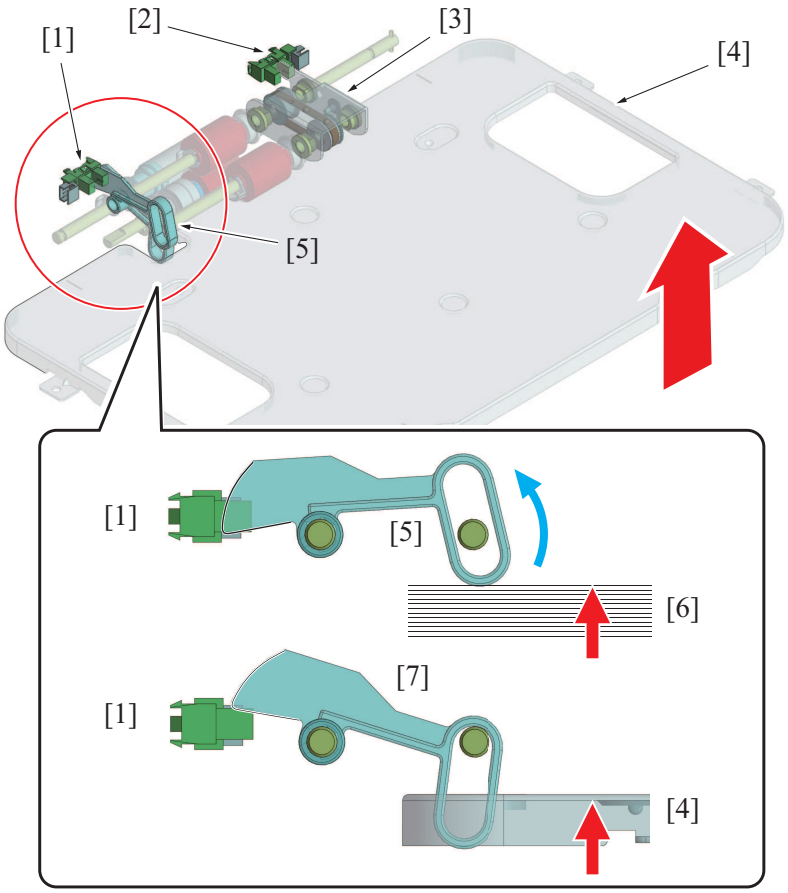
(2) Criteria for determining the amount of remaining paper

Condition	Paper full	Paper near full	Paper present	Paper near-empty
Remaining paper level *	3000 to 2000 sheets	2000 to 1000 sheets	1000 to 51 sheets	50 to 1 sheets *2
LU near empty sensor/1 (PS5)	Blocked	Blocked	Unblocked	Unblocked
LU near empty sensor/2 (PS6)	Unblocked	Blocked	Blocked	Unblocked

- *1: Reference value when plain paper is placed
- *2: The accuracy of the determination of the near empty number is 50 sheets ± 20 sheets.

3.3.3 Paper empty detection

- The LU paper empty sensor detects the paper empty states.
- The absence of paper is determined when the paper tray is raised up to the upper limit position. (The LU upper limit sensor detects the upper limit position of the paper tray.)



[1]	LU paper empty sensor (PS4)	[2]	LU upper limit sensor (PS2)
[3]	Pick-up roller holder	[4]	Paper tray
[5]	Actuator (paper present)	[6]	Paper
[7]	Actuator (paper tray empty)	-	-

(1) When paper is left on the paper tray

1. If the paper tray is raised up to the upper limit position, the actuator is pushed up by the top of the paper.
2. If the actuator blocks the LU paper empty sensor, the sensor determines that paper is remaining on the tray.

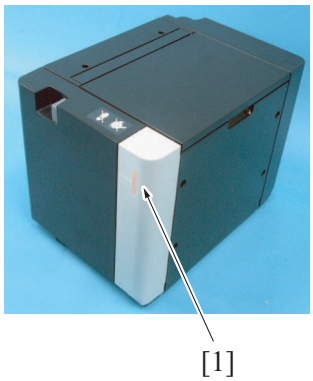
(2) When no paper is left on the paper tray

1. Since the paper tray has a notch, the actuator does not move from the paper empty position even if the paper tray is raised up to the upper limit position.
2. If the LU paper empty sensor remains unblocked, it determines that there is no paper left (paper empty).
3. When paper empty is detected, the paper tray stays at the upper limit position.

3.3.4 Remaining paper display

- An LED on the front right side displays the amount of remaining paper.
- The following table shows display statuses.

Paper feed port status	Empty	Near empty	Not empty, Not near empty, Currently on lift-up
LED status	Lit	Blinking	Unlit

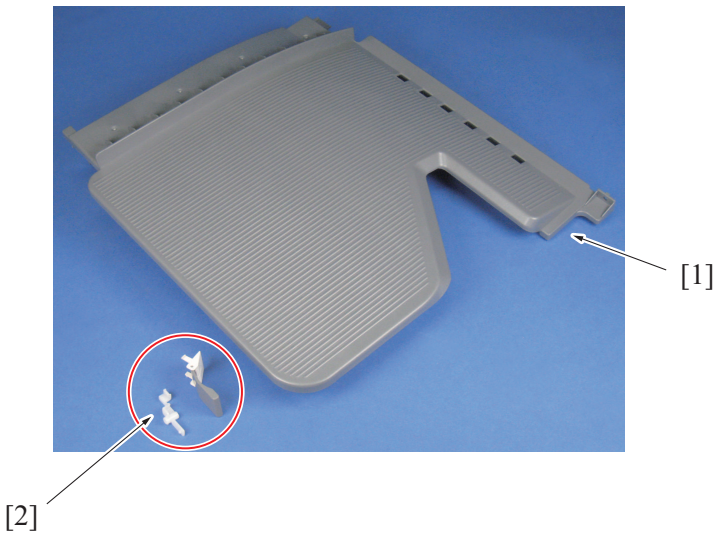


[1]	Tray LED display	-	-

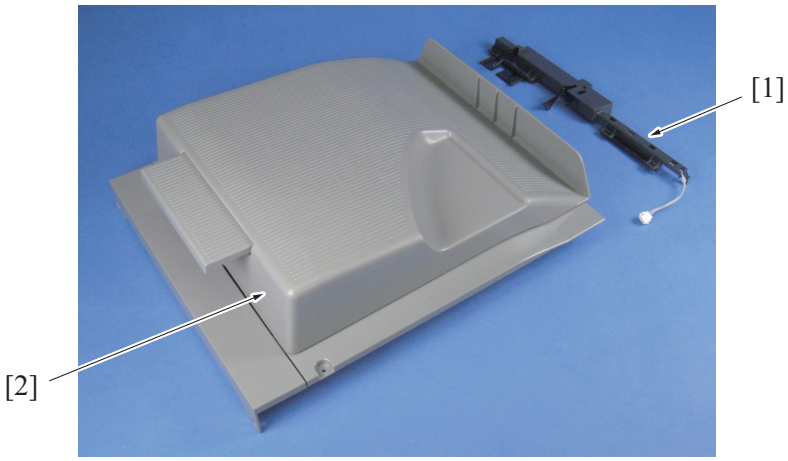
PH THEORY OF OPERATION JS-506

1. OVERVIEW OF THE SEPARATOR

- The separator JS-506 is installed to the MFP to enable both "exit tray 1" and "exit tray 2" to use. So you can exchange the paper exit port.
- Tray 2 has a shift mechanism and a sorting function can be added.



[1]	Exit tray 1	[2]	Exit tray 1 paper stopper



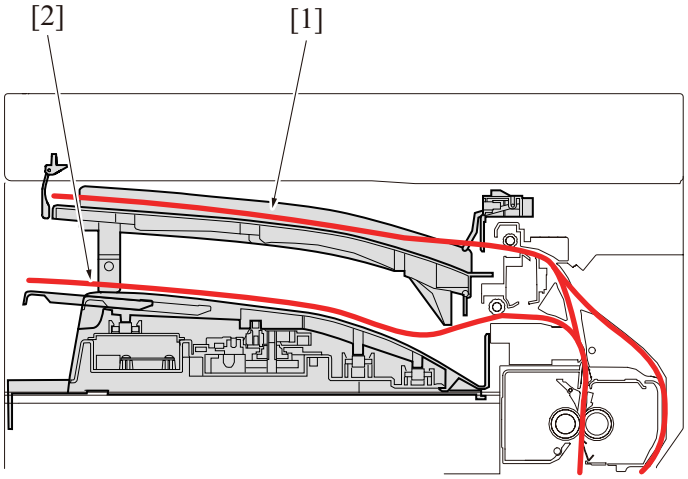
[1]	Sensor assy	[2]	Exit tray 2

NOTE

- **Do not use the "Exit tray 1 paper stopper" supplied with JS-506 in bizhub C368/C308/C258.**

2. PAPER PATH

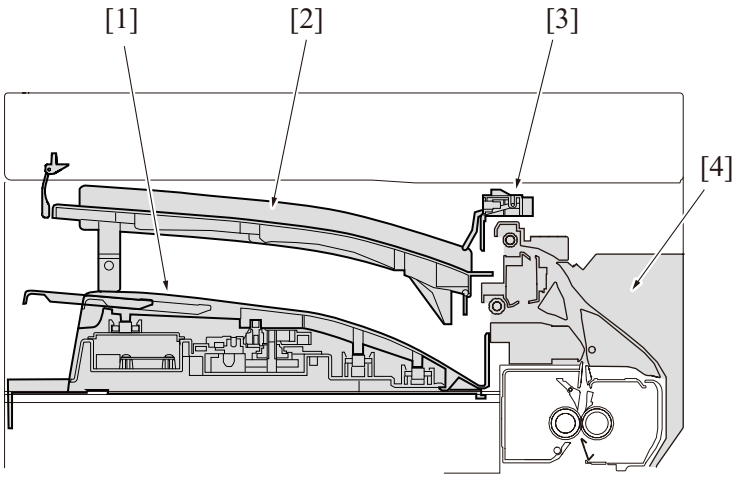
2.1 Paper feed to the exit tray



[1]	Paper feed to the exit tray 1	[2]	Paper feed to the exit tray 2

3. CONFIGURATION

3.1 Section configuration

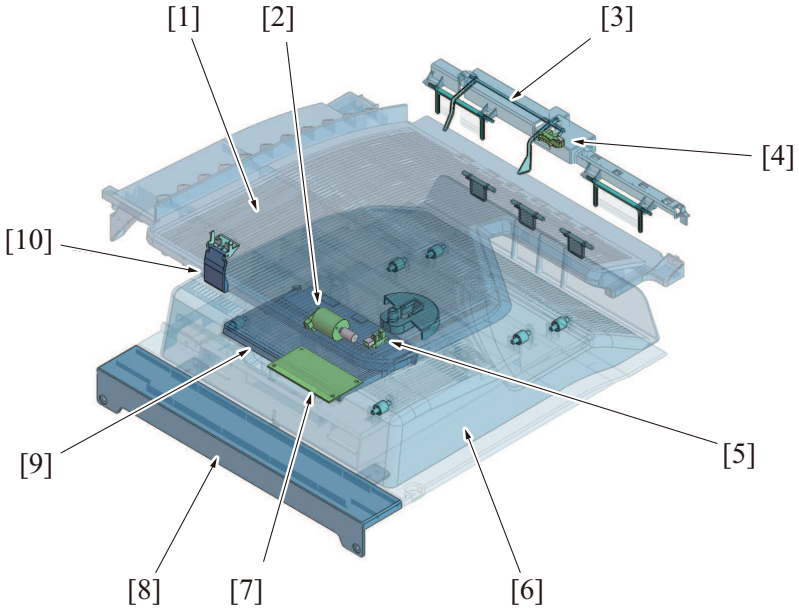


[1]	Exit tray 2	[2]	Exit tray 1
[3]	Sensor assy (exit tray 1)	[4]	Paper exit/reverse section at the main body *

- *: The unit shape and part configuration are changed when the JS-506 is installed to the MFP.

3.2 Main electrical part configuration

- JS-506 has the exit tray 1 (upper) and the exit tray 2 (lower).
- JS-506 does not have the paper transport function and only has the shift function.



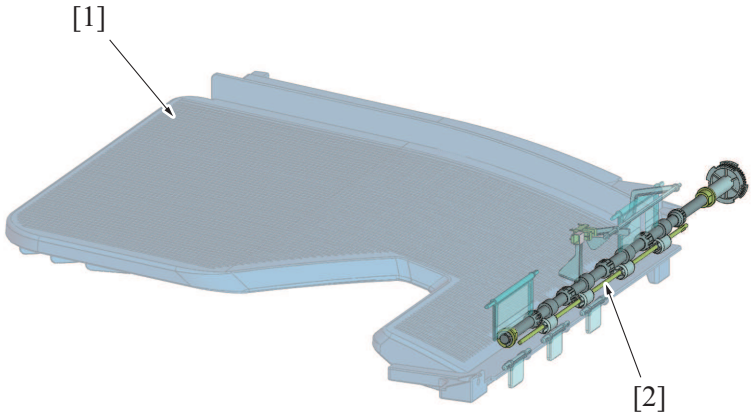
[1]	Exit tray 1 (upper)	[2]	Tray shift motor (M1)
[3]	Exit tray 1 full detection lever	[4]	Exit tray1 full sensor (PS2)
[5]	Tray shift home sensor (PS1)	[6]	Exit tray 2 (lower)
[7]	JS control board (JSCB)	[8]	Separator cover
[9]	Extension tray	[10]	Exit tray 1 paper stopper *

- *: Not used in bizhub C368/C308/C258.

4. DRIVE

4.1 Paper transport drive mechanism for exit tray 1

- A reverse roller on the MFP main unit side transports paper to the exit tray 1.
  NOTE
  - **Refer to MFP paper exit/reverse unit for details on the drive mechanism for the reverse roller.**

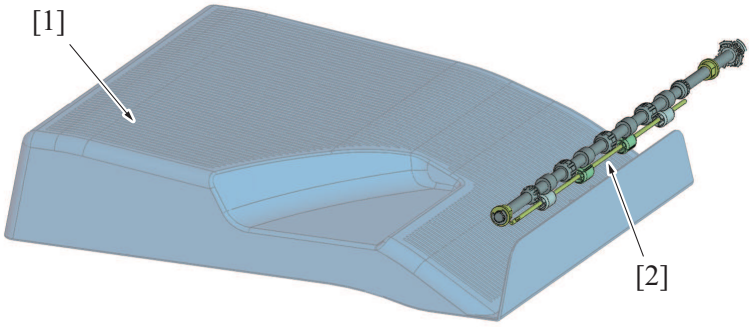


[1]	Exit tray 1	[2]	Switchback roller (MFP main body; paper exit/reverse section) *

- *: The roller shape, roller configuration, and drive method is changed when the JS-506 is installed to the MFP.

4.2 Paper transport drive mechanism for exit tray 2

- A reverse roller on the MFP side transports paper to the exit tray 2.
  NOTE
  - **Refer to MFP paper exit/reverse unit for details on the drive mechanism for the exit roller.**

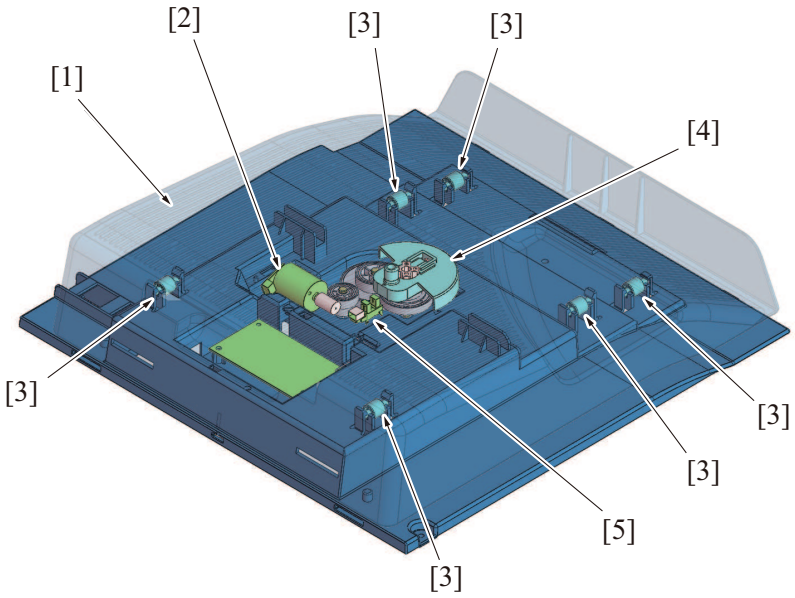


[1]	Exit tray 2	[2]	Exit roller (MFP main body; paper exit/reverse section) *

- *: The roller shape, roller configuration, and drive method is changed when the JS-506 is installed to the MFP.

4.3 Exit tray 2 shift drive mechanism

- A shift tray motor conducts shift drive of the exit tray 2.



[1]	Exit tray 2	[2]	Tray shift motor (M1)
[3]	Exit tray support rolls (6 points)	[4]	Shift control actuator
[5]	Tray shift home sensor (PS1)	-	-

5. OPERATION

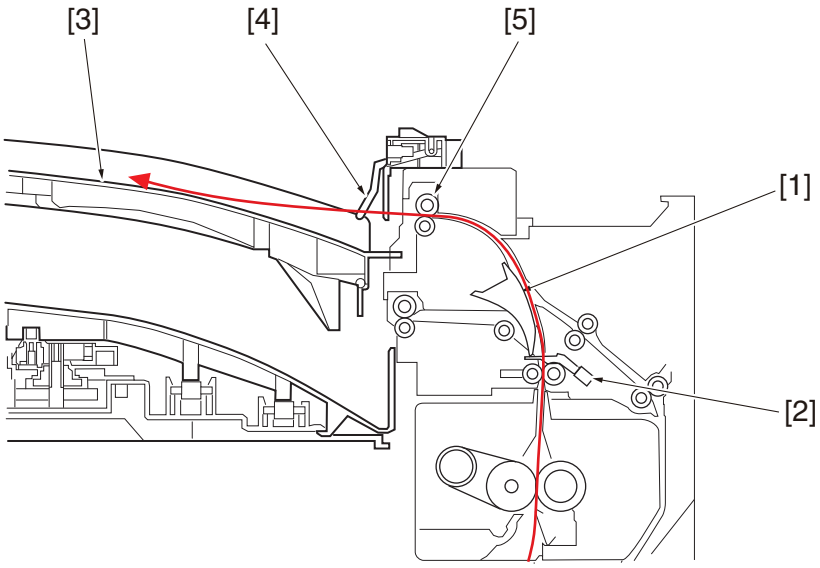
5.1 Exit tray 1

5.1.1 Paper transport

- The JS-506 exit tray 1 does not have a paper transport mechanism. Paper transport is performed by a reverse roller in the MFP.
- The paper exit/reverse switch gate is switched to the reverse roller side when the paper is transported to the reverse roller.
- The reverse roller stops after the predetermined period of time when the exit sensor on the main body detects the trailing edge of the last paper.

NOTE

- **The paper exit/reverse unit mechanism and control details are changed when the JS-506 is installed to the MFP.**



[1]	Paper exit/reverse switch gate (reverse roller side)	[2]	Paper exit sensor (main body: PS3)
[3]	Exit tray 1	[4]	Exit tray 1 full detection lever
[5]	Reverse roller (main body)	-	-

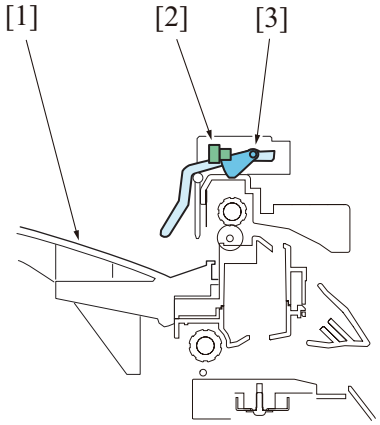
5.1.2 Paper full detection

- The exit tray 1 has the exit tray 1 full sensor which detects paper full.
  The sensor detects paper full with either 100 sheets of plain paper or stack height of 22.5 mm or less.

NOTE

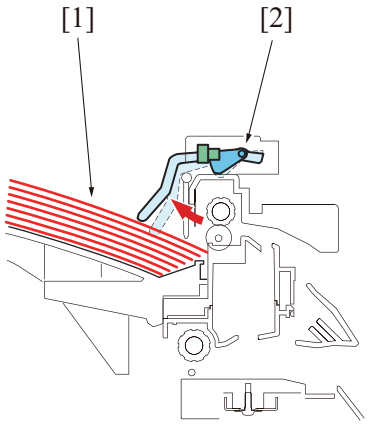
- **Paper may curl depending on the type of paper and the temperature and humidity of the room where the device is installed. The stacked sheets may be reduced depending on the amount of paper curl.**

(1) Paper not present



[1]	Exit tray 1	[2]	Exit tray1 full sensor (PS2)
[3]	Exit tray 1 full detection lever: unblocked	-	-

(2) Paper full



[1]	Paper	[2]	Exit tray 1 full detection lever: blocked

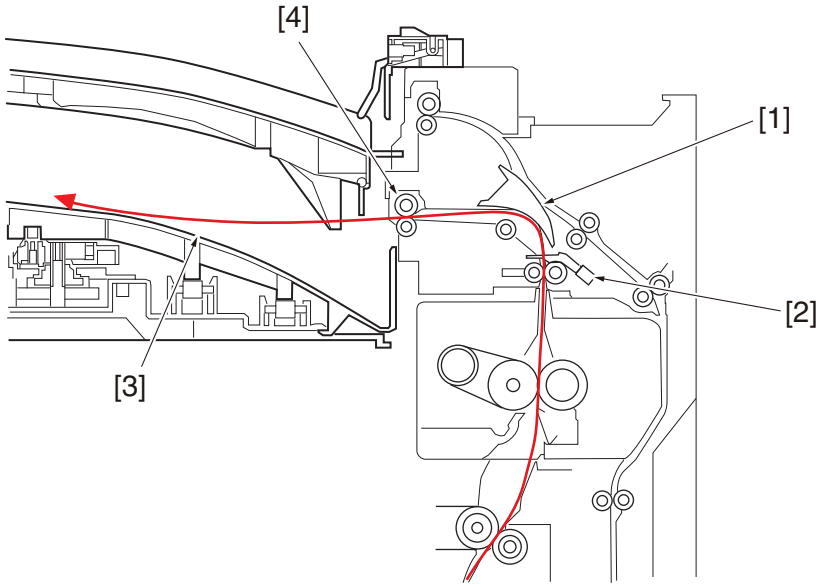
5.2 Exit tray 2

5.2.1 Paper transport

- The JS-506 exit tray 2 does not have a paper transport mechanism. Paper transport is performed by a paper exit roller in the MFP.
- The paper exit/reverse switching gate does not move, since it is in the default position (paper exit roller side).
- The paper exit roller stops after the predetermined period of time when the paper exit sensor on the main body detects the trailing edge of the last paper.

NOTE

- **The paper exit/reverse unit mechanism and control details are changed when the JS-506 is installed to the MFP.**

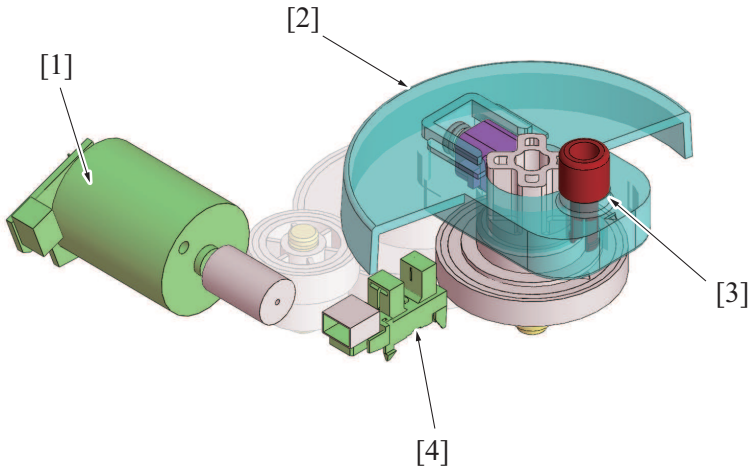


[1]	Paper exit/reverse switch gate (exit roller side)	[2]	Paper exit sensor (main body: PS3)
[3]	Exit tray 2	[4]	Exit roller

5.2.2 Paper shift mechanism

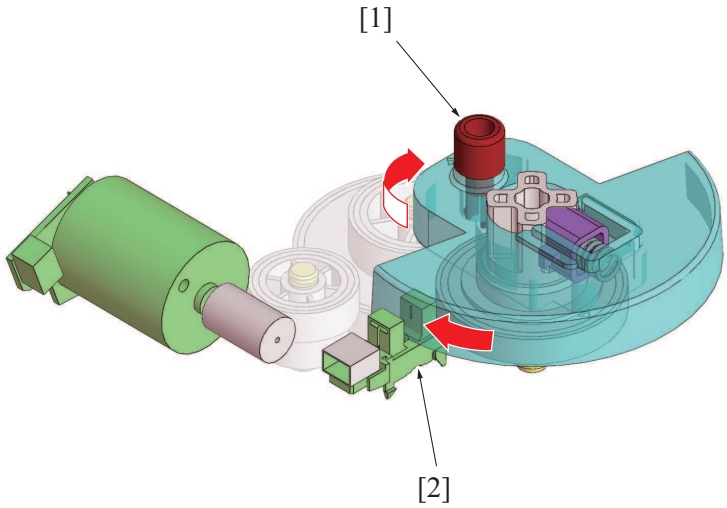
- Move paper alternately between the front side and the rear side of the exit tray 2 to sort paper.
- The shift mechanism operates when the "Shift output each job" is selected in default setting or when the offset function is selected on the control panel.
- The tray shift home sensor detects the home position for the exit tray 2.
- The exit tray 2 shifts to the home position when the power is on and the printing starts for the 1st job.
- Repeatedly move the paper between the rear side and front side of the exit tray 2 to sort paper in the exit tray 2.

(1) Exit tray 2: Home position



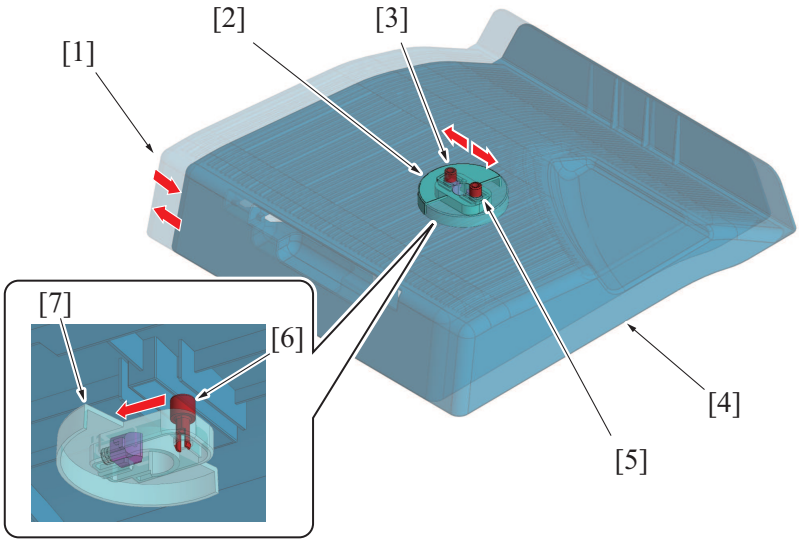
[1]	Tray shift motor (M1)	[2]	Shift control actuator
[3]	Tray shift projection: Home position (front side of the exit tray 2)	[4]	Tray shift home sensor (PS1): unblocked

(2) Exit tray 2: shift position



[1]	Tray shift projection: Shift position (rear side of the exit tray 2)	[2]	Tray shift home sensor (PS1): blocked

(3) Outline of exit tray 2 shift operation



[1]	Exit tray 2: shift position (rear side)	[2]	Shift control actuator
[3]	Tray shift projection: shift position	[4]	Exit tray 2: home position (front side)

[5]	Tray shift projection: Home position	[6]	Tray shift projection: Home position (exit tray 2, bottom view)
[7]	Shift control actuator (exit tray 2, bottom view)	-	-

5.2.3 Paper full detection

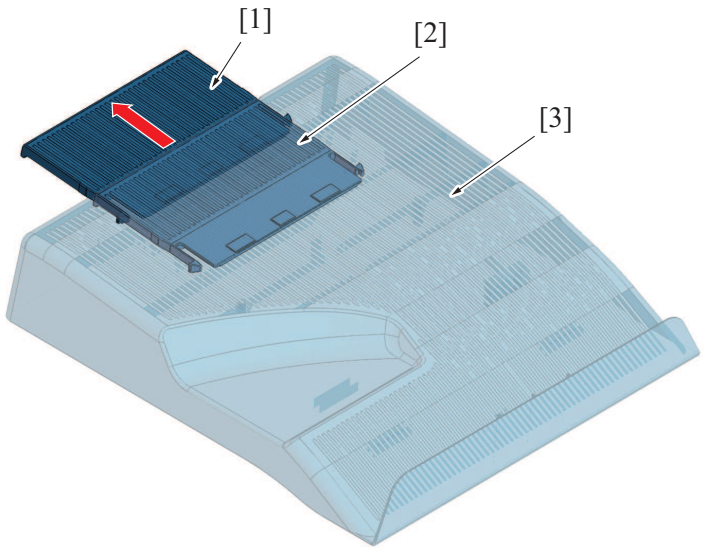
- The exit tray 2 does not have a paper full detection mechanism. If the exited paper exceeds the maximum number of stacked sheets, it may cause paper to spill out from the exit tray or jam.
  The maximum number of sheets stacked for the exit tray 2 is 150 sheets for plain paper.

NOTE

- **Pay attention not to allow paper in the exit tray to exceed the maximum number of stacked sheets when a large number of sheets is printed continuously.**
- **Paper may curl depending on the type of paper and the temperature and humidity of the room where the device is installed. The stacked sheets may be reduced depending on the amount of paper curl.**

(1) Extension tray

- An extension tray is installed to the rear end of the exit tray 2 to accommodate large-sized paper (A3, ledger paper, and so on).
- Make sure to pull out the extension tray before the printing of large-sized paper.



[1]	Extension tray: Used for printing large-sized paper	[2]	Extension tray: Used for printing small-sized paper
[3]	Exit tray 2	-	-

PI THEORY OF OPERATION FS-533/PK-519

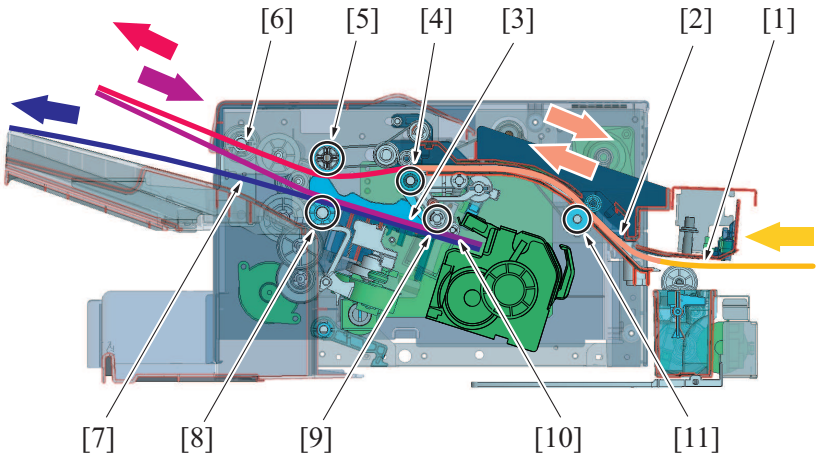
1. FINISHER OUTLINE

- Install the staple finisher FS-533 to the MFP to enable the following functions. "Sort function, Sort offset function", "Group function, Group offset function", "Staple function" and "Sort staple function" can be added.
- The "Punch function" can be added by installing the optional function (Punch Kit PK-519).

Option	Summary of the additional functions
PK-519	Punch function

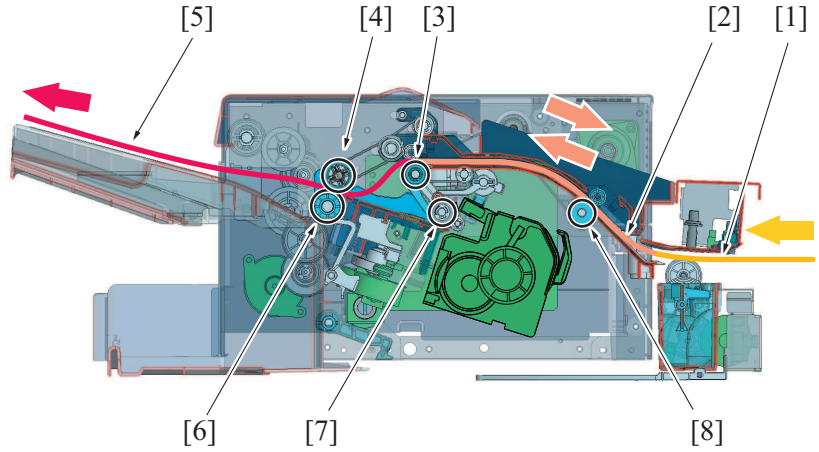
2. PAPER PATH

2.1 Sort offset mode/Group offset mode/Staple mode/Punch mode



[1]	Paper transport/Paper punching (punch mode)	[2]	Paper transport/Skew correction (punch mode)
[3]	Paper alignment (Sort/Sort offset mode, Group/Group offset mode, Staple mode)	[4]	Receiving roller
[5]	Paper exit roller/upper	[6]	Paper transport
[7]	Paper batch exit (Sort/Sort offset mode, Group/Group offset mode, Staple mode)	[8]	Paper exit roller/lower
[9]	Alignment roller	[10]	Staple (staple mode)
[11]	Paper conveyance roller	-	-

2.2 Non sort mode/Non group mode/Non staple mode/Sort mode/Group mode/Punch mode



[1]	Paper transport/Paper punching (punch mode)	[2]	Paper transport/Skew correction (punch mode)
[3]	Receiving roller	[4]	Paper exit roller/upper
[5]	Paper exit	[6]	Paper exit roller/lower
[7]	Alignment roller	[8]	Paper conveyance roller

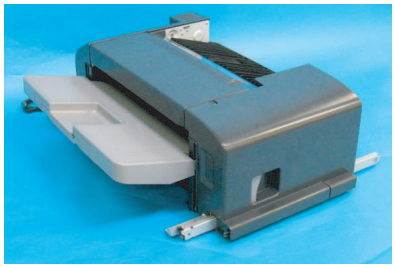
3. CONFIGURATION

3.1 Section configuration

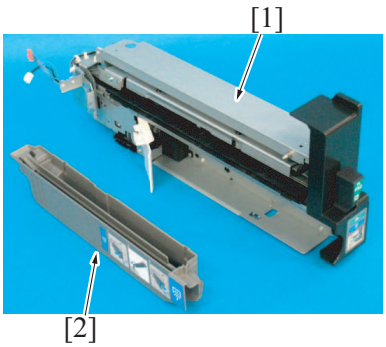
- The staple finisher FS-533 has the finisher main unit that is installed on the paper exit section of the MFP.
- Slide out the finisher from the MFP for maintenance and other operations. Slide out the finisher main unit to access the finisher operation section and the punch kit. (only when the optional punch kit kit is installed)
- The staple finisher has the sort/group mechanism and the staple mechanism as standard. The optional punch kit PK-519 can be installed between the right face of the finisher and the paper exit section of the main body.

3.1.1 Exterior view

Finisher FS-533



Punch kit PK-519

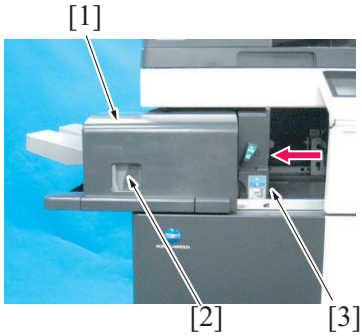


[1]	Punch kit PK-519	[2]	Punch dust box

FS-533 + PK-519 installation diagram (installation example)

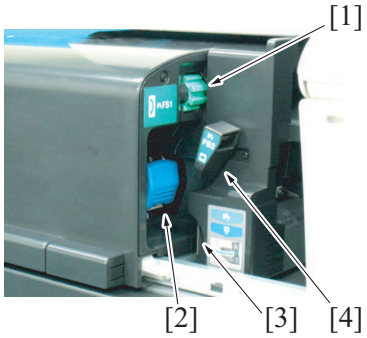


FS-533 + PK-519 sliding state (installation example)



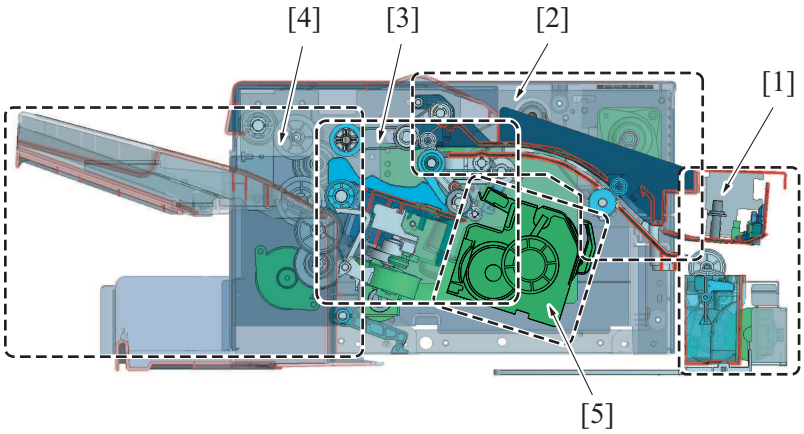
[1]	Finisher FS-533	[2]	Finisher release lever
[3]	Punch kit PK-519	-	-

FS 533 + PK-519 operation section



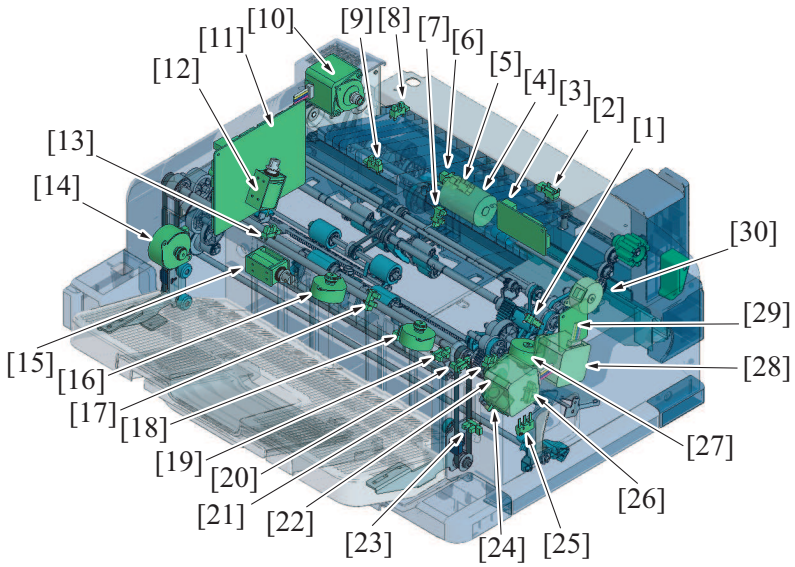
[1]	Jam removal dial	[2]	Staple cartridge
[3]	Punch dust box	[4]	Punch unit release lever

3.1.2 Section configuration



[1]	Punch section (only when punch kit PK-519 is installed)	[2]	Transport section
[3]	Alignment section	[4]	Receiving section
[5]	Staple section	-	-

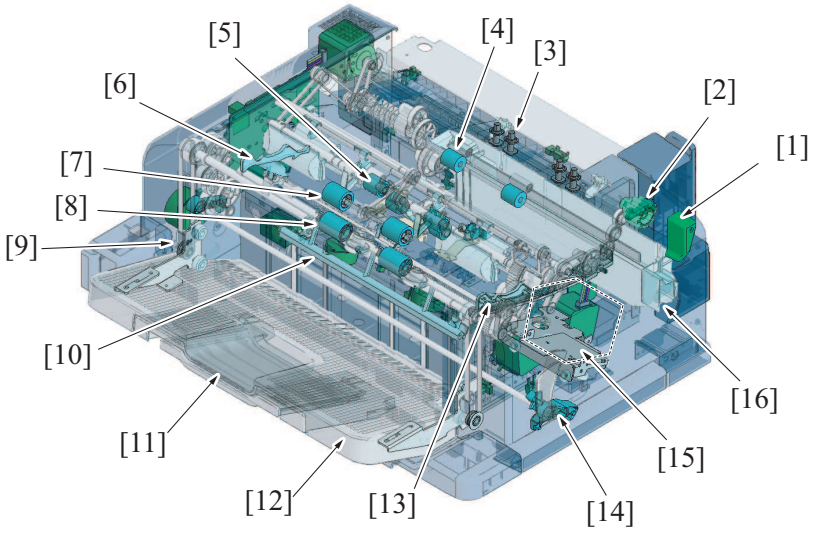
3.2 Electrical part configuration



[1]	Pick up roller position sensor (PS105)	[2]	Paper feed sensor (PS201): Punch kit
[3]	PK control board (PKCB): Punch kit	[4]	Punch motor (M201): Punch kit
[5]	Punch dust full sensor (PS205): Punch kit	[6]	Punch motor sensor (PS202): Punch kit
[7]	Paper feed sensor (PS101)	[8]	Puncher home sensor (PS204): Punch kit
[9]	Puncher drive cam sensor (PS203): Punch kit	[10]	Paper conveyance motor (M101)
[11]	FS control board (FSCB)	[12]	Batch solenoid (SD102)

[13]	Alignment plate home sensor/R (PS109)	[14]	Tray lift up motor (M109)
[15]	Paper surface detect solenoid (SD101)	[16]	Alignment motor/R (M106)
[17]	Paper surface detect sensor/1 (PS102)	[18]	Alignment motor/F (M105)
[19]	Paper weight lever sensor (PS103)	[20]	Paper surface detect sensor/2 (PS104)
[21]	Alignment plate home sensor/F (PS108)	[22]	Exit roller lift up motor (M104)
[23]	Paper exit tray home sensor (PS107)	[24]	Paper exit roller solenoid (SD103)
[25]	Finisher lock switch (SW1)	[26]	Stapler home sensor (PS110)
[27]	Stapler movement motor (M107)	[28]	Paper exit motor (M102)
[29]	Stapler relay board (STREYB)	[30]	Alignment roller motor (M103)

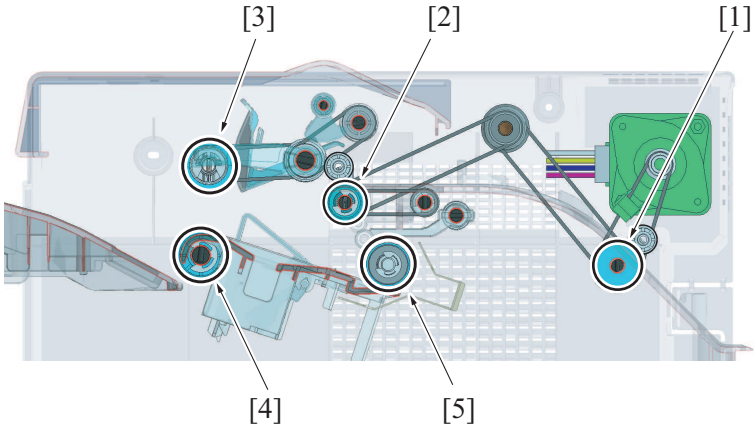
3.3 Main mechanical part configuration



[1]	Punch kit release lever: Punch kit	[2]	Jam removal dial
[3]	Puncher *: Punch kit	[4]	Paper conveyance roller
[5]	Receiving roller	[6]	Alignment plate/Rr
[7]	Paper exit roller/upper	[8]	Paper exit roller/lower
[9]	Tray lifter	[10]	Paper surface detect lever
[11]	Sub tray	[12]	Paper exit tray
[13]	Alignment plate/Fr	[14]	Finisher release lever
[15]	Stapler	[16]	Punch dust box

- *: The number of punchers differs depending on the type of the punch kit. For details, see “ PI.5.1.1 Punch kit type”.

3.4 Main roller configuration



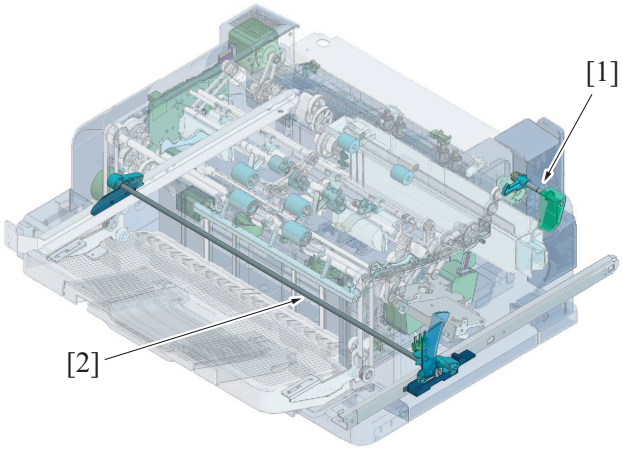
[1]	Paper conveyance roller	[2]	Receiving roller
[3]	Paper exit roller/upper	[4]	Paper exit roller/lower
[5]	Alignment roller	-	-

4. UNIT OPEN/CLOSE SECTION

4.1 Unit lock mechanism

- The finisher (FS-533) and punch kit (PK-519) are provided in the each unit lock mechanism.

Overall view

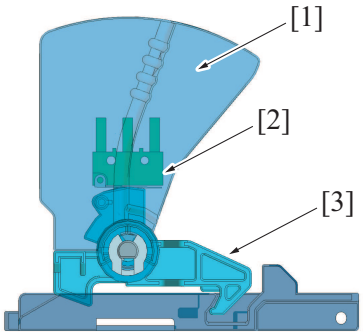


[1]	Punch unit lock mechanism	[2]	Finisher unit lock mechanism

4.1.1 Finisher unit lock mechanism

- Releasing the finisher release lever at the front side of the finisher releases the locking claws at the front and rear sides of the finisher from the finisher slide rail. The finisher and the MFP will be disconnected to enable the finisher to slide to the left.
- When the finisher is slid, the finisher lock switch turns off to detect that the finisher is opened.
- When the finisher is detected to be opened, the warning message will be displayed on the screen to inform that the unit is open. Following jobs will then be prohibited.
- Closing the finisher releases the warning screen to releases the job prohibition.

Front view



[1]	Finisher release lever	[2]	Finisher lock switch (SW1)
[3]	Lock claw	-	-

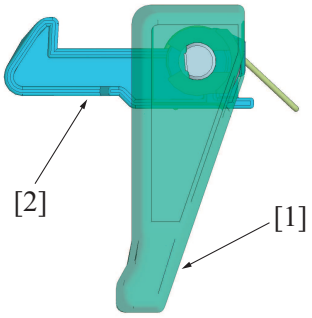
4.1.2 Punch unit lock mechanism (PK-519)

- When the finisher is opened, the release lever for the punch unit will be exposed. (only when the optional punch kit PK-519 is installed)
- The punch unit does not have a mechanism to detect open/close of the unit.

NOTE

- **The function to detect open/close of the punch unit is not installed since the finisher needs to be opened to open the punch unit.**

Front view

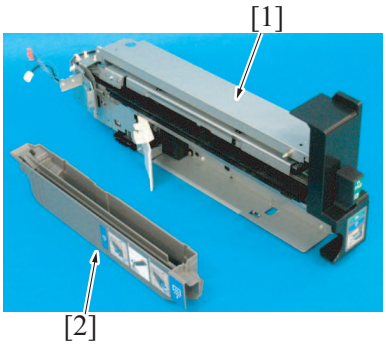


[1]	Punch unit release lever	[2]	Lock claw

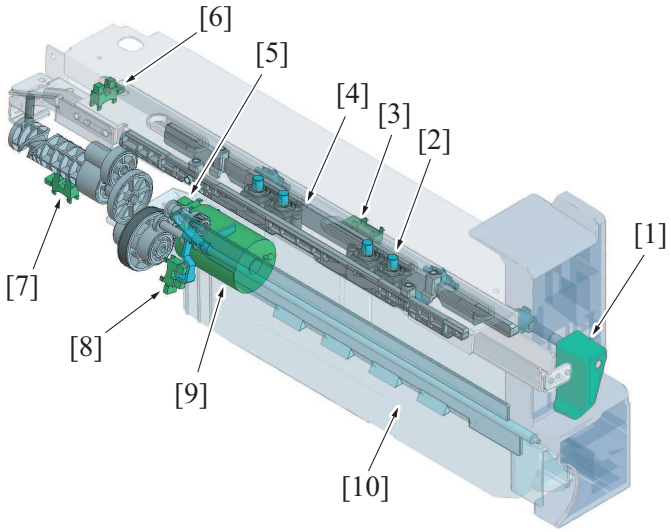
5. PUNCH SECTION (PK-519)

5.1 Configuration

- The punch function can be added to the finishing mode by installing the optional punch kit PK-519 to the finisher FS-533.
- At the punch section, the paper that is transported from the MFP paper exit section is punched when it is fed into the finisher.
- When punching the holes on the paper, the paper transported to the transport section will be switch backed to the punch section to correct the paper skew before punching the holes. Punching is conducted paper by paper. The punched paper will be transported from the punch section to the transport section.
- When the number of punch holes is not commanded at "Finishing", the paper will be transported to inside the finisher without switchback of the paper and punching.
- 2 hole/3 hole punch kits as well as 2 hole/4 hole punch kits have mechanisms to switch the number of punch holes.
  NOTE
  - **2 holes punch kit and 4 holes punch kit do not have the function to switch the number of punch holes.**
  - **"Finishing" cannot be selected using a different punch kit. (Example: Three holes punch mode cannot be selected when the 4 holes punch kit is installed.)**
- Punch dust generated by punching is received in the punch dust box.



[1]	Punch unit	[2]	Punch dust box

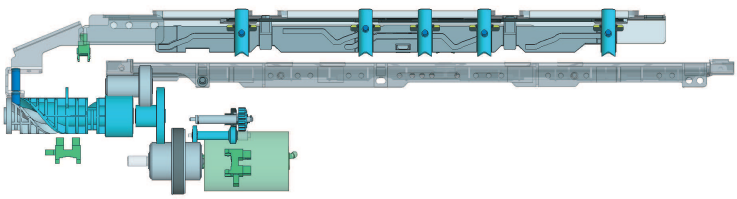


[1]	Punch unit release lever	[2]	Puncher *1
[3]	Paper feed sensor (PS201)	[4]	Puncher frame *2
[5]	Punch motor sensor (PS202)	[6]	Puncher home sensor (PS204)
[7]	Puncher drive cam sensor (PS203)	[8]	Punch dust full sensor (PS205)
[9]	Punch motor (M201)	[10]	Punch dust box

- *1: The number of the puncher is varied depending on the type of punch kit.
- *2: The shape of the puncher frame is varied depending on the type of punch kit.

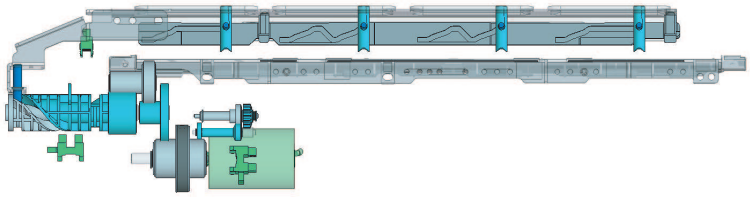
5.1.1 Punch kit type

2 holes/3 holes kit (Selectable the hole number)



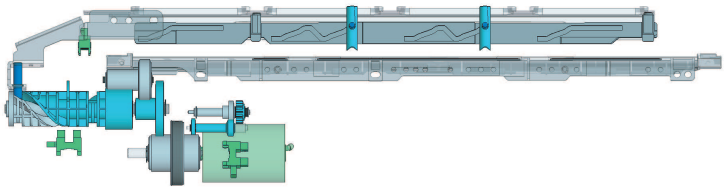
- **Attachable marketing area: Europe, US, Others 1-5**

2 holes/4 holes kit (Selectable the hole number)



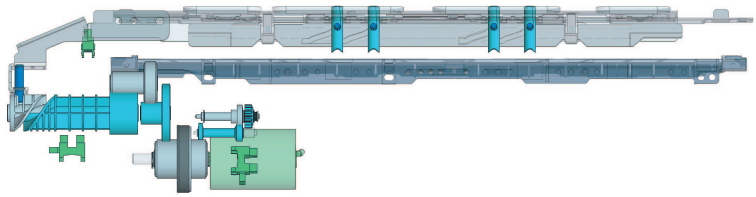
- **Attachable marketing area: Europe, US, Others 1-5**

2 holes punch kit



- **Attachable marketing area: Japan**

4 holes punch kit

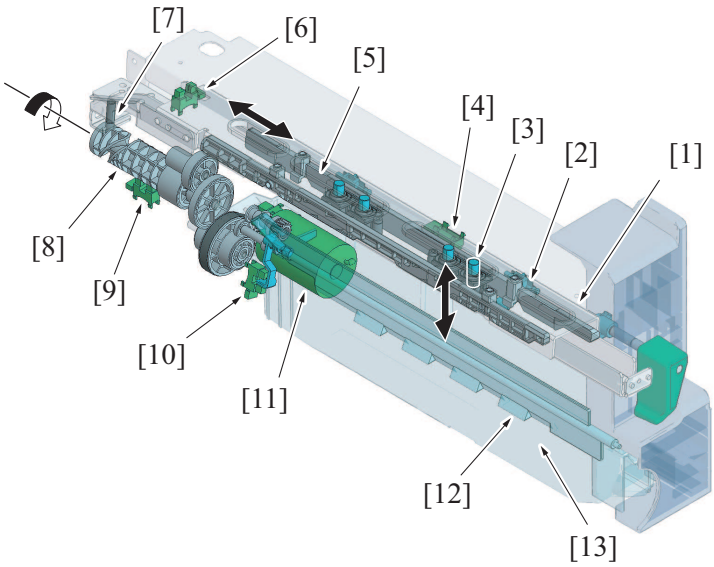


- **Attachable marketing area: Europe**

5.2 Drive

- The drive source for the punch section is a punch motor. It drives the puncher and the punch dust agitating blade.
- The puncher is driven via the puncher drive cam.
- The punch dust agitating blade is driven via the agitating blade drive connecting lever. The agitating blade drive connecting lever has the function to detect punch dust full.

Overall view



[1]	Puncher frame *1	[2]	Registration guide
[3]	Puncher *2	[4]	Paper feed sensor (PS201)
[5]	Slide came	[6]	Puncher home sensor (PS204)
[7]	Cam slide shaft	[8]	Puncher drive cam
[9]	Puncher drive cam sensor (PS203)	[10]	Punch dust full sensor (PS205)
[11]	Punch motor (M201)	[12]	Punch dust agitating blade
[13]	Punch dust box	-	-

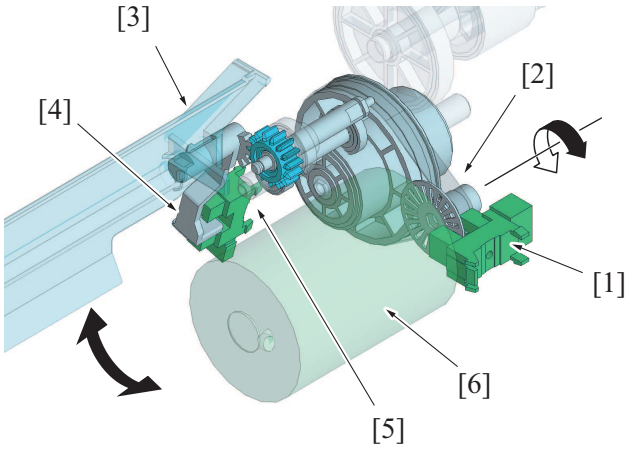
- *1: The shape of the puncher frame is varied depending on the type of punch kit.
- *2: The number of the puncher is varied depending on the type of punch kit.

NOTE

- **The illustration explains with an example for "2 holes/4 holes kit".**

- **The slide cam has a guide. With the shape of the guide and the difference shift value of the puncher frame, only the specified puncher can be moved down .**
- **The "2 holes kit" and the "4 holes kit" do not have the punch hole switching function.**

Enlarged view of the punch dust agitating blade drive section



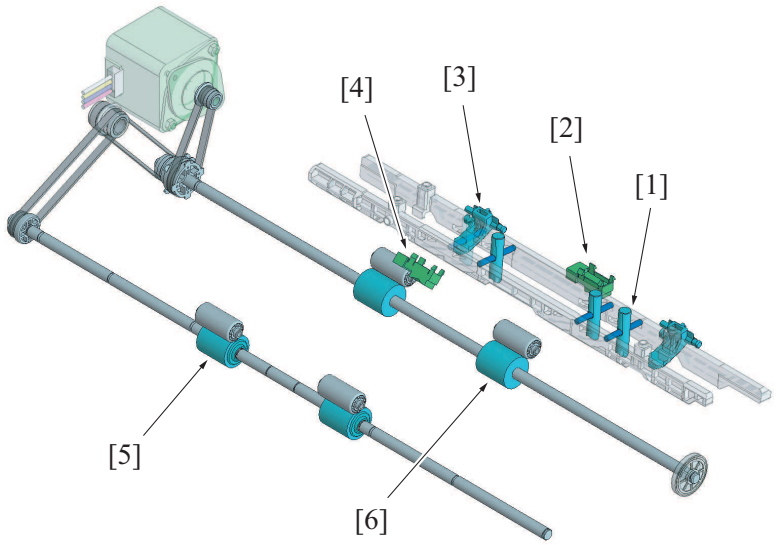
[1]	Punch motor sensor (PS202)	[2]	Encoder
[3]	Punch dust agitating blade	[4]	Punch dust agitating blade drive connecting lever
[5]	Punch dust full sensor (PS205)	[6]	Punch motor (M201)

5.3 Operation

5.3.1 Skew correction mechanism

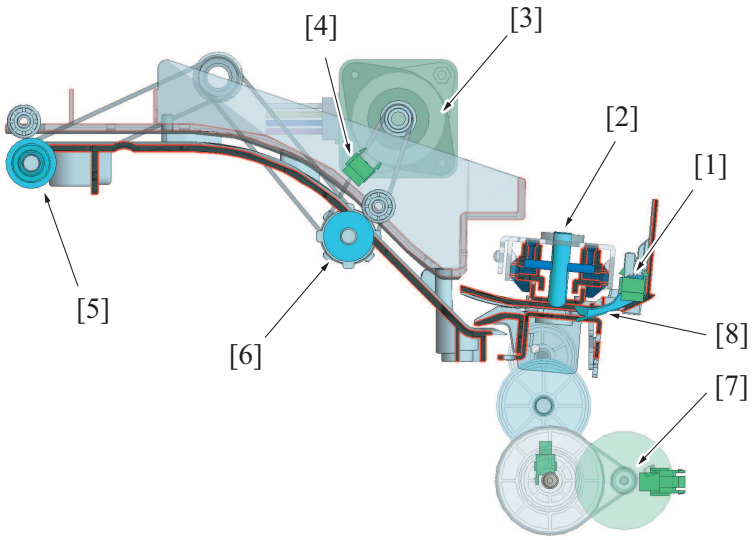
- When in punch mode, the paper is transported to the paper transport section of the finisher once and switchbacked to make the paper contact the registration guide. This process will correct the skew at the rear edge of the paper (tilt) to enable punching at the proper position.

Overall view



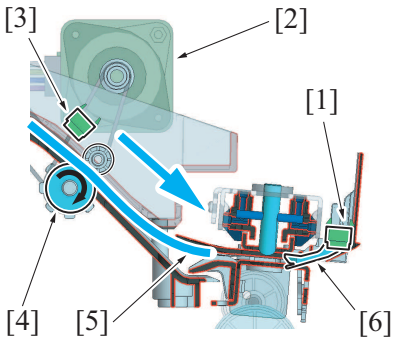
[1]	Puncher	[2]	Paper feed sensor (PS201)
[3]	Registration guide	[4]	Paper feed sensor (PS101)
[5]	Receiving roller	[6]	Paper conveyance roller

Front view

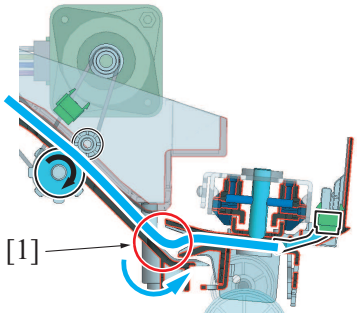


[1]	Paper feed sensor (PS201)	[2]	Puncher
[3]	Paper conveyance motor (M101)	[4]	Paper feed sensor (PS101)
[5]	Receiving roller	[6]	Paper conveyance roller
[7]	Punch motor (M201)	[8]	Registration guide

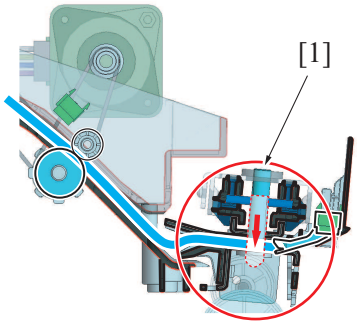
(1) Skew correction process



1. The paper conveyance motor [2] of the finisher will rotate forward, and the paper conveyance roller [4] will rotate forward. The paper will be transported for the punch section to the transport section.
2. The paper feed sensor [3] (PS101) will detect the front edge of the paper, and the paper feed sensor [1] (PS201) will detect the rear edge of the paper.
3. When the paper feed sensor [1] (PS201) detects the rear edge of the paper and the specified period of time has passed, the transportation motor will rotate in reverse direction.
4. The paper will be switchbacked [5] once, and the rear edge of the paper contacts the registration guide [6].



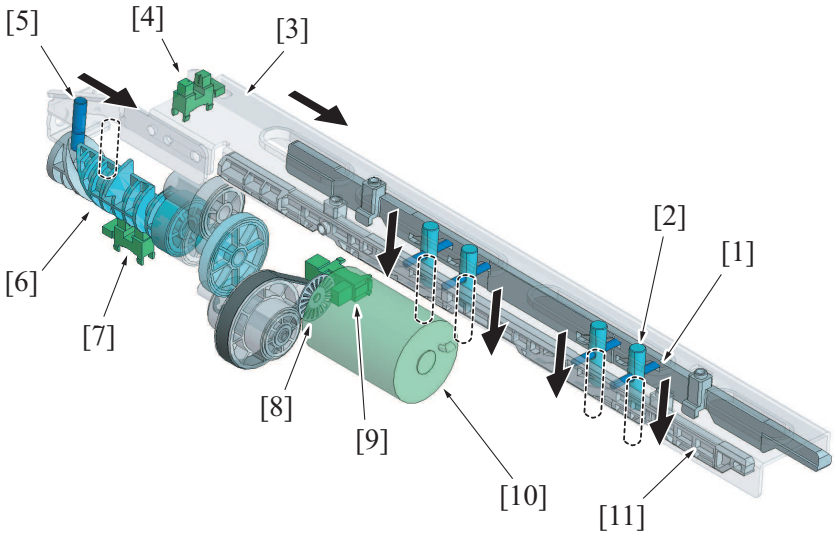
5. When the paper is switchbacked, the paper forms a loop [1] between the paper conveyance roller and the registration guide, and corrects the paper skew (tilt).
6. The paper feed sensor at the punch section detects the rear edge of the paper, and the paper conveyance motor stops after the specified period of time to stop the switchback of the paper.



7. The switchback of the paper stops, and the puncher [1] moves down to punch the hole on the paper.
8. After punching the hole, the conveyor motor rotates forward to transport the paper into the finisher.

5.3.2 Punch control

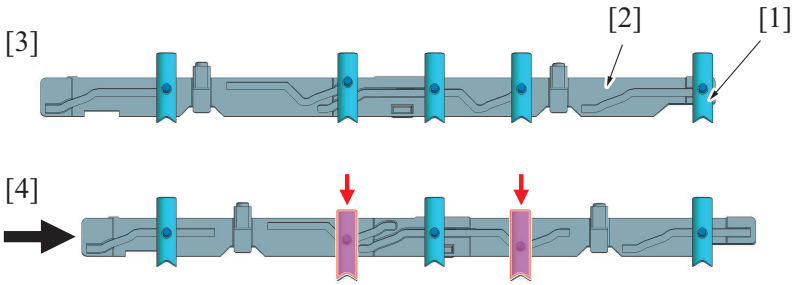
- The holes are punched on the paper by switchback of the paper into the punch unit and by moving the puncher up/down by the punch motor.



[1]	Puncher slide pin	[2]	Puncher
[3]	Puncher frame	[4]	Puncher home sensor (PS204)
[5]	Puncher frame slide pin	[6]	Puncher drive cam
[7]	Puncher drive cam sensor (PS203)	[8]	Encoder
[9]	Punch motor sensor (PS202)	[10]	Punch motor (M201)
[11]	Slide cam	-	-

(1) Paper punching process

1. The puncher frame waits at the home position to make the puncher waits at the upper position.
   Position of the puncher frame is detected by the puncher home sensor.
2. Paper feed sensor at the punch section detects the rear edge of the paper, and stops switchback of the paper after a specified period of time.
3. The punch motor rotates forward to rotate the puncher drive cam forward. The punch frame then will move towards the front side. When the puncher frame moves towards the front side, the slide cam moves the puncher down by its cam shape.
   The rotation value of the punch motor is detected by the number of times light shielding plate blocks the punch encoder sensor. The value the slide cam moves back and forth differs depending on the value the punch motor rotates. When the value the slide cam moves changes, the value of the puncher moves in vertical direction also changes. The position of the puncher is judged in process. The rotating position of the puncher driven cam is detected by the puncher drive cam sensor.
   Example: Figure for 2 holes punching operation for 2 hoes/3 holes kit



   [1] Puncher
   [2] Slide cam
   [3] Puncher frame (home position)
   [4] Puncher frame (Punching position)
4. When the puncher frame moves to the front side, the slide cam pushes the puncher down to punch the holes at the rear edge of the paper. (The holes are punched paper by paper.) The holes are judged to be punched according to the rotation value of the punch motor.
   NOTE
   - **The number of the punchers (number of the holes) differs depending on the type of the punch kit .**
   - **The number of the punch holes is switched according to the shift value of the puncher frame for the 2 holes/3 holes kit as well as 2 holes/4 holes kit.**
     For details, see " PI.5.3.3 Punch holes switch control".
5. When the holes are punched, the punch motor rotates in reverse direction, and the puncher drive cam rotates in reverse direction. This process leads the puncher frame to return to the home position to move the puncher up.

5.3.3 Punch holes switch control

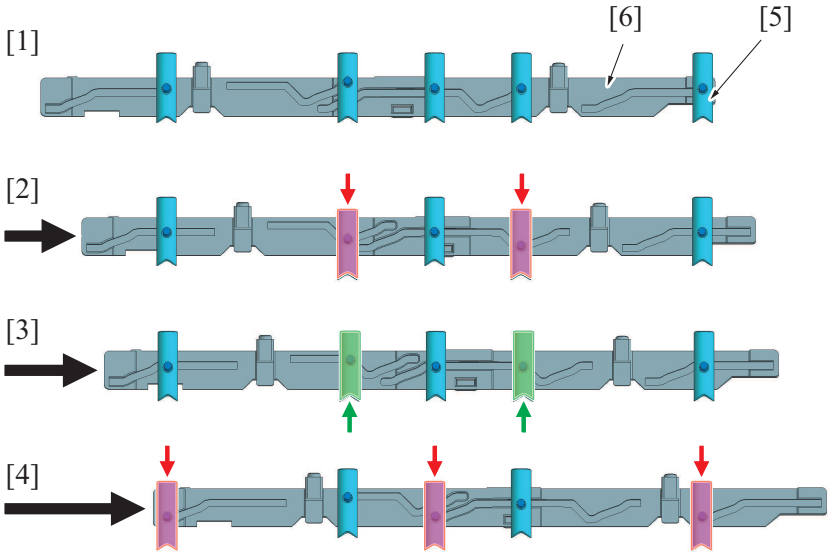
- 2 holes/3 holes punch kit as well as 2 holes/4 holes punch kit have mechanisms to switch the number of punch holes.

(1) Number of punch holes switch mechanism

- The slide cam has a guide. With the shape of the guide and the difference shift value of the puncher frame, only the specified puncher can be moved down.

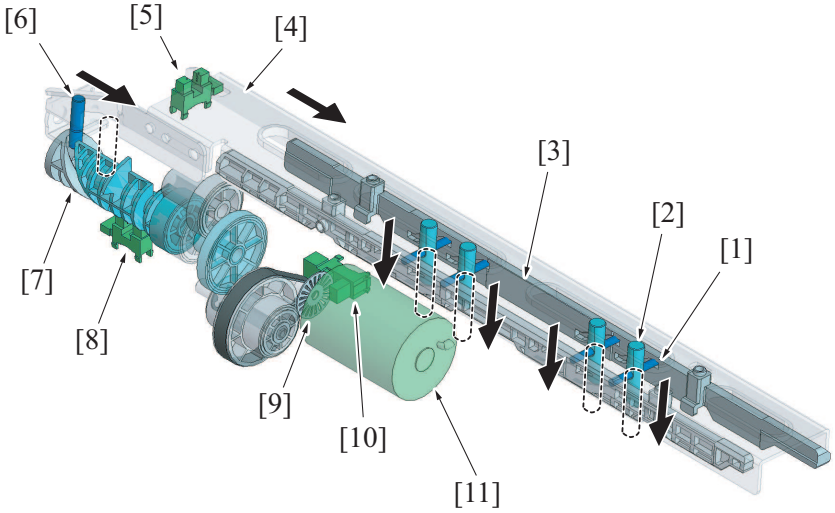
- The shift value of the puncher frame is judged by the rotation value of the punch motor. The rotation value of the punch motor is detected by the punch motor sensor.
- The number of the punch holes can be selected when selecting the punch mode.
  NOTE
  - **When the second type of punch hole (3 holes on the illustration) is selected, the puncher frame shifts to the waiting position 2 from the waiting position 1 (home position) and waits prior to the job.**
- The number of the puncher and the guide shape of the slide cam differ depending on the type of the punch kit.

Example: cross section of the 2 holes/3 holes kit



[1]	Waiting position 1 (home position)	[2]	Puncher frame shift value: Small (Example: 2 holes punching position)
[3]	Waiting position 2 (puncher frame shift value: medium)	[4]	Puncher frame shift value: Large (Example: 3 holes punching position)
[5]	Puncher	[6]	Slide cam

(2) Puncher frame position detect mechanism



[1]	Puncher slide pin	[2]	Puncher
[3]	Slide cam	[4]	Puncher frame
[5]	Puncher home sensor (PS204)	[6]	Puncher frame slide pin
[7]	Puncher drive cam	[8]	Puncher drive cam sensor (PS203)
[9]	Encoder	[10]	Punch motor sensor (PS202)
[11]	Punch motor (M201)	-	-

(a) Puncher position detect control

- The waiting position 1 (home position) and the waiting position 2 are judged by the assembly of the detecting result of the punch home sensor and the puncher drive cam sensor.

Puncher retract position	Puncher home sensor	Puncher drive cam sensor
Waiting position 1 (puncher retract position)	Blocked	1st light block

Puncher retract position	Puncher home sensor	Puncher drive cam sensor
Punching position 1 (Example: 2 holes punching)	Unblocked	1st light unblock
Waiting position 2 (puncher retract position)		2nd light block
Punching position 2 (Example: 3 holes punching)		2nd light unblock

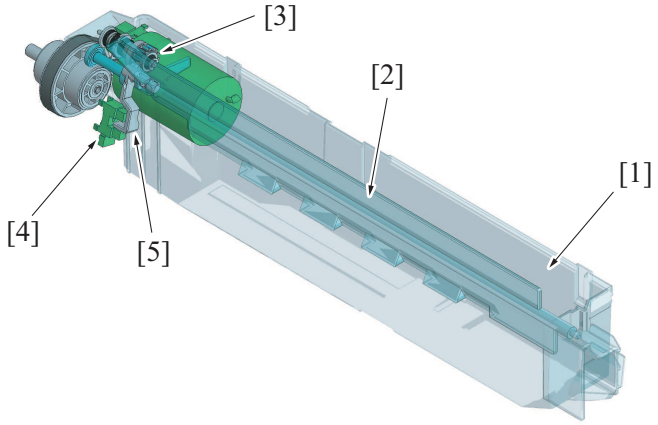
(b) Puncher shift value detect mechanism

- The shift value of the puncher frame is judged by the number of times the encoder blocks the punch motor sensor.

5.3.4 Punch dust full detection control

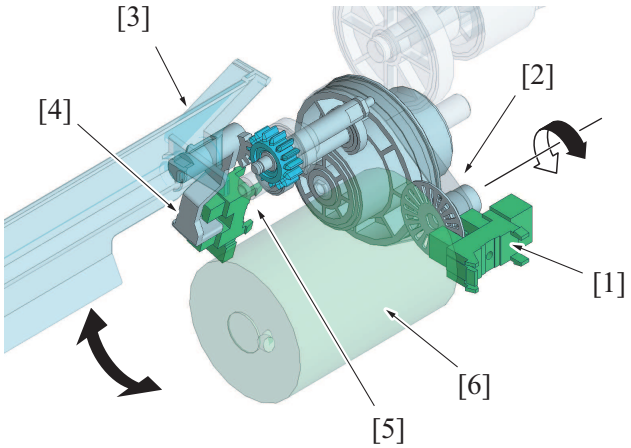
- The punch dust box section has the punch dust full sensor. When the job is commanded with the punch dust exceeding the specified value, a warning message for the punch dust full is displayed on the control panel.
- The punch dust full sensor detects the volume of the punch dust with the position of the agitating blade drive connecting lever.
- The punch dust full sensor also detects if the punch dust box is installed.
  If the punch dust box is not installed when the punch job is commanded, the warning message for the punch dust full will be displayed on the control panel.
- Even when the "punch dust full" is detected, printing is not prohibited. All the jobs except punch holes will be conducted until finished.

Punch dust box over view



[1]	Punch dust box	[2]	Punch dust agitating blade
[3]	Drive transmission gear	[4]	Punch dust full sensor (PS205)
[5]	Agitating blade drive connecting lever	-	-

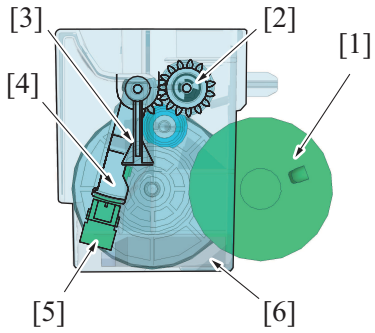
Enlarged view of the punch dust full sensor section



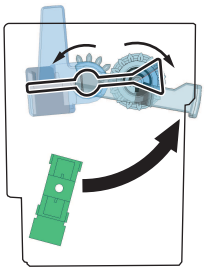
[1]	Punch motor sensor (PS202)	[2]	Encoder
[3]	Punch dust agitating blade	[4]	Agitating blade drive connecting lever
[5]	Punch dust full sensor (PS205)	[6]	Punch motor (M201)

(1) Punch dust full detect operation

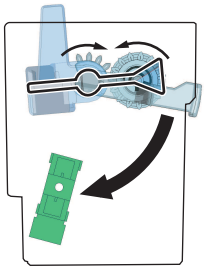
Punch dust agitating blade home position view



1. The drive transmission gear [2] stops while the punch motor [1] is in halt. The punch dust agitating blade [3] in the punch dust box [6] waits at the home position.
   The agitating blade drive connecting lever [4] blocks the punch dust full sensor [5] during that time.

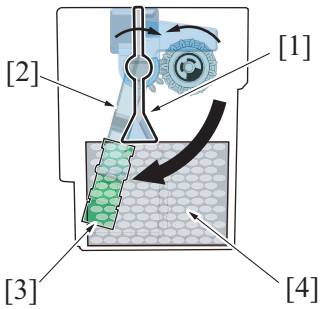


2. When the punch motor rotates forward, the drive transmission gear rotates forward.
3. When the drive transmission gear rotates forward, the agitating blade drive connecting lever rotates forward to rotate the punch dust agitating blade forward.
   When the agitating blade drive connecting lever rotates, the punch dust full sensor is unblocked.
   The punch dust agitating blade rotates to level the punch dust in the punch dust box.



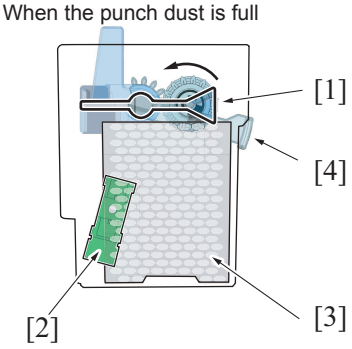
4. When punch holes is complete, the punch motor starts rotating in reverse direction.
   When the punch motor rotates in reverse direction, the punch dust agitating blade rotates in reverse direction and tries to return to the home position.

In normal operation



5. **NOTE**
   In normal operation:
   - **The agitating blade drive connecting lever [2] and the punch dust agitating blade [1] return to their home positions by the punch motor's drive force.**
   - **By the agitating blade drive connecting lever [2] returning to the home position, the punch dust full sensor [3] will block the light. The punch dust [4] then is judged not to be full.**

When the punch dust is full



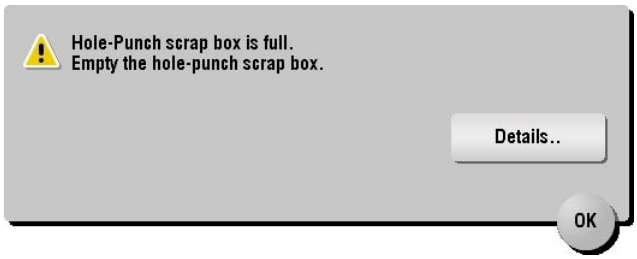
6. **NOTE**
   When the punch dust is full:
   - **The agitating blade drive connecting lever [4] and the punch dust agitating blade [1] cannot return to their home positions due to the punch dust [3].**
   - **The torque limiter function is installed to the drive transmission gear to prohibit transmission of the drive force more than specified.**
   - **With the agitating blade drive connecting lever [4] not returning to the home position, the punch dust full sensor [2] keeps being unblocked. When the transmission status is detected for 10 consecutive times during punching operation, the punch dust [3] is detected to be full to display the message warning that the punch dust is at full level.**

(a) Punch dust full message

Example of display



Example of display



NOTE

- **The display details and message text are changed when the JS-506 is installed to the MFP.**

(2) Punch dust box not installed detect control

1. When the punch dust box is installed, the agitating blade drive connecting lever waits at the home position. (blocks the punch dust full sensor)
2. When the punch dust box is removed, the punch dust full sensor is unblocked.
3. When the finisher is closed and the punch job is commanded with the above status, the punch dust box is detected as uninstalled. So that the message appears on the control panel to warn that the punch dust box is full.

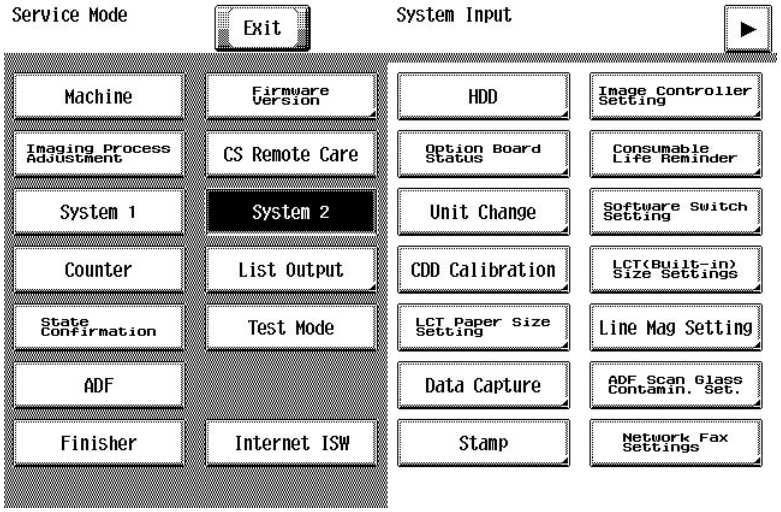
   NOTE

   - **Even when the "punch dust box not installed" is detected, printing is not prohibited. All other jobs except punching holes will be conducted and continued until finished.**
   - **Punching the holes to the paper will be conducted only when the punch dust box is installed.**

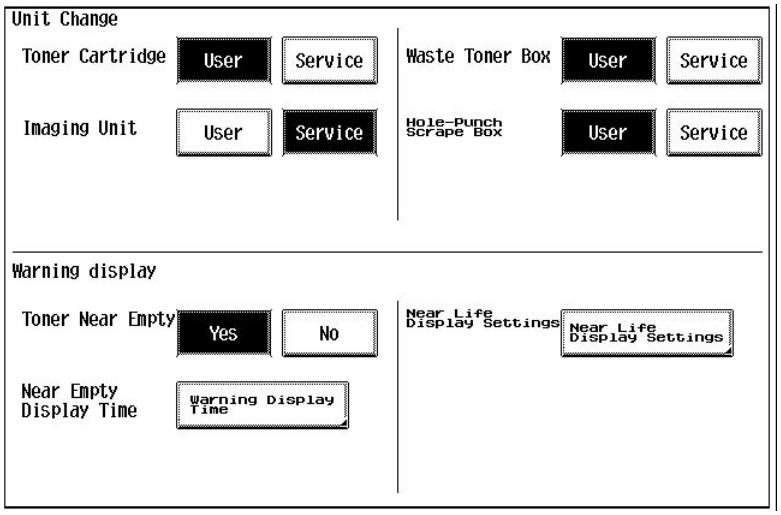
(3) Unit change function

- The screen to be displayed when a punch dust full is detected can be enabled or disabled in the “Unit Change” in the Service Mode.

Service Mode/System screen: typical



System 2/Unit Change screen: typical



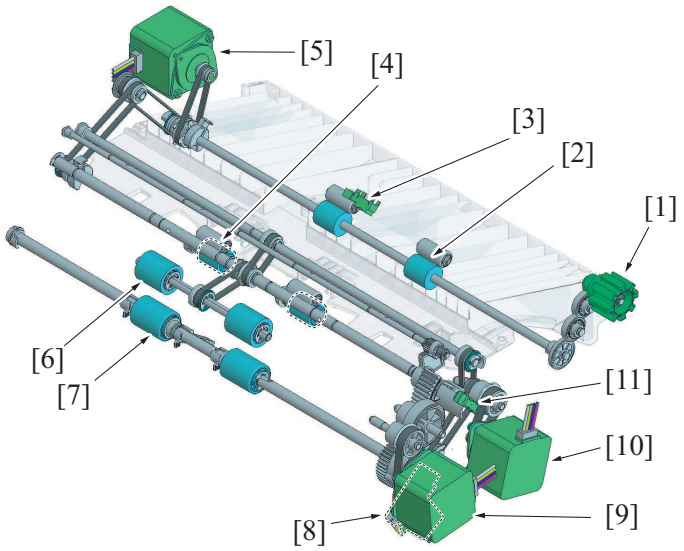
NOTE

- **The Service Mode screen display, details, menus, and default settings are changed when the JS-506 is installed to the MFP.**
- **For details of the Service Mode, see "Unit Change."**

6. TRANSPORT SECTION

6.1 Configuration

- At the transport section, paper that is transported from the MFP paper exit section (punch section when a punch kit is installed) is transported into the finisher and alignment section.



[1]	Jam removal dial	[2]	Paper conveyance roller
[3]	Paper feed sensor (PS101)	[4]	Receiving roller
[5]	Paper conveyance motor (M101)	[6]	Paper exit roller/upper
[7]	Paper exit roller/lower	[8]	Paper exit roller solenoid (SD103)
[9]	Exit roller lift up motor (M104)	[10]	Paper exit motor (M102)
[11]	Pick up roller position sensor (PS105)	-	-

6.2 Drive

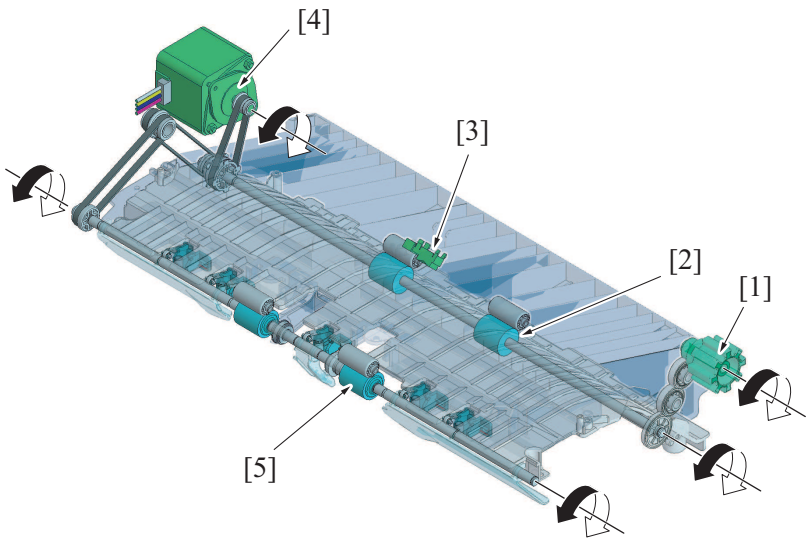
6.2.1 Drive outline

The driving source of the transport section is the paper conveyance motor, paper exit motor, and exit roller lift up motor, and the following parts are driven.

Section	Driving source	Driving parts	Function
Transport/ receiving roller section	Paper conveyance motor	• Paper conveyance roller • Receiving roller	• Transports the paper to inside the finisher • Transports the paper to the alignment section • Switchbacks the paper to the punching section (when in punch mode)
Paper exit roller section	Paper exit motor	• Paper exit roller/upper • Paper exit roller/lower • Paper exit paddle	• Rotates the paper exit roller/upper in reverse direction to transport the paper to the alignment tray (when in sort/group mode) • Rotates the paper exit roller/upper and the paper exit roller/lower in forward direction to exit the paper to the paper exit tray
	Exit roller lift up motor	• Paper exit roller/upper • Paper guide	• Moves the paper exit roller/upper and the paper guide up/down • Moves the paper exit roller/upper down to transport the paper to the alignment tray (when in sort/group mode) • Moves the paper exit roller/upper down to exit the paper to the paper exit tray

6.2.2 Paper conveyance/receiving roller section drive

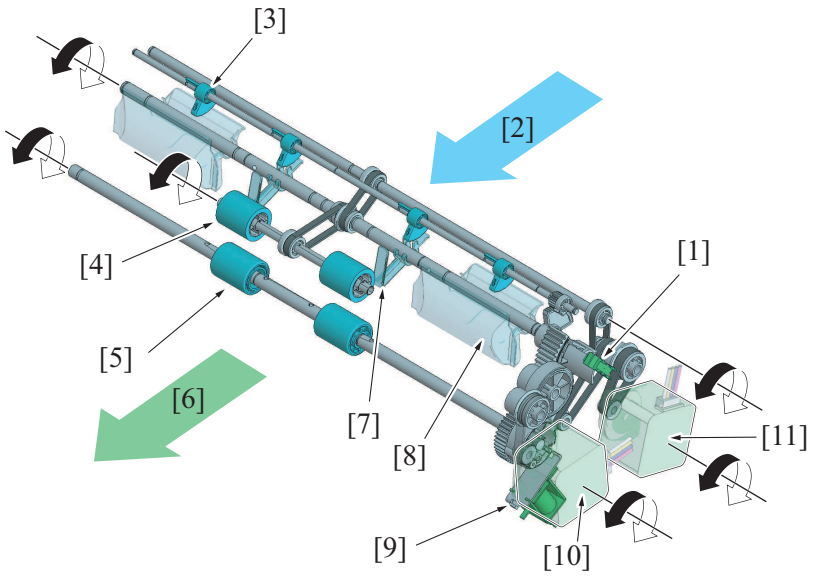
- The drive source for the paper conveyance and the receiving roller section is the paper conveyance motor which drives paper conveyance roller and the receiving roller.
- The paper conveyance roller and the receiving roller can be manually rotated (forward/reverse) by manually rotate the jam removal dial. This dial is to be used when the paper is clogged inside the finisher.



[1]	Jam removal dial	[2]	Paper conveyance roller
[3]	Paper feed sensor (PS101)	[4]	Paper conveyance motor (M101)
[5]	Receiving roller	-	-

6.2.3 Paper exit roller section drive

- The paper exit roller section has 2 types of drive mechanisms.



[1]	Pick up roller position sensor (PS105)	[2]	Direction of the transport (transport section)
[3]	Paper lift up cam	[4]	Paper exit roller/upper
[5]	Paper exit roller/lower	[6]	Direction of the paper exit (receive section)
[7]	Paper guide	[8]	Paper guide
[9]	Paper exit roller solenoid (SD103)	[10]	Exit roller lift up motor (M104)
[11]	Paper exit motor (M102)	-	-

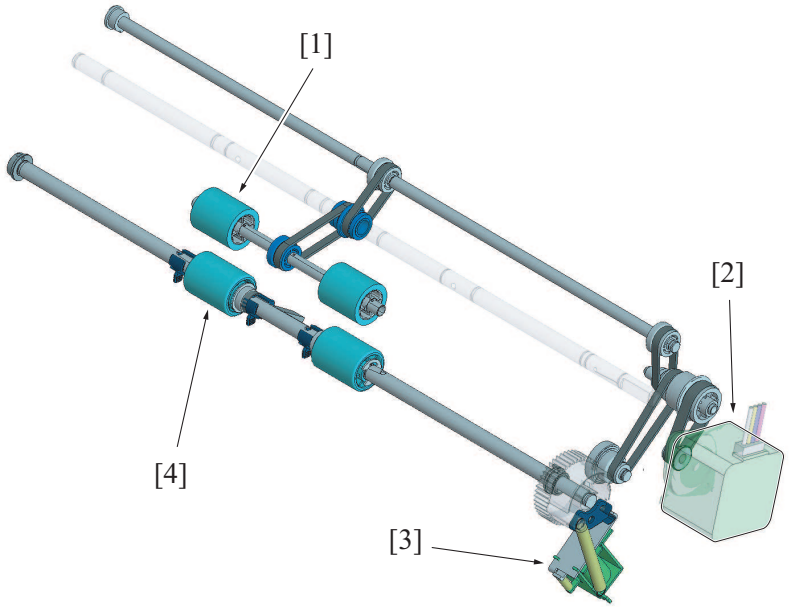
(1) Paper exit motor

- The paper exit motor drives the paper exit roller/upper and the paper exit roller/lower.
- The paper exit roller/upper is connected to the paper exit motor. Rotation of the paper exit motor rotates the paper exit roller/upper.
- The connection of the paper exit roller/lower and the paper exit motor is released while waiting. Turn on/off of the paper exit roller solenoid to connect the paper exit roller/lower drive gear and rotate (forward direction*) the paper exit roller/lower.

NOTE

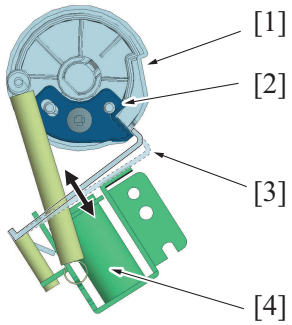
- ***: A torque limiter is installed to the paper exit roller/lower. Therefore, when the reverse rotation force of over the predetermined value is applied from the paper exit roller/upper which is pressed at the time of FD alignment , the paper exit roller/lower rotates in reverse direction as the paper exit roller/upper rotates.**

Paper exit motor drive view



[1]	Paper exit roller/upper	[2]	Paper exit motor (M102)
[3]	Paper exit roller solenoid (SD103)	[4]	Paper exit roller/lower

Paper exit roller/lower drive front view

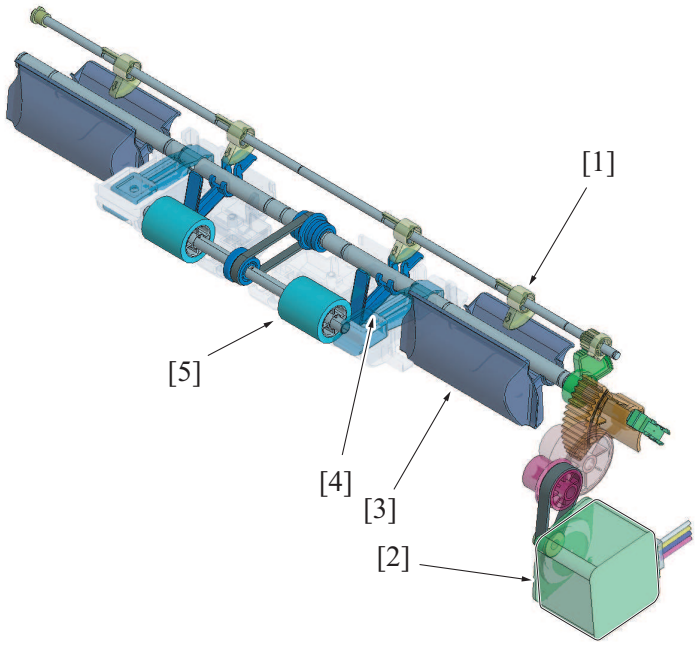


[1]	Paper exit roller/lower drive gear	[2]	Paper exit roller/lower drive gear lock plate
[3]	Rotation lock claw	[4]	Paper exit roller solenoid (SD103)

(2) Exit roller lift up motor

- The exit roller lift up motor drives the up/down operation of the paper exit roller/upper. It also drives the paper guide (2 points) and the paper guide (2 points). The paper exit roller/upper waits at the upper position. Rotation of the exit roller lift up motor moves the paper exit roller/lower down. (Drive source for rotating the paper exit roller/upper is the paper exit motor.)
- The exit roller lift up motor rotates the cam (4 points). When the cam rotates, the paper guide pushed up by the cam will be unlocked to move the paper guide down by its own weight.

Exit roller lift up motor drive view

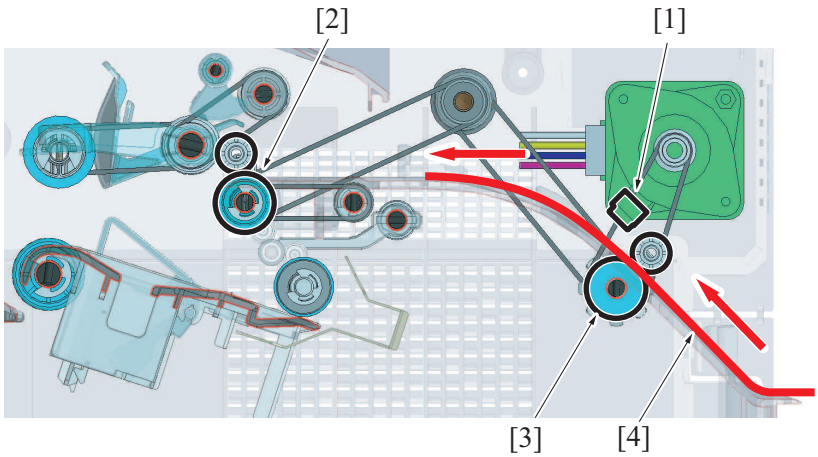


[1]	Cam	[2]	Exit roller lift up motor (M104)
[3]	Paper guide	[4]	Paper guide
[5]	Paper exit roller/upper	-	-

6.3 Operation

6.3.1 Paper conveyance/receiving roller section paper transport control

- The paper conveyance roller sends the paper that is transported from the MFP paper exit section (or from the punch section) to the receiving roller.
- The receiving roller sends the paper transported from the paper conveyance roller to the receiving section or the alignment section.
- The paper feed sensor detects the front edge and the rear edge of the paper. This will make the unit to detect the transportation and path of the paper.
- When in punch mode, the paper conveyance roller and the receiving roller rotate in reverse direction to switchback the paper and punch the holes at the punch section.
  When the holes are punched, the paper conveyance roller and the receiving roller rotate in forward direction to send the paper to the receiving section or to the alignment section.
  For details on punching operation, see “ PI.5.3.2 Punch control”.

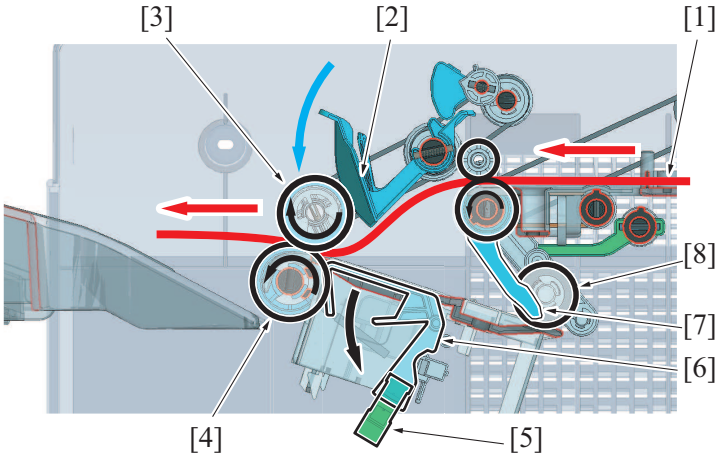


[1]	Paper feed sensor (PS101)	[2]	Receiving roller
[3]	Paper conveyance roller	[4]	Paper

6.3.2 Paper exit roller section paper transport control

(1) Non sort mode, Non group mode, Non staple mode, Sort mode, Group mode

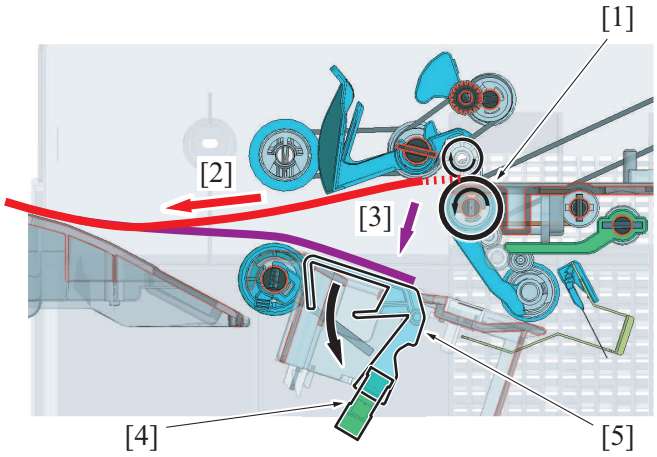
- The paper guide waits at the upper position by the cam. When the cam rotates by the exit roller lift up motor, the paper guide will be unlocked and moves down to the lower position. The paper sent from the transport section will be led to the exit roller by the paper guide.
- The paper exit roller/upper moves down to hold the paper from the transport section with the paper exit roller/lower to discharge it to the exit tray.
- The paper surface detect sensor/1 detects that the paper is discharged to the paper exit tray by the actuator being pushed down while the paper passes through and then returned to the original position.



[1]	Paper	[2]	Paper guide
[3]	Paper exit roller/upper	[4]	Paper exit roller/lower
[5]	Paper surface detect sensor/1 (PS102)	[6]	Paper surface detect sensor/1 actuator
[7]	Batch weight guide	[8]	Alignment roller

(2) Sort offset function mode, Group offset function mode, Staple mode

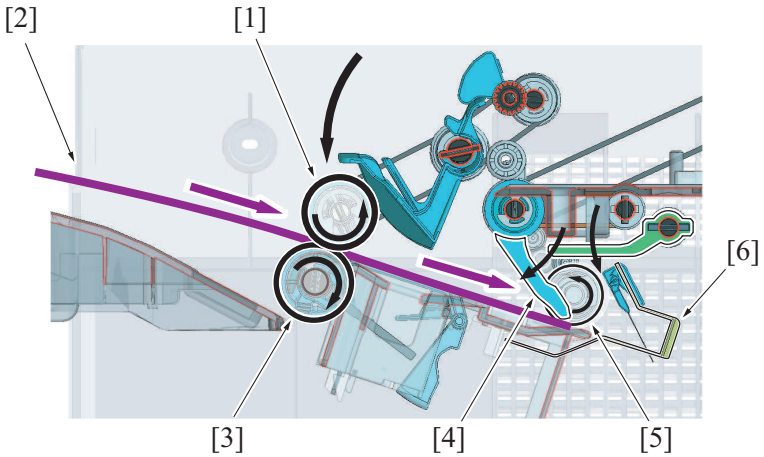
1. The paper exit roller/upper stops rotating at the upper position and waits.
   The paper exit roller/lower waits at the halt status.
2. The first paper is discharged [2] by the receiving roller [1], and moves down to the alignment tray by its own weight. [3]



NOTE

- **The paper surface detect sensor/1 [4] detects that the paper is discharged to the alignment tray when the actuator [5] is pressed down by the paper.**

3. The paper exit roller/upper [1] moves down to hold the first paper on the alignment tray [2] with the paper exit roller/lower [3] to rotate rollers* in reverse direction and transport the paper to the alignment roller [5].



NOTE

- ***: The paper exit roller/lower [3] rotates in reverse direction driven by the paper exit roller/upper [1].**

4. The paper exit roller/upper [1] moves up and stops rotating.
5. The alignment roller [5] contacts the rear edge of the paper to the alignment plate [6] to align the paper. (paper FD alignment)
6. The alignment plate moves back and forth to align right and left of the paper. (paper CD alignment)
7. The batch weight guide [4] moves down to hold the rear end [2] of the aligned paper.

For drive of the batch weight guide, see " PI.7.2.2 (3) Batch solenoid".

NOTE

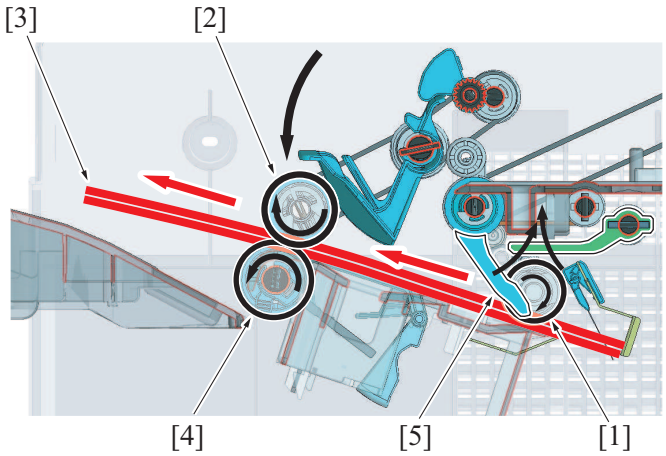
- **The batch weight guide [4] prevent the second paper and after to misalign the aligned paper [2]. For details, see " PI.7.3.2 Paper alignment control (paper FD alignment)".**

8. The second paper will be discharged over the first paper on the alignment tray.
9. The batch weight guide [4] moves up to release the rear end of the paper.
10. The paper exit roller/upper [1] moves down to hold the first and the second paper on the alignment tray with the paper exit roller/lower to rotate the paper exit roller/upper [1] in reverse direction, and transport it to the alignment roller [5] to align the rear edge of the paper.
11. The alignment plate moves back and forth to align the paper.

NOTE

- **The second paper and after will be transported in the same way.**
- **For details of the paper alignment control, see " PI.7.3.1 Paper alignment overview".**

12. When the last paper is aligned, the paper exit roller/upper [2] will move down to hold all the paper on the alignment tray [3] with the paper exit roller/lower [4].



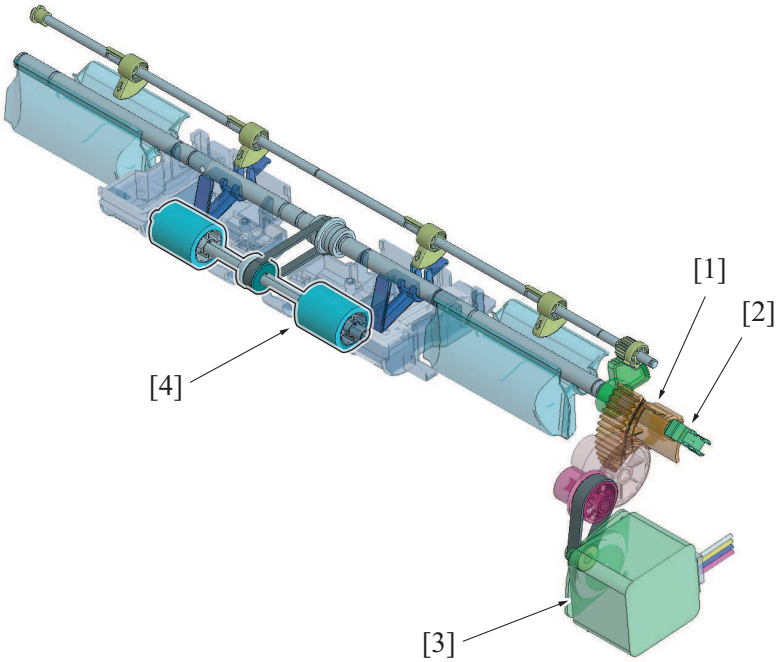
NOTE

- **When in staple mode, stapling is conducted after paper alignment is finished. For details on stapling control, see " PI.8.2.2 Stapling control".**
- **For control after the paper is discharged to the paper exit tray, refer to the receiving section .**

13. The batch weight guide [5] moves up to release the rear edge of the paper [2].
14. The paper exit roller/upper [2], paper exit roller/lower [4], and the alignment roller [1] rotate to discharge the paper [3] to the paper exit tray. (The paper exit roller/upper [2] and paper exit roller/lower [4] rotate in forward direction, and the alignment roller [1] rotates in reverse direction.)

6.3.3 Paper exit roller up/down control

The paper exit roller moves up/down when transporting the paper from the paper conveyance or receiving roller section to the receiving section or to the alignment section.



[1]	Exit roller lift up gear	[2]	Pick up roller position sensor (PS105)
[3]	Exit roller lift up motor (M104)	[4]	Paper exit roller/upper

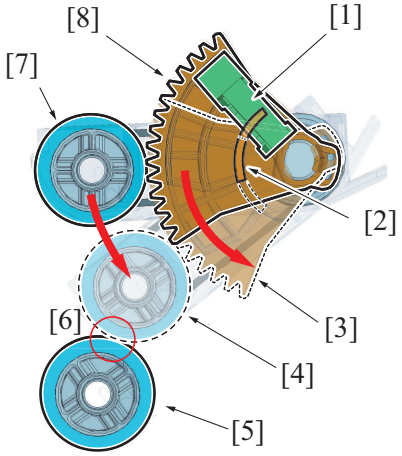
(1) Lift up control in non-sort mode, non-group mode, non-staple mode, sort mode, and group mode

1. The paper exit roller/upper is moved down from the upper position (home position) to the lower position (press position) to hold the paper with the paper exit roller/upper and the paper exit roller/lower to rotate the roller forward and to discharge the paper to the paper exit tray.
2. The paper exit roller/upper moves up when the paper transportation is complete. (returns to the home position)

(2) Lift up control in sort offset mode, group offset mode, and staple mode

1. The paper exit roller/upper waits at the upper position (home position) and discharges the paper to the alignment tray.
2. The paper exit roller/upper moves down from the upper position to the lower position (press position).
3. The paper exit roller/upper rotates in reverse direction and sends the paper to the alignment section.
   NOTE
   - **When transporting the paper to the alignment section, only the paper exit roller/upper rotates in reverse direction.**
4. The paper is aligned in the alignment section. When the paper is being aligned, the paper exit roller/upper waits at the upper position.
5. When aligning and stapling are finished, the paper exit roller/upper moves down to hold the paper with the paper exit roller/upper and the paper exit roller/lower, and rotates the roller in forward direction to discharge the paper to the paper exit tray.
6. The paper exit roller/upper moves up when the paper transportation is complete. (returns to the home position)

(3) Paper exit roller position detect control

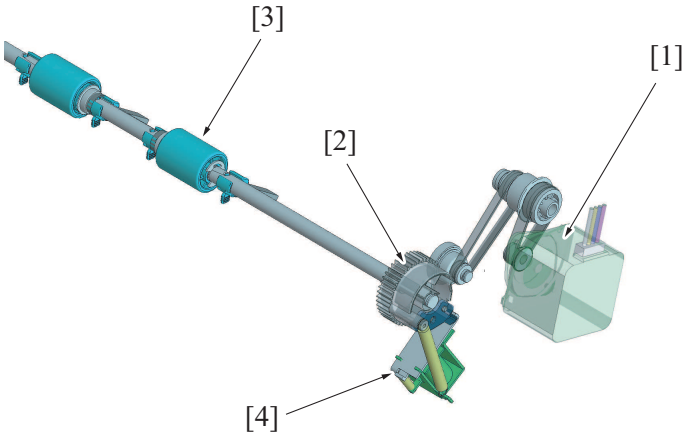


1. The paper exit roller/upper waits at the upper position [7]. (home position) The light shield plate [2] of the gear [8] installed on the lift up shaft for the paper exit roller/upper blocks the pick up roller position sensor [1] and detects that the paper exit roller/upper is at the home position [7].
2. When the exit roller lift up motor rotates, the gear on the exit roller lift up shaft rotates [3] to move the paper exit roller/upper [4] down to be pressed [6] to the paper exit roller/lower [5]. (Paper exit roller/upper at press position) When the gear [3] rotates, the light shield plate [2] also rotates to unblock the pick up roller position sensor [1]. This process detects that the paper exit roller/upper [4] position is at the press position.

Paper exit roller/upper position	Pick up roller position sensor
Upper position (home position)	Blocked
Lower position (pressure position)	Unblocked

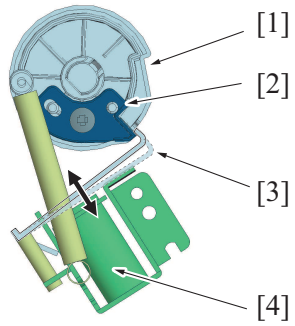
6.3.4 Paper exit roller/lower drive connecting control

- It rotates the paper exit roller/lower when transporting the paper from the transport section to the receiving section or to the alignment section.
- The connection of the paper exit roller/lower and the paper exit motor is released by the paper exit roller solenoid when waiting. On/off of the paper exit roller solenoid connects the paper exit roller/lower to the paper exit motor, and rotates as the paper exit motor rotates. When the paper exit roller/lower and the paper paddle rotate one revolution clockwise (forward direction), the connection with the paper exit motor will be released and stop.
  NOTE
  - **For details of the paper weight paddle control, see " PI.9.3.1 Paper exit paddle control".**

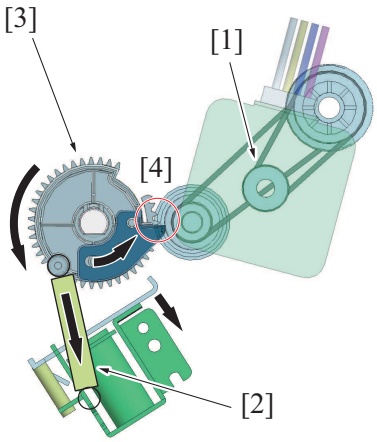


[1]	Paper exit motor (M102)	[2]	Paper exit roller/lower drive gear
[3]	Paper exit roller/lower	[4]	Paper exit roller solenoid (SD103)

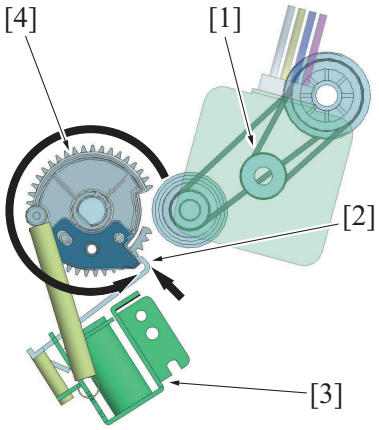
(1) Paper exit roller/lower drive connecting process



1. Connection of the paper exit roller/lower with the paper exit motor is released while waiting. On/off of the paper exit roller solenoid [4] operates the rotation lock claw [3] for the paper exit roller solenoid to release the lock plate [2] installed on the paper exit roller/lower drive gear [1].



2. By the paper exit roller/lower drive gear [3] being rotated by the spring force [2], it will be connected to the drive mechanism [4] of the paper exit motor [1]. This process transfers drive force to the paper exit roller/lower drive gear to rotate the paper exit roller/lower.

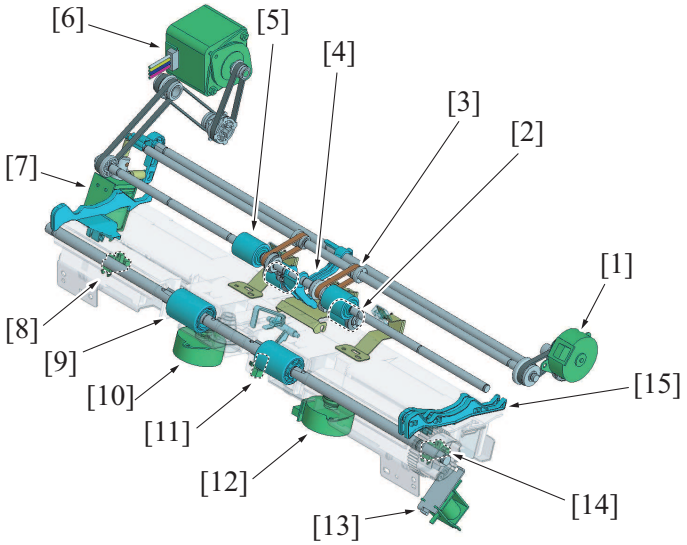


3. The paper exit roller/lower will be released from the paper exit motor [1] drive mechanism by the shape of the paper exit roller/lower drive gear [4] after rotating about one revolution. (Connection between the paper exit roller/lower and the paper exit motor [1] will be released.)
4. The paper exit roller/lower drive gear [4] will be locked to prohibit rotation by the rotation lock claw [2] of the paper exit roller solenoid [3]. (The paper exit roller/lower stops rotating.)

7. ALIGNMENT SECTION

7.1 Configuration

- In the alignment section, paper transported from the transport section is aligned and delivered to the paper exit tray.



[1]	Alignment roller motor (M103)	[2]	Alignment roller
[3]	Drive connecting belt	[4]	Batch weight guide
[5]	Receiving roller	[6]	Paper conveyance motor (M101)
[7]	Batch solenoid (SD102)	[8]	Alignment plate home sensor/R (PS109)
[9]	Paper exit roller/lower	[10]	Alignment motor/R (M106)
[11]	Paper surface detect sensor/1 (PS102)	[12]	Alignment motor/F (M105)
[13]	Paper exit roller solenoid (SD103)	[14]	Alignment plate home sensor/F (PS108)
[15]	Alignment plate/Fr	-	-

7.2 Drive

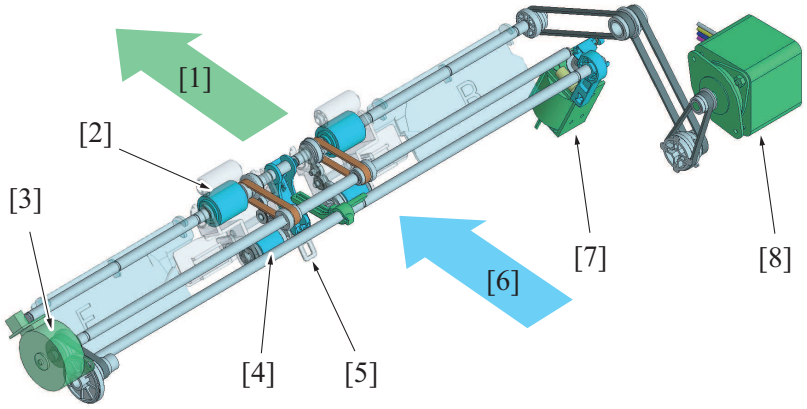
7.2.1 Drive outline

The driving source of the alignment section is the paper conveyance motor, alignment roller motor, batch solenoid, alignment motor, and paper exit motor, and the following parts are driven.

Section	Driving source	Driving parts	Function
Alignment roller section	Paper conveyance motor	Receiving roller	Transports paper to the alignment tray.
	Alignment roller motor	Alignment roller	• Switchbacks the paper to align the rear edge of the paper. (FD alignment operation) • The aligned paper will be discharged to the paper exit tray.
	Batch solenoid	Batch lever	It holds the rear edge of the paper on the alignment tray. It prevents the aligned paper to be misaligned by the paper that follows.
Alignment tray section	Alignment motor	Alignment plate/Fr	It moves the alignment plate/Fr forward and backward to align the paper. (CD alignment operation)
		Alignment plate/Rr	It moves the alignment/Rr forward and backward to align the paper. (CD alignment operation)
	Paper exit motor	Paper exit roller/upper	• It transports the paper to the alignment tray. (switchback) • Exits paper to the paper exit tray.
		Paper exit roller/lower	The paper is discharged to the paper exit tray.
		Paper exit paddle	

7.2.2 Alignment roller section

There are 3 types of drive mechanisms for the alignment roller section.



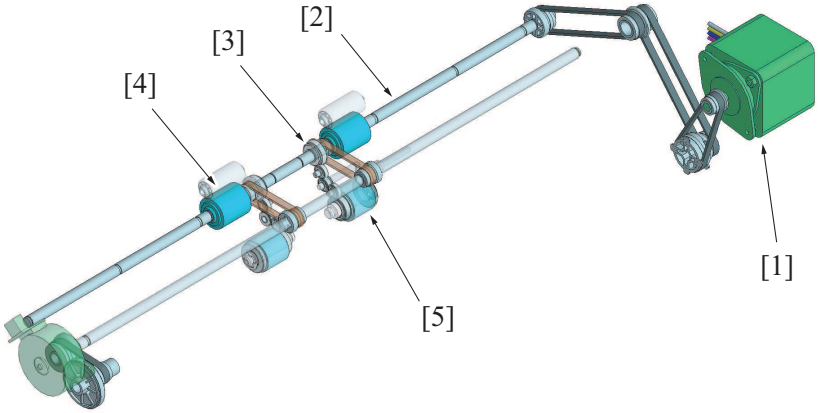
[1]	Direction of the paper exit (receive section)	[2]	Receiving roller
[3]	Alignment roller motor (M103)	[4]	Alignment roller
[5]	Paper weight guide	[6]	Direction of the paper transport (transport section)
[7]	Batch solenoid (SD102)	[8]	Paper conveyance motor (M101)

(1) Paper conveyance motor

- The receiving roller is driven by the paper conveyance motor.
- For details of the receiving roller drive, see "Paper conveyance/receiving roller section drive".
- The receiving roller is installed on the drive shaft for the receiving roller. It rotates by the drive force of the transport motor.

NOTE

- **The drive transmission pulley is not fixed to the receiving roller's drive shaft. Therefore, the alignment roller does not rotate even when the paper conveyance motor rotates.**



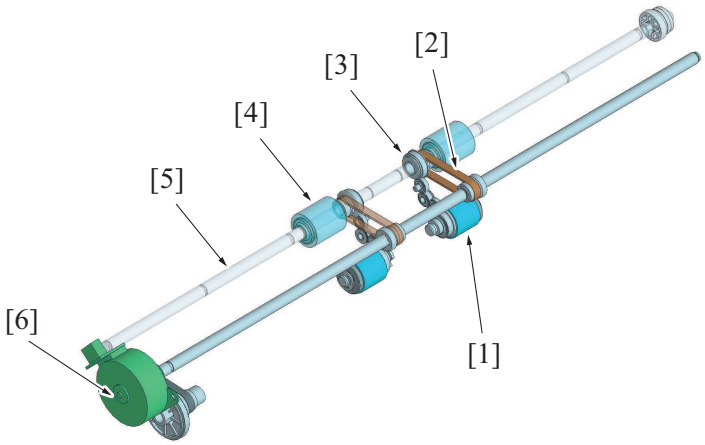
[1]	Paper conveyance motor (M101)	[2]	Receiving roller drive shaft
[3]	Drive connecting pulley	[4]	Receiving roller
[5]	Alignment roller	-	-

(2) Alignment roller motor

- The alignment roller is driven by the alignment roller motor.
- The alignment roller rotates by the drive force of the alignment roller motor through the drive transmission pulley on the drive shaft for the receiving roller.

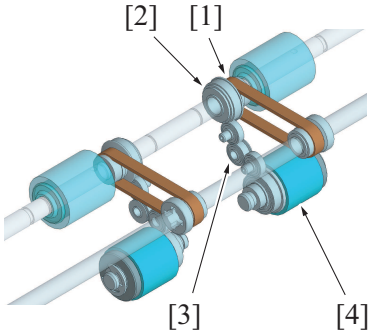
NOTE

- **The drive transmission pulley is not fixed to the receiving roller's drive shaft. Therefore, the receiving roller does not rotate even when the alignment roller motor rotates.**



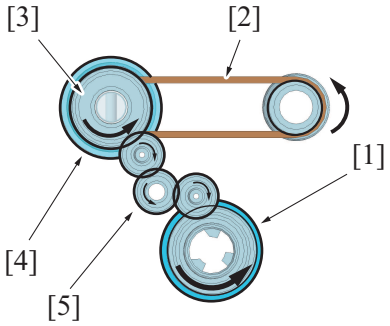
[1]	Alignment roller	[2]	Drive connecting belt
[3]	Drive connecting pulley	[4]	Receiving roller
[5]	Receiving roller drive shaft	[6]	Alignment roller motor (M103)

(a) Enlarged view of the alignment roller drive section



[1]	Drive connecting belt	[2]	Drive connecting pulley
[3]	Drive connecting gear	[4]	Alignment roller

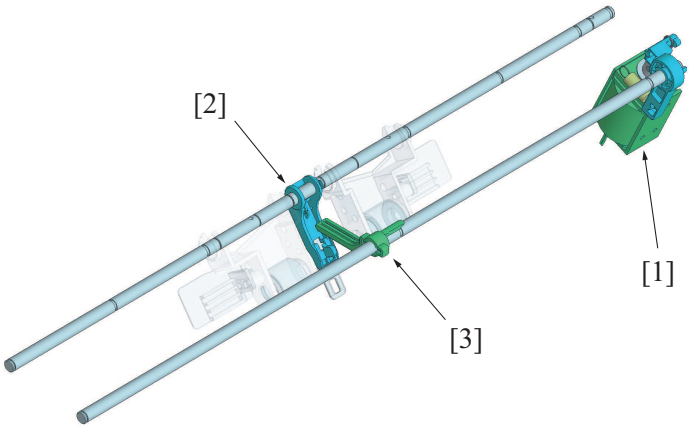
(b) Alignment roller drive section front view



[1]	Alignment roller	[2]	Drive connecting belt
[3]	Drive connecting pulley	[4]	Receiving roller
[5]	Drive connecting gear	-	-

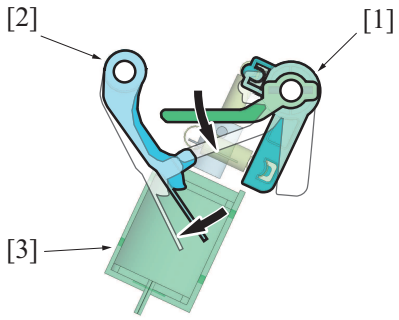
(3) Batch solenoid

- The batch lever is driven by the batch solenoid.
- The batch lever and the batch guide wait at the upper position by the spring force. (home positions)
- When the batch solenoid turns on, the drive shaft for the batch lever rotates to rotate the batch lever downward.
- The batch guide is pressed down by the batch lever moving downward.
- When the batch solenoid turns off, the drive shaft for the batch lever rotates by the spring force to return the batch lever and the batch guide to the upper position.



[1]	Batch solenoid (SD102)	[2]	Batch guide
[3]	Batch lever	-	-

(a) Batch guide drive section front view



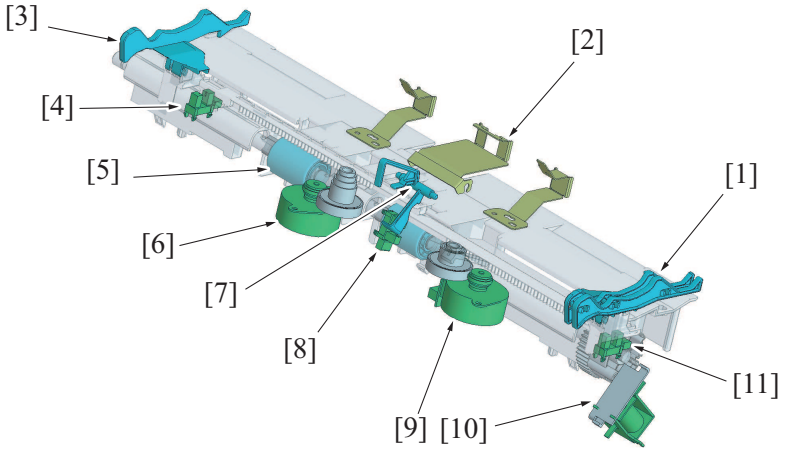
[1]	Batch lever	[2]	Batch guide
[3]	Batch solenoid (SD102)	-	-

7.2.3 Alignment tray section

- The alignment tray section has 2 types of drive mechanisms.

(1) Alignment motor

- The alignment motor drives the alignment plate back and forth.
- The alignment plate/Fr, and the alignment plate/Rr have individual alignment motors. This enables each alignment plate to independently move back and forth.



[1]	Alignment plate/Fr	[2]	Paper stopper
[3]	Alignment plate/Rr	[4]	Alignment plate home sensor/R (PS109)
[5]	Paper exit roller/lower	[6]	Alignment motor/R (M106)
[7]	Paper surface detect sensor/1 actuator	[8]	Paper surface detect sensor/1 (PS102)
[9]	Alignment motor/F (M105)	[10]	Paper exit roller solenoid (SD103)
[11]	Alignment plate home sensor/F (PS108)	-	-

(2) Paper exit motor

- The paper exit roller/lower is driven by the paper exit motor.
  For details of the paper exit roller/lower, see “Paper conveyance/receiving roller section drive” and “Paper exit roller/lower drive connecting process”.

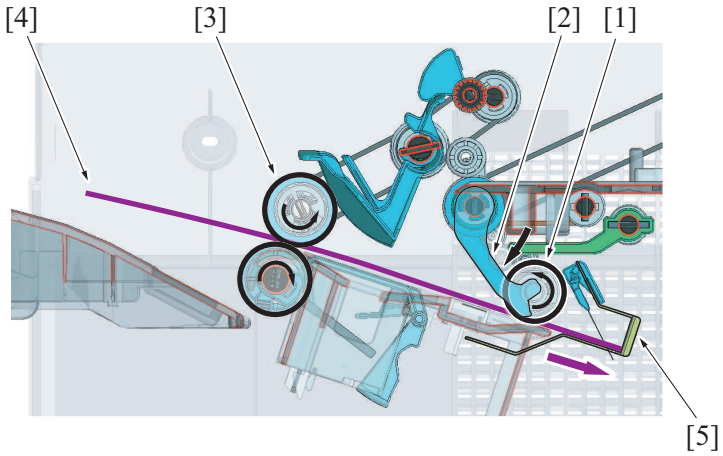
7.3 Operation

7.3.1 Paper alignment overview

- At the alignment section, the paper is aligned for the jobs in sort offset mode, group offset mode, and staple mode.
- The paper is discharged to the exit tray without being in alignment for non-sort mode, non-group mode, non-staple mode, sort mode, and group mode.
- When the paper is aligned, it is switchbacked to the alignment section individually. When alignment is finished, the paper or the batch is discharged to the paper exit tray.
- There are two types for paper alignment as described below.
  - Paper FD Alignment: The operation to align rear edge of the paper in transportation direction.
  - Paper CD Alignment: The operation to align both sides of the paper in the width direction.

7.3.2 Paper alignment control (paper FD alignment)

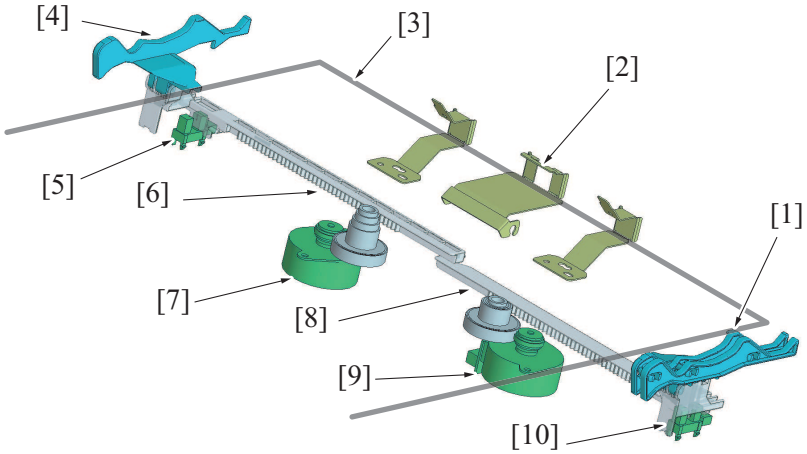
- The operation to align rear edge of the paper in transportation direction is called "paper FD alignment".
- The paper from the transport section will be transported to the alignment tray by the alignment roller. The rear edge of the paper then is aligned by contacting the rear edge of the paper to the paper stopper.
- The batch guide moves down to hold the rear edge of the aligned paper.
  NOTE
  - **It prevents the aligned paper from being jumbled from when the 2nd sheet of paper is discharged in the alignment tray.**
  - **The batch guide moves up when the next sheet of paper is transported to the alignment tray, as well as when the paper is discharged from the alignment tray to release the paper.**



[1]	Alignment roller	[2]	Batch guide
[3]	Paper exit roller/upper	[4]	Paper
[5]	Paper stopper	-	-

7.3.3 Paper alignment control (paper CD alignment)

- The operation to align both sides of the paper in the width direction is called "paper CD alignment".
- The paper from the transport section is transported to the alignment tray by the alignment roller. The paper is aligned by contacting the alignment plate/Fr and Rr to both sides (forward-backward direction) of the paper.
- The home position of the alignment plate is detected by the alignment plate home sensor. (alignment plate home sensor/F, R)



[1]	Alignment plate/Fr	[2]	Paper stopper
[3]	Paper	[4]	Alignment plate/Rr

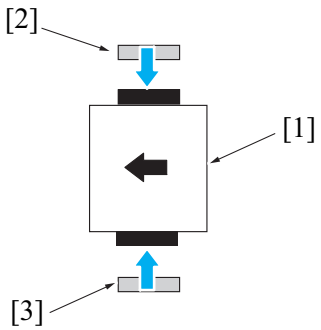
[5]	Alignment plate home sensor/R (PS109)	[6]	Slide gear/Rr
[7]	Alignment motor/R (M106)	[8]	Slide gear/Fr
[9]	Alignment motor/F (M105)	[10]	Alignment plate home sensor/F (PS108)

(1) Alignment plate control when in staple mode

- When the staple mode is commended, the alignment plate/Fr and the alignment plate/Rr shift according to the paper width. The paper is aligned by the alignment plates contacting from both front and rear sides.
- The above alignment operation will be conducted for the paper for every job to align the edges of the paper batch. When the alignment is finished, stapling process will be conducted.

NOTE

- **When printed in staple mode, paper batch will be stapled and be discharged to the paper exit tray without being shifted.**



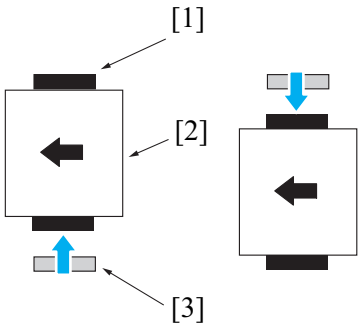
[1]	Paper	[2]	Alignment plate/Rr (shifting to the front side)
[3]	Alignment plate/Fr (shifting to the rear side)	-	-

(2) Alignment plate control for sort offset mode and group offset mode

- When commanding offset in sort mode or group mode, the alignment plate/Fr or the alignment plate/Rr presses the paper from one side to the far side (or front side) depending on the paper width. This process shifts the paper position.
- The paper batches will be sorted out by repeating the process above.

NOTE

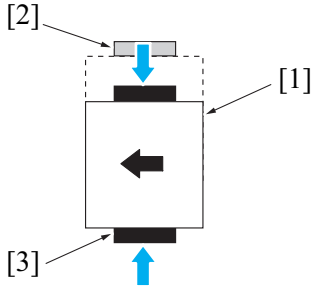
- **The offset value (shift value) of the paper is 30 mm.**
- **When "Offset" is not commanded in the sort mode or the group mode, only the sort print/group print will be conducted, and the paper will be discharged to the paper exit tray without being shifted.**



[1]	Alignment plate/Rr	[2]	Paper
[3]	Alignment plate/Fr	-	-

(a) Operation when shifting the paper to the front side

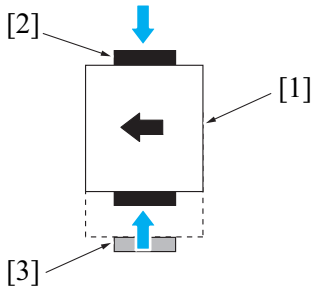
1. The alignment plate/Fr [3] will shift to the reference position at the front side. (The reference position differs depending on the paper size.)
2. The alignment plate/Rr [2] shifts according to the paper width. The paper [1] is pressed by the alignment plate/Rr [2] to be shifted to the front side.



(b) Operation when shifting the paper to the rear side

1. The alignment plate/Rr [2] will shift to the reference position at the rear side. (The reference position differs depending on the paper size.)

2. The alignment plate/Fr [3] shifts according to the paper width. The paper [1] is pressed by the alignment plate/Fr [3] to be shifted to the rear side.



(c) Paper receiving quantity

- When the quantity of the paper that is received into the alignment tray in sort offset mode or in group offset mode reaches the specified value, the paper batch in the alignment tray will be discharged to the paper exit tray.
  NOTE
  Sample process for sort out:
  1. When the job requires making of two sets with 10 sheets A4 size document in sort offset mode, the paper batch is discharged when the sheet quantity reached 5 for the first copy.
  2. The remaining 5 sheets will be aligned to be discharged with the same shift position. This will make 10 aligned and discharged sheets on the paper exit tray.
  3. Then the shift position will be changed from the 1st copy to sort out the 2nd copy.
  4. The process for the second copy leaves 2 sets with 10 sheets each on the exit tray.

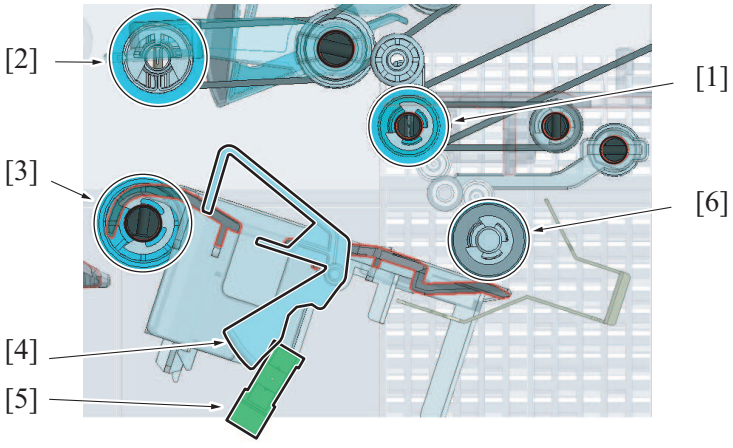
Maximum batch discharge quantity for sort out

Paper size	Paper type	
	• Thin paper (52 g/m2 to 59 g/m2) • Plan paper (60 g/m2 to 90 g/m2) • Recycled paper (52 g/m2 to 90 g/m2)	Thick paper (91 g/ m2 to 300 g/ m2)
216 mm or less	5 sheets	3 sheets
More than 216 mm	4 sheets	

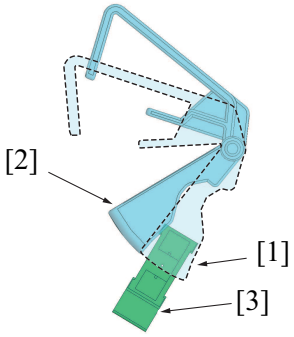
- When the "Paper load quantity" or "Paper load height" of the paper in the exit tray reaches to the specified value during sort offset mode or group offset mode, the exit tray is judged to be full.
  Amount of paper stacking
  NOTE
  - **The paper load height is detected by the paper level detection function.**
    For details, see " PI.9.3.3 Paper level detect control".

7.3.4 Alignment tray paper detect control

- The alignment tray has paper surface detect sensor/1, which detects the paper path and the paper receiving in the alignment tray.
- Paper surface detect sensor/1, detects that the paper is transported to the alignment tray by the actuator being pressed down by the paper which passes it.



[1]	Receiving roller	[2]	Paper exit roller/upper
[3]	Paper exit roller/lower	[4]	Paper surface detect sensor/1 actuator
[5]	Paper surface detect sensor/1 (PS102)	[6]	Alignment roller



[1]	Paper surface detect sensor/1 actuator: The paper is stored (blocked)	[2]	Paper surface detect sensor/1 actuator: Paper is not stored (unblocked)
[3]	Paper surface detect sensor/1 (PS102)	-	-

(1) When in non-sort mode, non-group mode, non-staple mode, sort mode, and group mode

- The paper surface detect sensor/1 detects that the paper is transported to the paper exit roller /lower by the actuator being pressed down by the paper which passes it.
- When the paper alignment is finished, the sensor detects that the paper is discharged to the exit tray by the actuator returned to the original position with the paper discharged from the alignment tray.

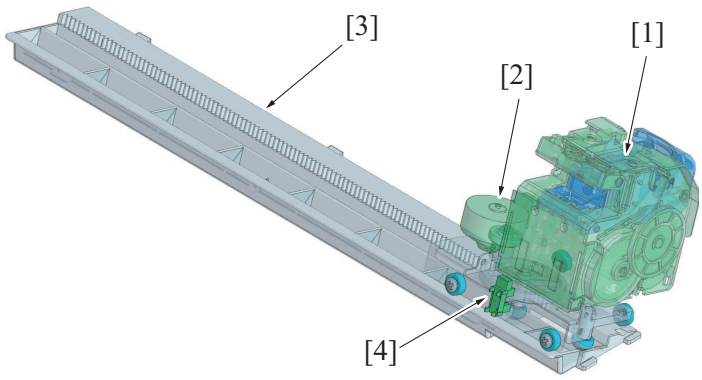
(2) When in sort offset mode, group offset mode, and staple mode

- The paper surface detect sensor/1 detects that the paper is stored to the alignment tray by the actuator being pressed down by the switchbacked paper.
- When the alignment is finished, the sensor detects that the paper is discharged to the exit tray by the actuator returned to the original position.

8. STAPLER SECTION

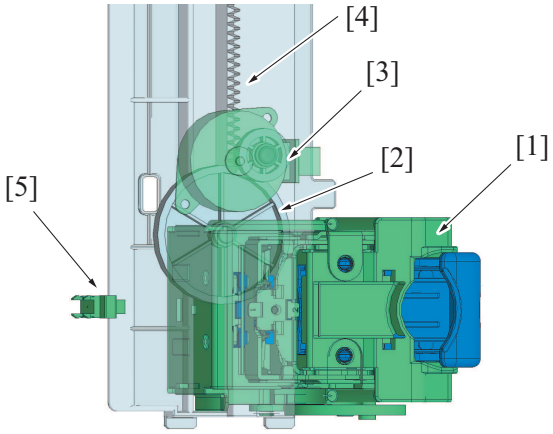
8.1 Configuration/Drive

- The stapler waits at the home position at the front side.
- The stapler movement motor moves the stapler.
- When the stapler movement motor installed on the stapler mounting table rotates, the drive connecting gear rotates. When the drive connecting gear rotates, the stapler mounting plate and the stapler, shifts back and forth along the slide gear.



[1]	Stapler	[2]	Stapler movement motor (M107)
[3]	Slide gear	[4]	Stapler home sensor (PS110)

8.1.1 Stapler drive section top view



[1]	Stapler unit	[2]	Stapler drive connecting gear
[3]	Stapler movement motor (M107)	[4]	Slide gear
[5]	Stapler home sensor (PS110)	-	

8.2 Operation

8.2.1 Stapler positioning control

- The home position of the stapler is detected by the stapler home sensor.
- When in corner staple mode, the stapler waits at the home position and staples when the paper alignment is finished.
- When in 2 points staple mode, the stapler shifts to the first stapling position to conduct stapling. Then the stapler shifts to the second stapling position to conduct stapling. When the stapling is finished, the stapler returns to the home position.
- The stapling position is controlled based on the number of pulses generated by the stapler movement motor. No position sensors are provided for the corner staple and two-point staple functions.

8.2.2 Stapling control

(1) Stapling operation

- The Stapling operation is driven by the stapler motor.
- In the stapling operation, the clincher staple arm is lowered by the stapler motor. The clincher staple arm presses the sheets. (This is called clamp operation.) Then a staple is pushed up by the staple arm from the stapler side. The staple is pressed through the sheets and bent from the clincher staple arm side, so that the sheets are fastened together.
- The stapler motor then lifts the clincher staple arm and lowers the staple arm to complete the stapling operation.
- The number of sheets that user wishes to staple are placed into the alignment tray and the stapling operation is performed. However, if the number exceeds the upper limit, the set of sheets is delivered to the exit tray without being stapled.

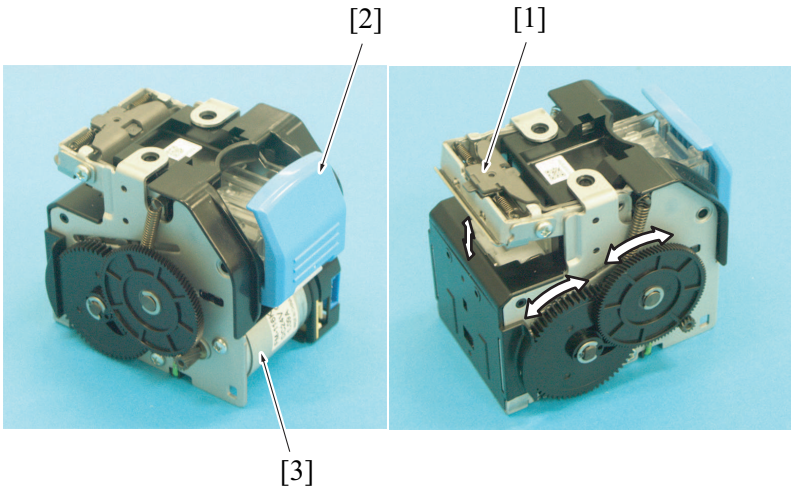
Maximum stapling quantity

Paper size	Maximum stapling quantity
A4S or less (small size)	50 sheets *

Paper size	Maximum stapling quantity
Foolscap or more (large size)	30 sheets

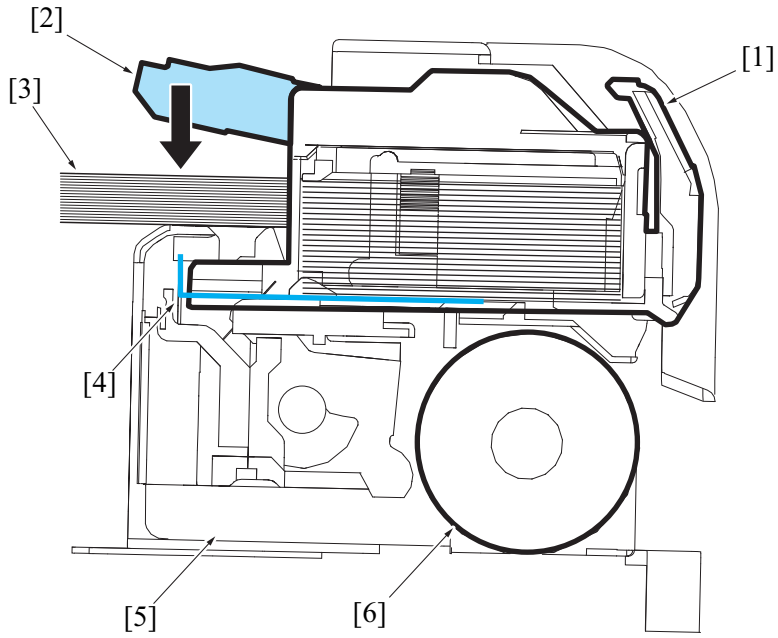
- *: When there are small size sheets and large size sheets with same width at the same time, they are judged as large size sheets, and the maximum staple quantity becomes 30.
  Example: When there are A4 LEF and A3 SEF, the maximum stapling quantity is 30.

Overall view



[1]	Clincher staple arm	[2]	Staple cartridge
[3]	Stapler motor	-	-

Front view

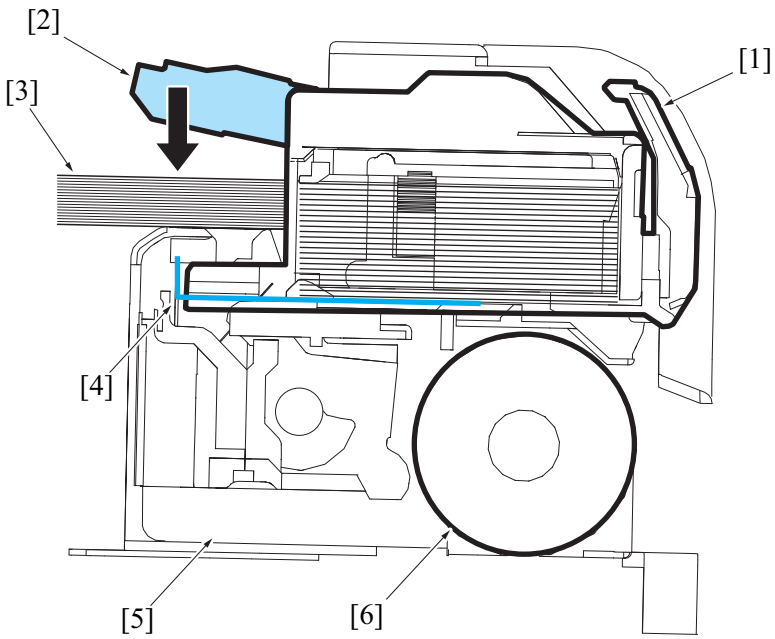


[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor (M14)

8.2.3 Staple empty detection control

(1) Staple cartridge

- The stapler is provided with a staple cartridge used only for the stapler.
- To reload the stapler with staples, the staple cartridge is first loaded with staples (staple sheet type: 5000 staples) and then the cartridge is attached to the stapler.
  For information on how to load staplers, refer to the user's guide.

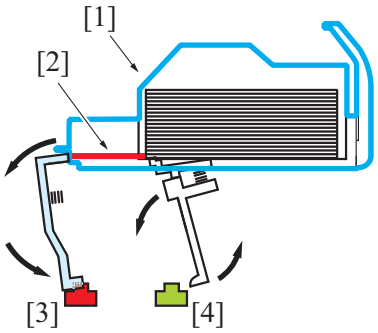


[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor

(2) Staple empty detection mechanism

- The stapler includes the self-priming sensor and staple empty sensor to detect the status of the staple cartridge and staples.
- The staple cartridge is loaded with staple sheets, and a staple sheet is conveyed to the clinch position (staple position) from the lowest one.

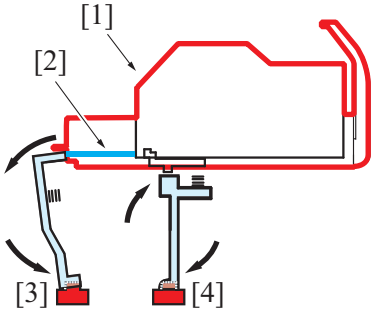
State where staple sheets are loaded



[1] Staple cartridge (loaded with staple sheets)
[2] Staple sheet fed from the cartridge
[3] Self-priming sensor (blocked)
[4] Staple empty sensor (unblocked)

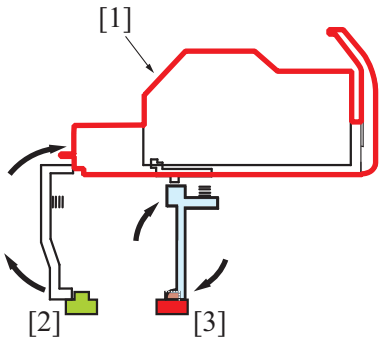
- While the staple cartridge is loaded, if the trailing edge of the last staple sheet in the cartridge passes the actuator of the staple empty sensor, the actuator is raised by the spring force.
- When the actuator is raised, the staple empty sensor is blocked and machine determines that the cartridge is empty. The control panel displays to warn of the staple empty message.

State where the last staple sheet is fed



[1] Staple cartridge (staple empty)
[2] Staple sheet (remainder)
[3] Self-priming sensor (blocked)
[4] Staple empty sensor (blocked)

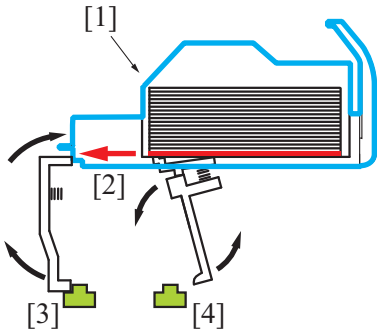
State where staple sheet runs out



[1] Staple cartridge (empty)
[2] Self-priming sensor (unblocked)
[3] Staple empty sensor (blocked)

- Even when the staple empty sensor detects the trailing edge of the last staple sheet, the staple sheet (staples: about 20) fed from the cartridge remains at the cartridge's front section. In this case, the actuator of the self prime sensor is pressed down by the leading edge of the staple sheet.
- If the actuator is pressed down, the self prime sensor is blocked and machine determines that the staple sheet is fed to the clinch position (staple position).
- Even when staple empty is detected, printing is not disabled. Paper is delivered without being stapled.
- After staple empty is detected, when the staple cartridge is loaded with staple sheets and the stapler is loaded with the cartridge, the actuator of the staple empty sensor is pressed down by the staple sheets.
- When the actuator is pressed down, the staple empty sensor is unblocked and staple empty condition is cleared. At this point, the staple empty sensor detects the staple sheets (unblocked). However, if the leading edge of the staple sheet cannot be detected by the self-priming sensor (unblocked), the clinch operation is repeated up to 20 times to feed the leading edge of the staple sheet to the position (clinch position) where it can be detected by the self-priming sensor.

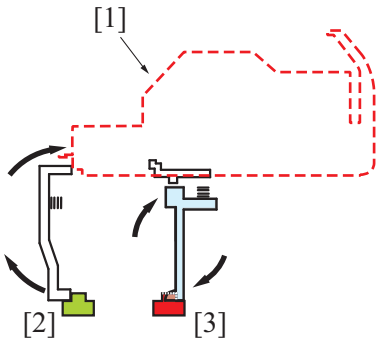
State where staple sheet runs out



[1] Staple cartridge (loaded with staple sheets)
[2] Staple sheet is fed by clinch operation
[3] Self-priming sensor (unblocked)
[4] Staple empty sensor (unblocked)

- If the self prime sensor cannot detect the leading edge of the staple sheet after clinch operations, machine determines that the staple sheet is not properly fed (staple sheet is not properly set) and the control panel displays to warn of the staple empty message.
- If the staple empty message appears even after staple sheets are loaded, check whether the staple sheets is properly set in the staple cartridge. If the cartridge is clogged with a staple sheet, clear the sheet.
- If staple empty occurs, the stapler stays at the stapler home position. (Position where staples can be supplied only by opening the front door)

(a) When the staple cartridge is not loaded



[1]	Staple cartridge (not mounted)	[2]	Self-priming sensor (unblocked)
[3]	Staple empty sensor (blocked)	-	-

- The actuator of the staple empty sensor is raised by the spring force. The staple empty sensor is blocked.
- If the staple empty message appears even after staple sheets are loaded, check whether the staple sheets is properly set in the staple cartridge. If the cartridge is clogged with a staple sheet, clear the sheet.
- The control panel displays to warn of the staple empty message.

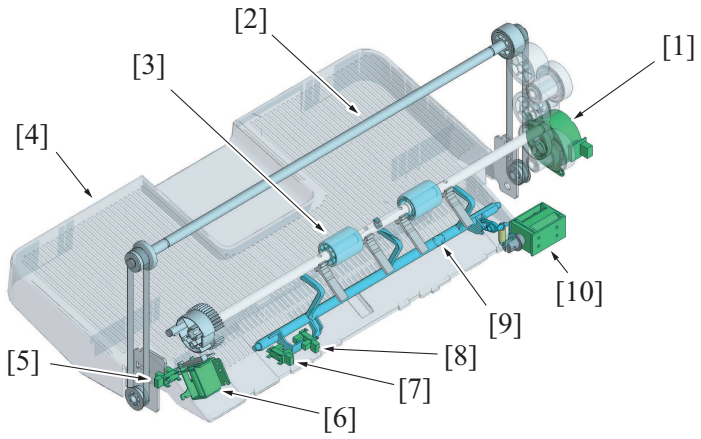
8.2.4 Clogged staple detection control

- Stapling operation is performed by lowering of the clincher staple arm and lifting of the staple arm.
- The staple arm position is detected by the stapler home sensor located in the stapler.
- The stapler determines that the stapling operation is completed if the staple arm returns to the home position within the specified time after the stapling operation. If the staple arm does not return to the home position after the specified time has passed, the machine determines that staple trouble has occurred and trouble code C1109 appears on the control panel.

9. RECEIVING SECTION

9.1 Configuration

- In the receiving section, paper transported into the finisher is placed into paper exit tray. The tray up/down mechanism moves the tray down depending on the amount of discharged paper, so that a maximum of 500 sheets can be stored. The tray also includes the mechanism for detecting the number of stacked sheets.



[1]	Tray lift up motor (M109)	[2]	Shaft
[3]	Paper exit roller/lower	[4]	Paper exit tray
[5]	Paper exit tray home sensor (PS107)	[6]	Paper exit roller solenoid (SD103)
[7]	Paper surface detect sensor/2 (PS104)	[8]	Paper weight lever sensor (PS103)
[9]	Paper surface detect lever	[10]	Paper surface detect solenoid (SD101)

9.2 Drive

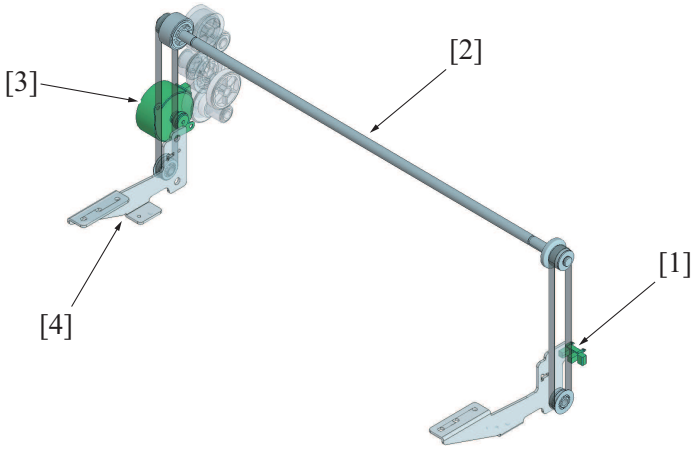
9.2.1 Drive outline

- The driving source of the receiving section is the tray lift up motor, paper surface detect solenoid, and paper exit motor. The following parts are driven.

Section	Driving source	Driving parts	Function
Tray lift up section	Tray lift up motor	Paper exit tray	The paper exit tray will be moved up/down according to the discharged paper load.
Paper level detect section	Paper surface detect solenoid	Paper surface detect lever	• The paper surface level detect lever is moved up/down to detect the paper load discharged to the paper exit tray. • For consecutive printing, the rear edge of the paper discharged to the paper exit tray will be held by the paper surface level detect lever. It prevents the discharged paper from being misaligned by the paper that follows.
Paper exit roller section	Paper exit motor	Paper exit roller/lower	The paper is discharged to the paper exit tray.
		Paper exit paddle	It rotates so that the rear edge of the paper which passed through the paper exit roller/lower will be held to be discharged to the paper exit tray/upper without fail.

9.2.2 Tray lift up section

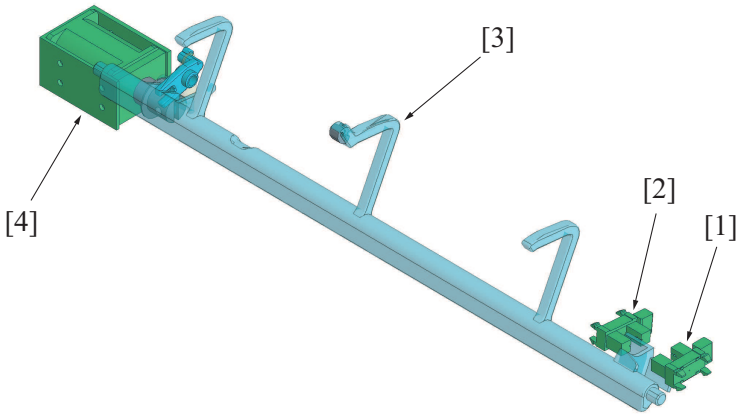
- The drive source is the tray lift up motor which moves the exit tray up/down.



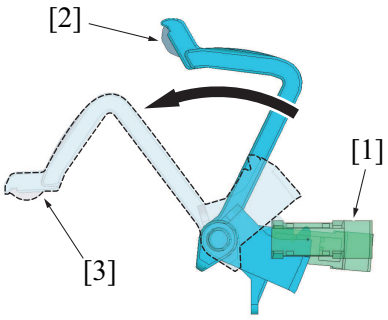
[1]	Paper exit tray home sensor (PS107)	[2]	Shaft
[3]	Tray lift up motor (M109)	[4]	Tray lifter

9.2.3 Paper level detect section

- The paper surface detect solenoid drives the paper surface level detect lever.
- The paper surface detect solenoid turns on to rotate the paper surface level detect lever downward.
- The paper surface detect solenoid turns off to allow the paper surface level detect lever to return to the upward position via spring force.



[1]	Paper surface detect sensor/2 (PS104)	[2]	Paper weight lever sensor (PS103)
[3]	Paper surface detect lever	[4]	Paper surface detect solenoid (SD101)

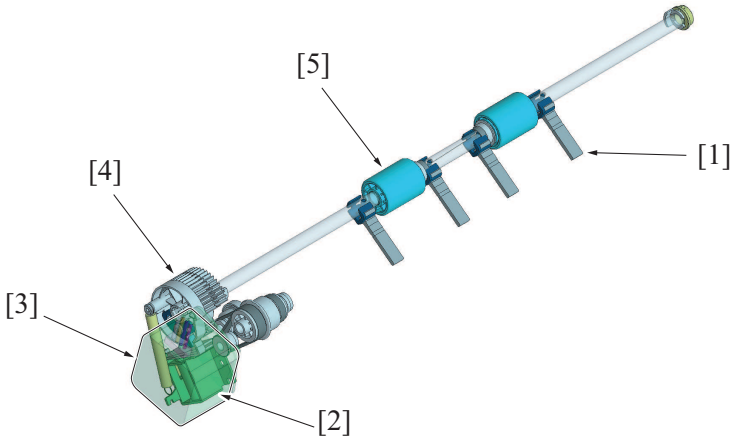


[1]	Paper surface detect sensor	[2]	Paper surface detect lever (upper position: when solenoid is turned OFF)
[3]	Paper surface detect lever (lower position: when solenoid is turned ON)	-	-

9.2.4 Paper exit roller section

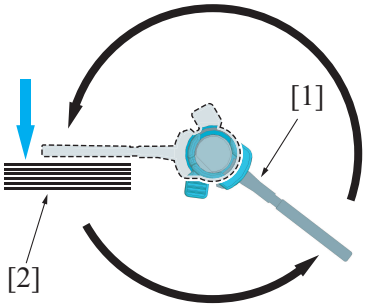
- The paper exit motor drives the paper exit roller/lower.
  For details of the paper exit roller/lower, see “Paper conveyance/receiving roller section drive” and “Paper exit roller/lower drive connecting process”.
- The paper exit paddle (4 points) on the drive shaft at the paper exit roller/lower, also rotates with the paper exit roller/lower.

(1) Overall view



[1]	Paper exit paddle	[2]	Paper exit roller solenoid (SD103)
[3]	Paper exit motor (M102)	[4]	Paper exit roller/lower drive gear
[5]	Paper exit roller/lower	-	-

(2) Paper press down paddle front view



[1]	Paper paddle (home position)	[2]	Paper on the paper exit tray

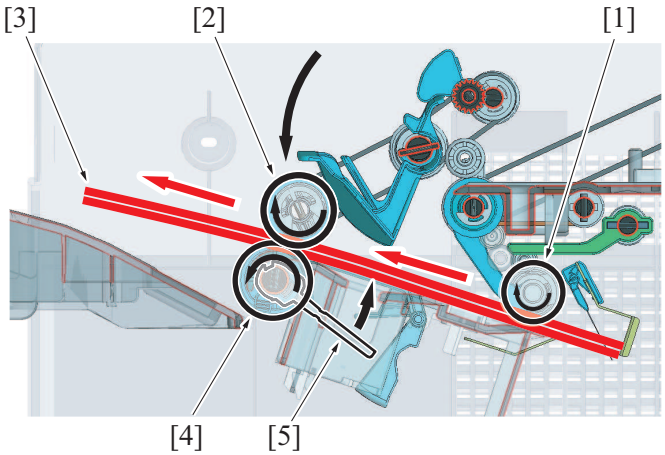
9.3 Operation

9.3.1 Paper exit paddle control

- There are paper exit paddles (4 points) installed on the paper exit roller/lower shaft. It rotates so that the paper exit paddle holds the rear edge of the paper when the paper passes through the paper exit roller/lower, and to discharge the paper to the paper exit tray without fail.

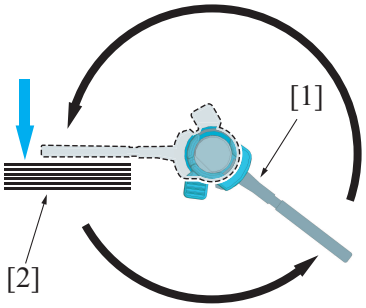
(1) Paper discharge process

1. When the last paper is aligned, the paper exit roller/upper moves down to hold all the paper on the alignment tray with the paper exit roller/lower and to discharge the paper to the paper exit tray with paper exit roller/upper, paper exit roller/lower and the alignment roller.



[1] Alignment roller
[2] Paper exit roller/upper
[3] Paper
[4] Paper exit roller/lower
[5] Paper exit paddle

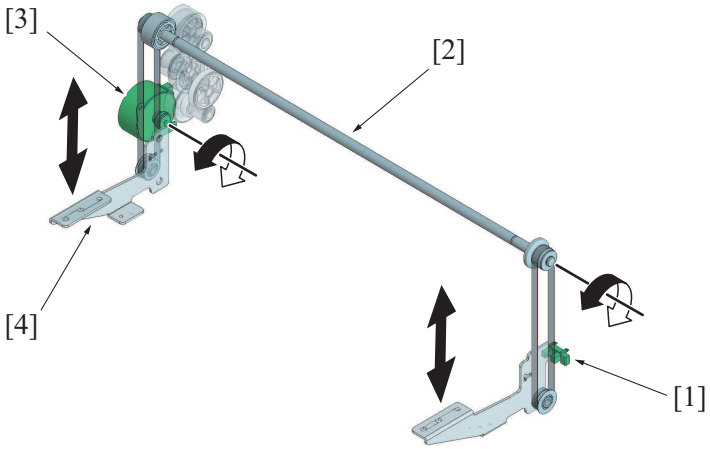
2. The paper exit paddle pushes out the rear edge of the paper which passed through the paper exit roller/lower to press the paper over the paper exit tray.
NOTE
   - **The paper exit paddle is installed on the paper exit roller/lower shaft. It rotates one revolution and stops as the exit roller/lower does.**
     For details of the paper exit roller/lower operation mechanism, see " PI.6.3.4 (1) Paper exit roller/lower drive connecting process".
3. The paper exit paddle presses the paper and returns to the home position.



[1] Paper exit paddle (home position)
[2] Paper on the paper exit tray
NOTE
   - **The paper exit paddle is made from soft rubber. It curves after discharging the paper to the paper exit tray to return to the home position inside the machine.**
4. After the paper exit paddle is retracted, the paper surface detect lever rotates to press the rear edge of the discharged paper.
For details of the paper surface detect lever operation mechanism, see " PI.9.3.3 Paper level detect control".

9.3.2 Paper exit tray lift up control

- The up/down motion of the paper exit tray is conducted by the tray lift up motor.
- When the tray lift up motor rotates forward, the tray drive belt rotates forward through the gear to lift up the paper exit tray.
- When the tray lift up motor rotates in a reverse direction, the tray drive belt rotates in a reverse direction through the gear to lower the paper exit tray.
- The paper exit tray home sensor detects the home position of the paper exit tray.
- The height of the paper exit tray is detected by the paper level detect mechanism. When a job is commanded, the paper surface detect lever operates to move the paper exit tray up/down according to the detected result.
  For details of the control, see " PI.9.3.3 Paper level detect control".



[1]	Paper exit tray home sensor (PS107)	[2]	Shaft
[3]	Tray lift up motor (M109)	[4]	Tray lifter

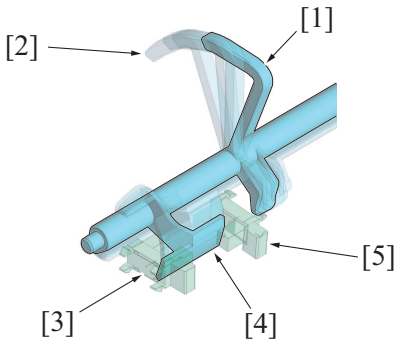
9.3.3 Paper level detect control

- The paper level is detected by the paper weight lever sensor and paper surface detect sensor/2. The height of the paper exit tray is controlled according to the detected result.
- The paper surface detect actuator rotates when the paper surface detect solenoid turns on, to hold the rear top face of the paper on the paper exit tray. The rotation value of the paper surface detect lever changes at this point, according to the paper load and the height of the paper exit tray.
- The paper weight lever sensor and paper surface detect sensor/2 are installed at different heights. (Paper weight lever sensor: high, paper surface detect sensor/2: low) The paper surface detect lever has two light shield plates with different lengths, which provides different detection result for each sensor with the rotation value found by the paper surface detect lever. The current paper level is judged according to the result so that the paper exit tray will be controlled to move up/down to the suitable height.
- The paper level is detected every time the paper is discharged to monitor the paper height. For consecutive printing, it also prevents discharged paper from being misaligned by the following paper being discharged.
- When the paper exit tray home sensor detects the exit tray while the paper exit tray is moving down, the paper exit tray is judged to be full and the warning message will be displayed on the control panel, informing that the paper exit tray is full.
- The paper surface detect lever moves down when the paper is removed from the paper exit tray. When the lever moves down, the paper is detected to be removed, and the paper exit tray full display will be released.

Paper level detect table

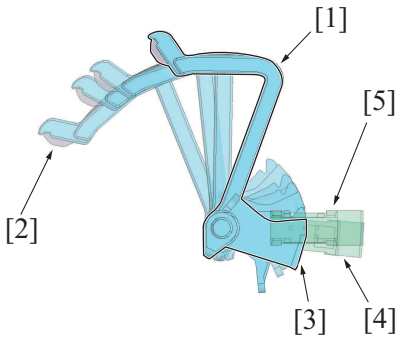
Paper surface detect sensor/2	Paper weight lever sensor	Paper level	Exit tray lift up control
Unblocked	Blocked	High	• The paper exit tray is at the higher position than the reference position. The tray lift up motor will be rotated in reverse direction and move the paper exit tray down to the reference position. • When the paper exit tray home sensor detects the paper exit tray while the paper exit tray is moving down, the exit tray is judged to be full, and the following printing job will be prohibited.
Blocked	Blocked		
Blocked	Unblocked	Reference position	• Reference position. The paper exit tray will not move up/down.
Unblocked	Unblocked	Low	• The paper exit tray is at the lower position than the reference position. The tray lift up motor will rotate to move the exit tray up to the reference position.

(1) Perspective view



[1]	Paper surface detect lever (Paper level: home position)	[2]	Paper surface detect lever (Paper level: low)
[3]	Paper surface detect sensor/2 (PS104) (Unblocked)	[4]	Light shield plate
[5]	Paper weight lever sensor (PS103) (Blocked)	-	-

(2) Front view



[1]	Paper surface detect lever (Paper level: home position)	[2]	Paper surface detect lever (Paper level: low)
[3]	Light shield plate	[4]	Paper surface detect sensor/2 (PS104) (Blocked)
[5]	Paper weight lever sensor (PS103) (Unblocked)	-	-

(3) Amount of paper stacking at the exit tray

- For details of the amount of paper stacking at the paper exit tray, see “C PRODUCT SPECIFICATIONS/FS-533”.

PJ THEORY OF OPERATION FS-534/FS-534SD/RU-513/PK-520

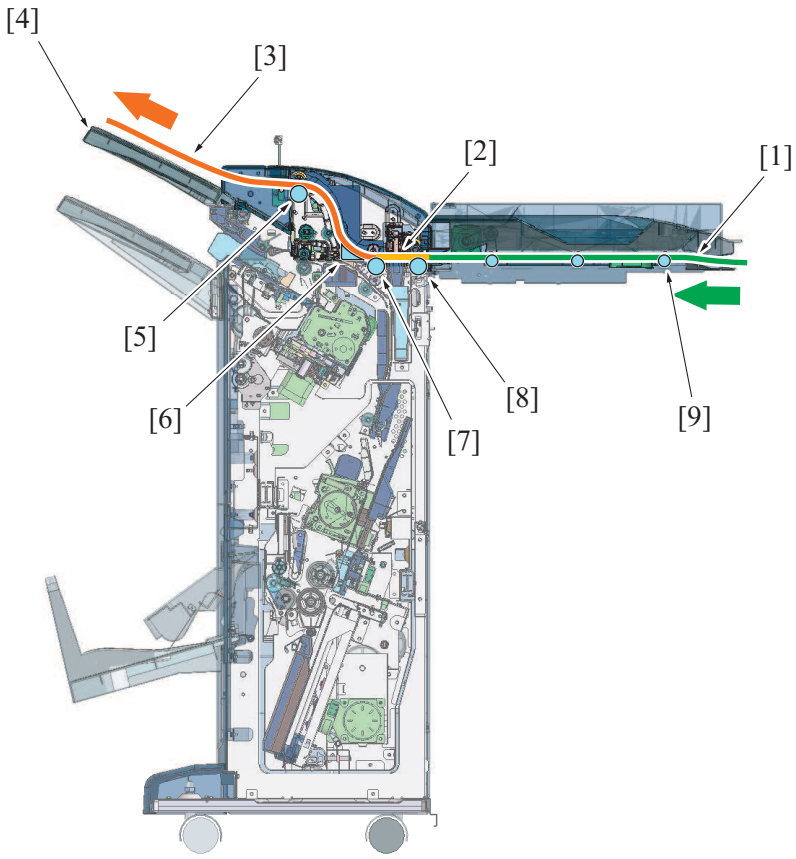
1. FINISHER OUTLINE

- Install the staple finisher FS-534 to the MFP enables the following functions. "Sort function, Sort offset function", "Group function, Group offset function", "Staple function", "Sort staple function", and "Large capacity receiving function".
- The "Punch function" can be added by installing the optional function (Punch Kit PK-520).
- On the staple finisher FS-534SD, "Saddle stitching function and Tri-folding function" is provided in addition to all functions that are provided on the staple finisher FS-534.

Option	Summary of the additional functions
RU-514	Connecting the MFP with the FS-534
PK-520	Punch function
FS-534SD	FS-534 + Folding function, Saddle stitching function, Tri-folding function

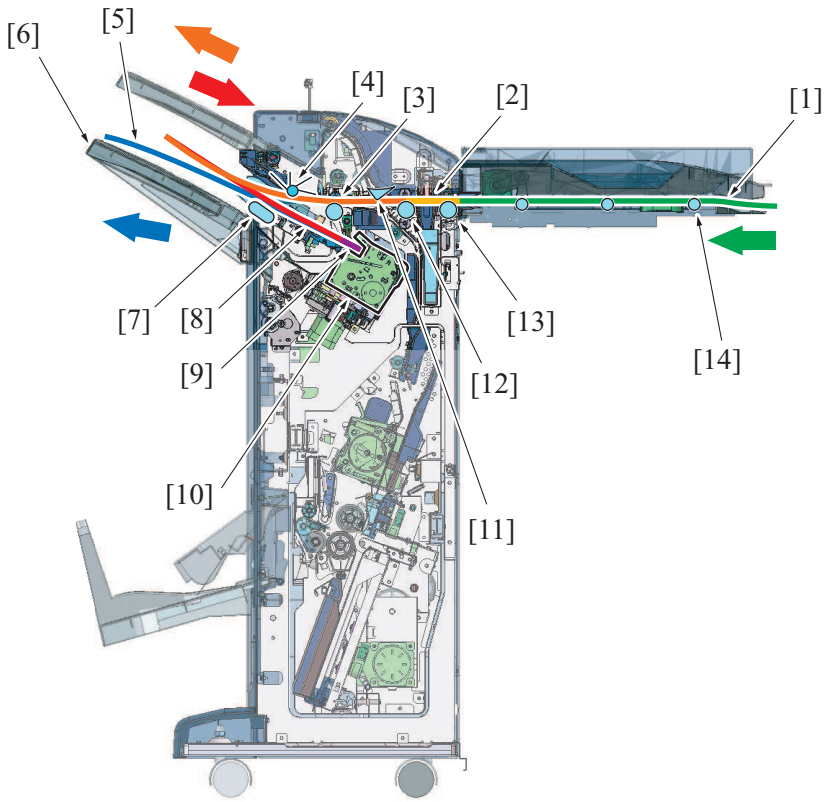
2. PAPER PATH

2.1 Sub tray



[1]	Paper feed (Paper path from the exit section of MFP)	[2]	Punching holes
[3]	Paper exit	[4]	Sub tray
[5]	Sub tray section exit roller	[6]	Paper path switching gate (lower position)
[7]	FNS section transport roller	[8]	FNS section paper feed roller
[9]	RU section horizontal transport roller	-	-

2.2 Main tray

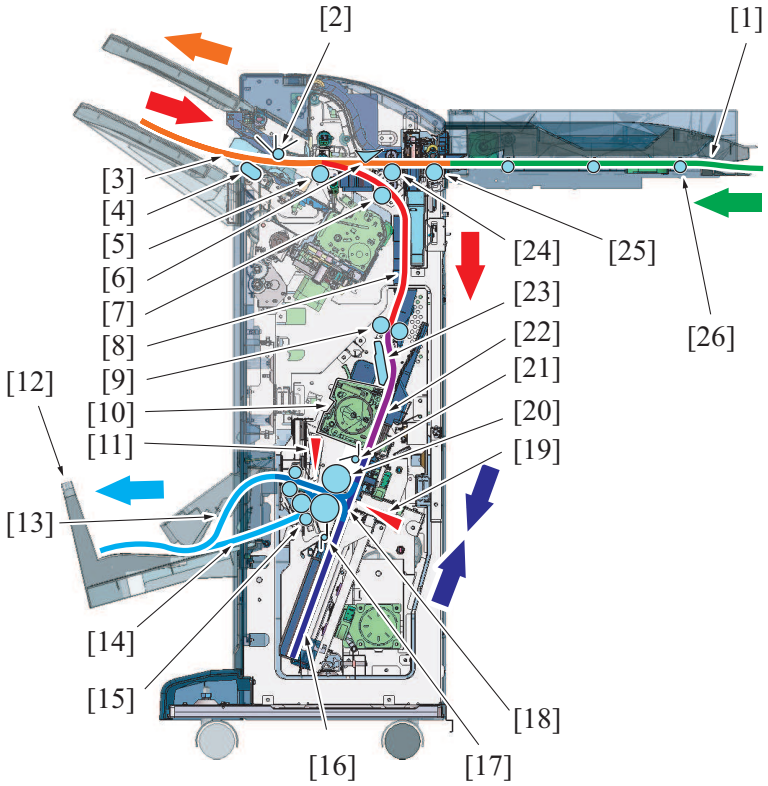


[1]	Paper feed (Paper path from the exit section of MFP)	[2]	Punching holes
[3]	Paper transport	[4]	Exit section upper paddle
[5]	Paper exit	[6]	Main tray
[7]	Exit section lower paddle	[8]	Paper alignment
[9]	Staple (staple mode)	[10]	Stapler
[11]	Paper path switching gate (upper position)	[12]	FNS section transport roller
[13]	FNS section paper feed roller	[14]	RU section horizontal transport roller

2.3 Saddle tray

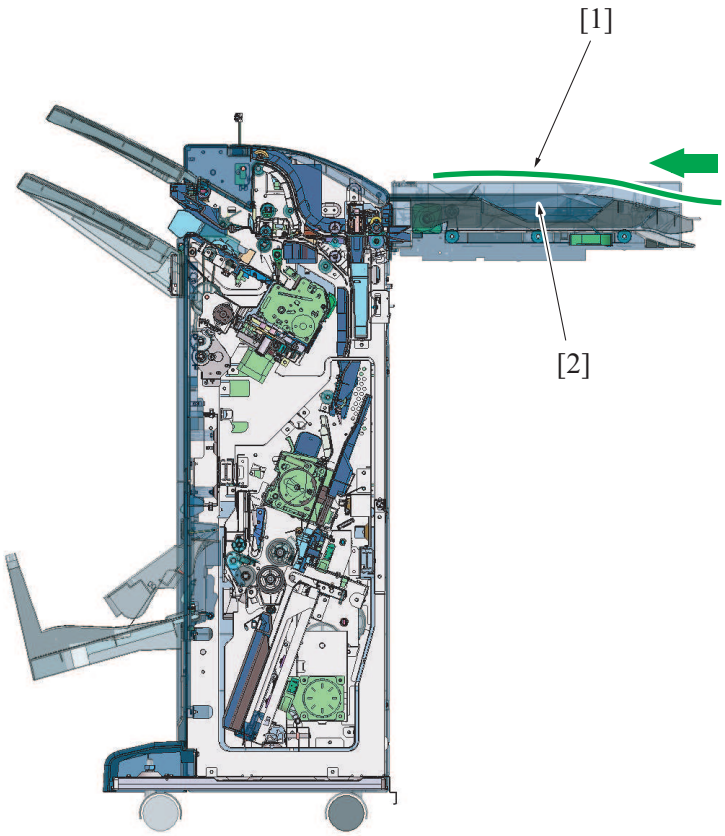
NOTE

- **FS-534SD only**



[1]	Paper feed (Paper path from the exit section of MFP)	[2]	Exit section upper paddle
[3]	Paper transport (switchback)	[4]	Exit section lower paddle
[5]	Receiving roller	[6]	Paper path switching gate (upper position)
[7]	FNS section exit roller	[8]	Paper vertical transport
[9]	Saddle section paper feed roller	[10]	Center stapler
[11]	Tri-folding knife	[12]	Saddle tray
[13]	Paper batch exit (center staple mode)	[14]	Paper batch exit (tri-folding mode)
[15]	Tri-folding roller	[16]	Paper alignment (FD)
[17]	Center folding section lower paddle	[18]	Paper fold (center folding, tri-folding)
[19]	Center fold knife	[20]	Center folding roller
[21]	Center folding section upper paddle	[22]	Paper alignment (CD), center staple
[23]	Curl cover	[24]	FNS section transport roller
[25]	FNS section paper feed roller	[26]	RU section horizontal transport roller

2.4 3rd tray



[1]	Paper exit	[2]	RU section (horizontal transport section): Relay unit RU-514

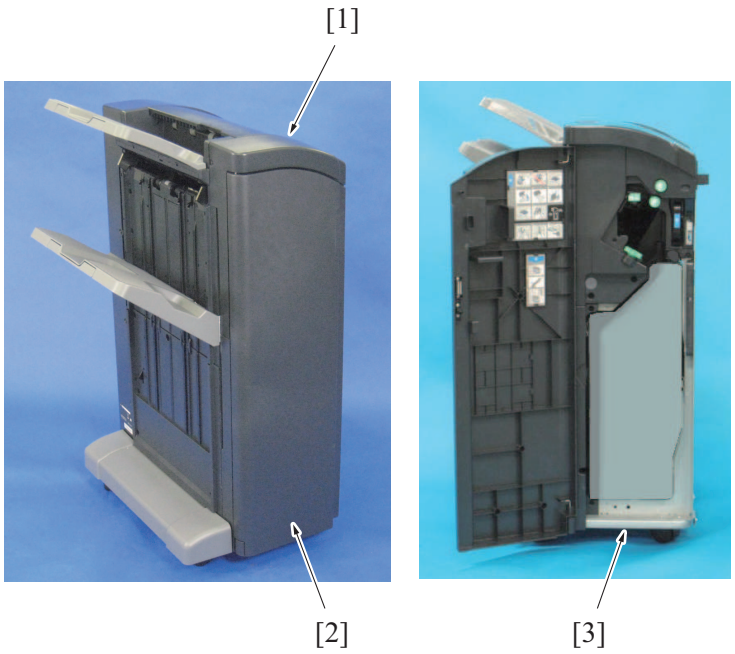
3. CONFIGURATION

3.1 Section configuration

- The staple finisher FS-534 is installed with the finisher main body being fixed on the left side of the MFP. At the time of maintenance, open and close the RU door, the upper door and front door on the finisher. A docking mechanism to slide the finisher from the MFP is not provided.
- The FS-534 comes standard with a sorting mechanism and a stapling mechanism.
- The FS-534SD includes folding function, saddle stitching function, and tri-folding function in addition to all of the functions of the FS-534.
- Also, the optional punch kit PK-520 and the saddle stitcher can be added to the FS-534/534SD.
- At maintenance of the FS-534SD saddle section, pull the saddle section frontward from the finisher.

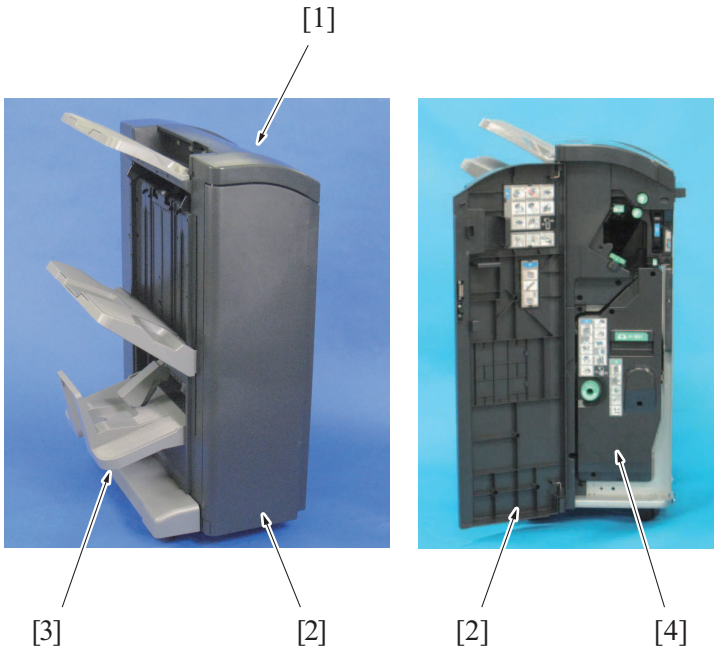
3.1.1 Exterior view

(1) FS-534



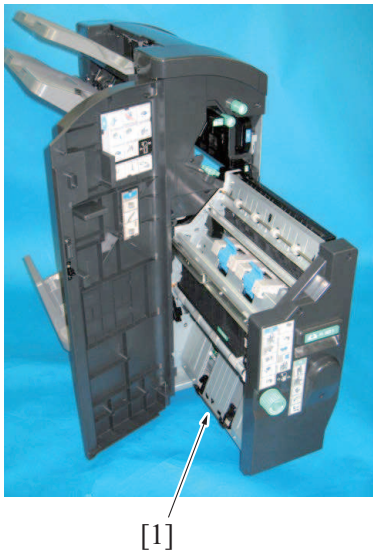
[1]	FS-534	[2]	Front door
[3]	Front door inside	-	-

(2) FS-534SD



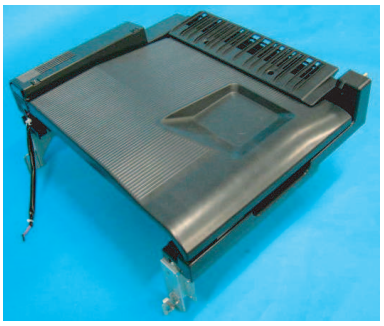
[1]	FS-534SD	[2]	Front door
[3]	Saddle tray section	[4]	Saddle section

(a) Saddle section

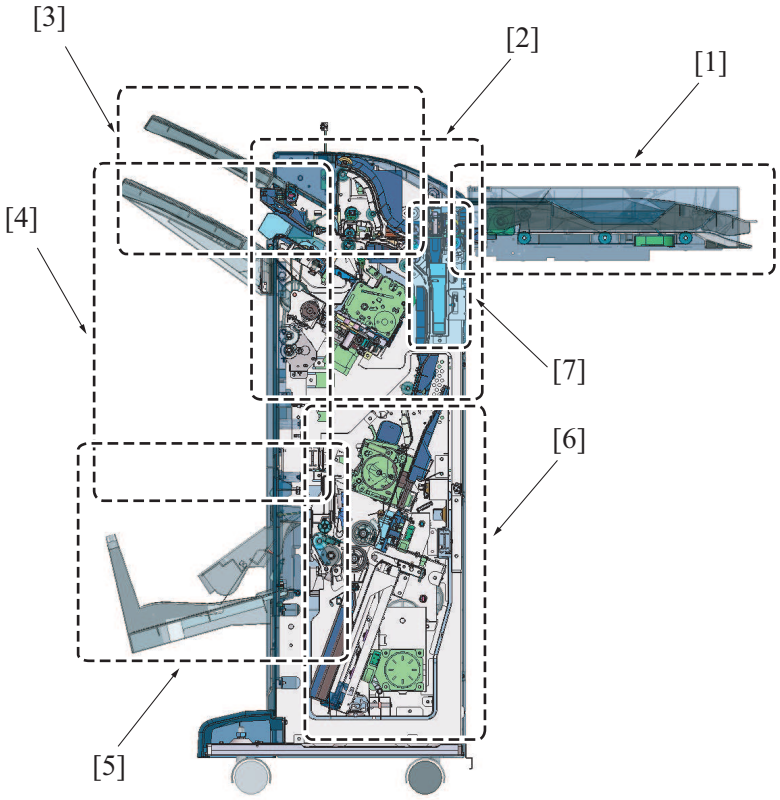


[1]	Saddle section slide status	-	-

(3) RU-514



3.1.2 Section configuration



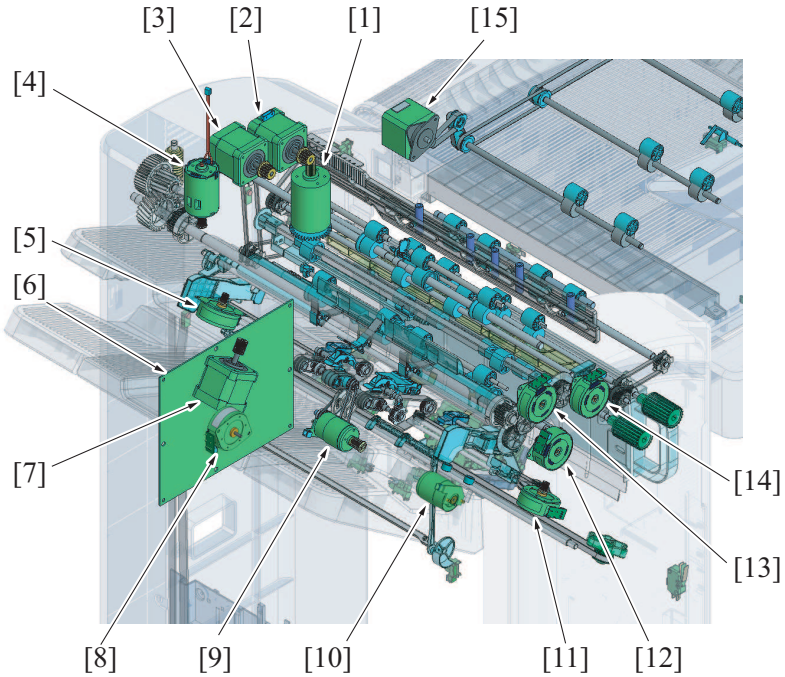
[1]	RU section (horizontal transport section): Relay unit RU-514	[2]	FNS section (finisher section)
[3]	Exit section (sub tray)	[4]	Exit section (main tray)

[5]	Saddle tray section (FS-534SD only)	[6]	Saddle section (FS-534SD only)
[7]	Punch section (only when the punch kit PK-520 is mounted)	-	-

3.2 Main electrical part configuration

3.2.1 Control board, motor

(1) RU section, Punch section, FNS section

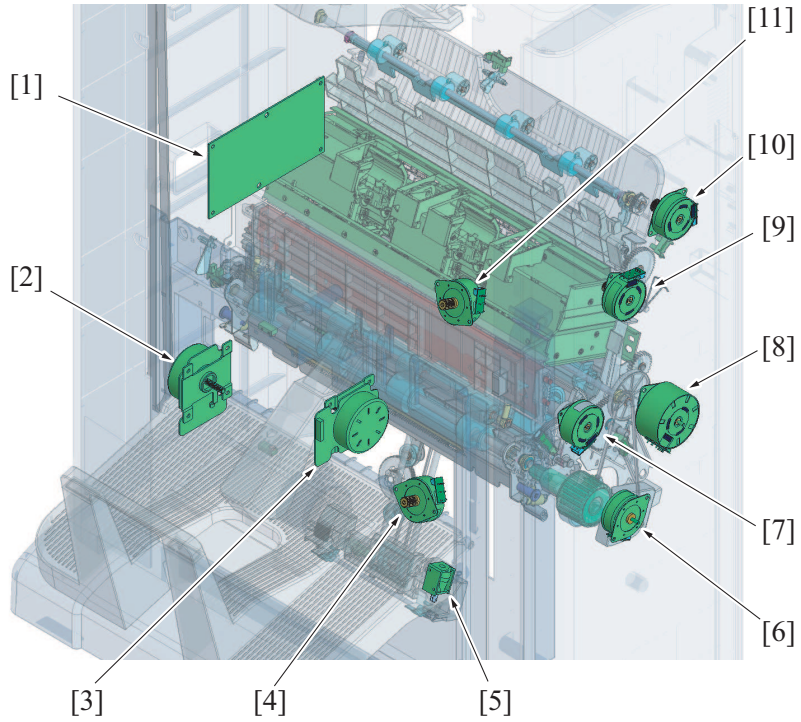


[1]	Punch drive motor (M1): Punch kit	[2]	FNS entry transport motor (M2)
[3]	FNS discharge motor (M3)	[4]	Main tray up/down motor (M11)
[5]	Alignment motor/Rear (M8)	[6]	FS control board (FSCB)
[7]	Side stapler movement motor (M13)	[8]	Paper receiving control motor (M12)
[9]	Pre-eject drive motor (M9)	[10]	Bundle eject motor (M10)
[11]	Alignment motor/Front (M7)	[12]	Trailing edge stopper motor (M6)
[13]	FNS paddle motor (M5)	[14]	Receiving roller retraction motor (M4)
[15]	RU transport motor (M1)	-	-

(2) Saddle section

NOTE

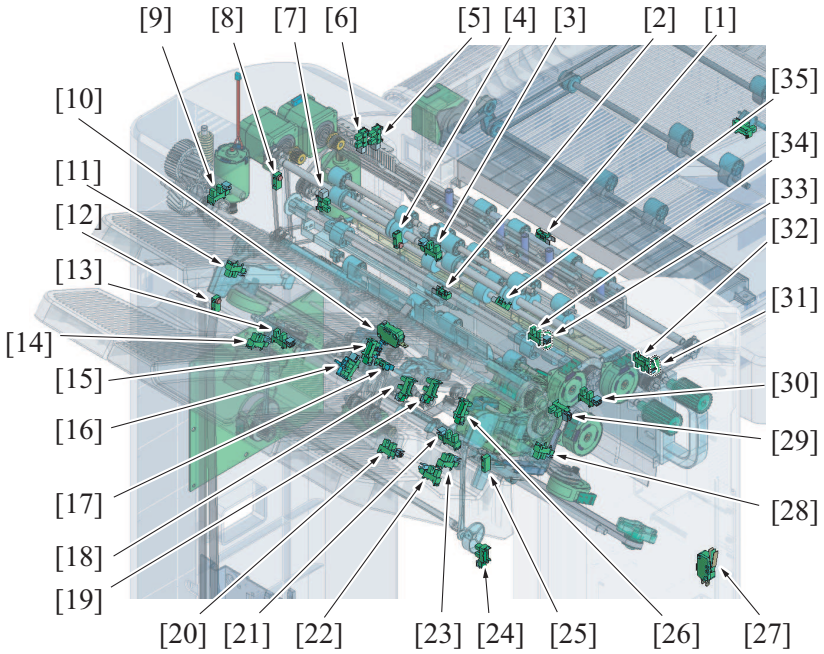
- **FS-534 only**



[1]	SD drive board (SDDB)	[2]	Center fold roller motor (M5)
[3]	Center fold knife motor (M9)	[4]	Stopper drive motor (M4)
[5]	Stopper solenoid (SD1)	[6]	SD paddle motor (M7)
[7]	Tri-folding guide motor (M6)	[8]	Center fold guide motor (M8)
[9]	Paper discharge control motor (M2)	[10]	SD transport motor (M1)
[11]	Alignment motor (M3)	-	-

3.2.2 Sensor

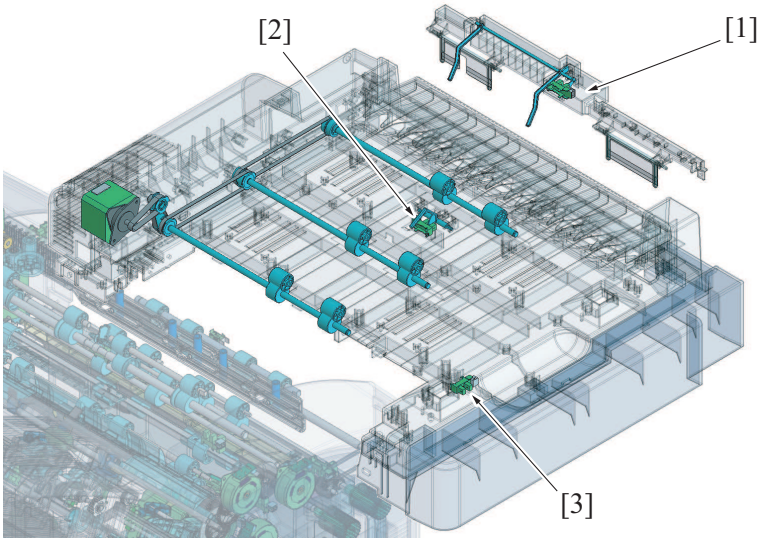
(1) FNS section



[1]	FNS entrance sensor (PS4)	[2]	Main tray exit sensor (PS16)
[3]	Sub tray exit sensor (PS8)	[4]	Punch dust full sensor/in (PS5): Punch kit
[5]	Punch home sensor (PS1): Punch kit	[6]	Punch position sensor (PS2): Punch kit
[7]	Punch motor sensor (PS3): Punch kit	[8]	Sub tray full detection sensor/out (PS9)
[9]	Stacker motor sensor (PS25)	[10]	Main tray upper position detect switch (SW2)
[11]	Alignment plate/R home sensor (PS13)	[12]	Main tray upper sensor/out (PS6)
[13]	Main tray upper position sensor/R (PS26)	[14]	Stapler home position sensor (Rear) (PS23)

[15]	Gripper position detection sensor (PS19)	[16]	Gripper home position sensor (PS18)
[17]	Staple stacker paper detection sensor (PS31)	[18]	Pre-eject away sensor (PS22)
[19]	Pre-eject home sensor (PS21)	[20]	Pre-eject encorder sensor (PS15)
[21]	Main tray upper position sensor/F (PS27)	[22]	Gripper motor sensor (PS17)
[23]	Stapler position sensor (Center) (PS24)	[24]	Paper delivery control sensor (PS28)
[25]	Main tray upper sensor (PS7)	[26]	Trailing edge stopper home position detection sensor (PS20)
[27]	Front door open detect switch (SW1)	[28]	Alignment plate/F home sensor (PS12)
[29]	Upper paddle home position detection sensor (PS14)	[30]	Receiving roller retraction sensor (PS11)
[31]	Punch dust full sensor/out (PS4): Punch kit	[32]	Exchange folded paper output sensor (PS30)
[33]	Sub tray full detection sensor/in (PS10)	[34]	Upper cover open/close detection sensor (PS32)
[35]	Saddle exit sensor (PS5)	-	-

(2) RU section (horizontal transport section)

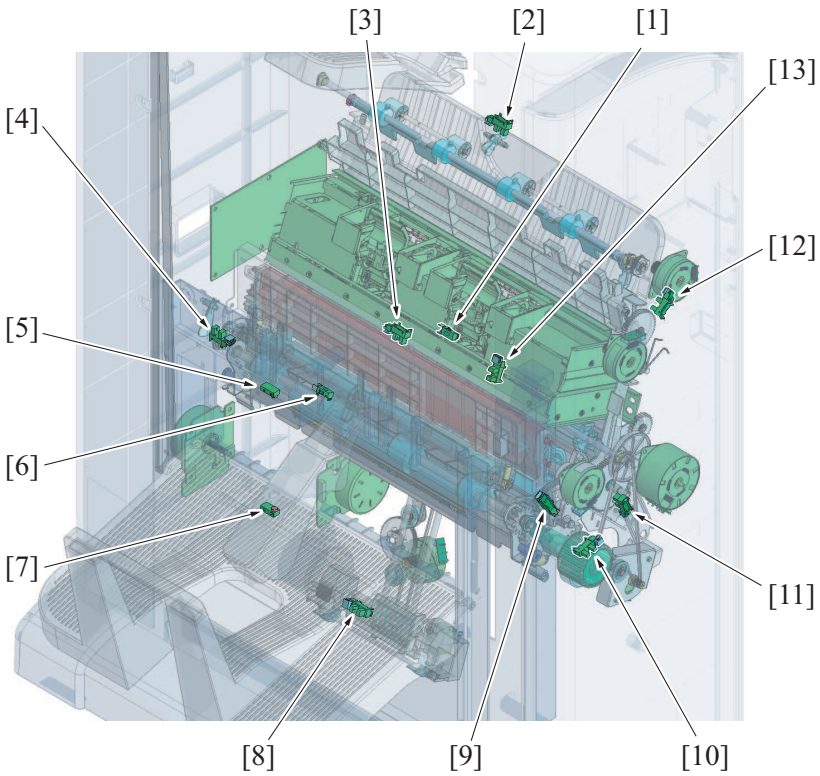


[1]	3rd exit tray full sensor (PS1)	[2]	RU entrance sensor (PS2)
[3]	RU cover open/close detection sensor (PS3)	-	-

(3) Saddle section

NOTE

- **FS-534SD only**

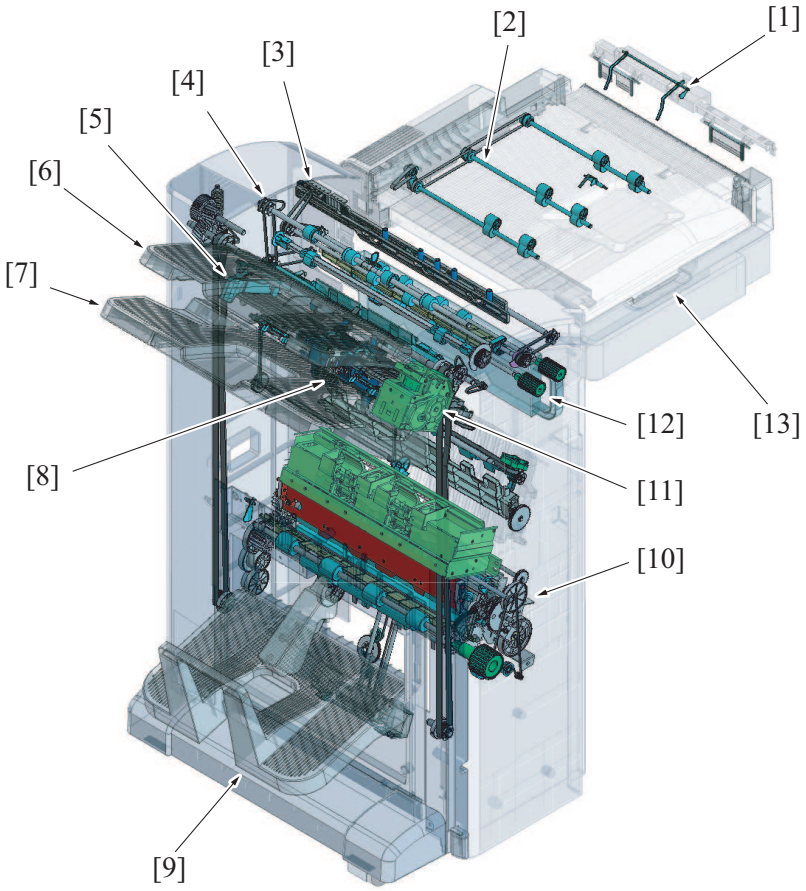


[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	SD entrance sensor (PS1)
[3]	Center fold knife home sensor (PS8)	[4]	Main tray full detection sensor (PS29) * : finisher
[5]	Booklet tray empty detection sensor/in (PS13)	[6]	Fold exit sensor (PS12)
[7]	Booklet tray empty detection sensor/out (PS14)	[8]	Stopper home sensor (PS6)
[9]	Tri-folding gate home sensor (PS11)	[10]	Paddle home sensor (PS5)
[11]	Guide home sensor (PS7)	[12]	Curl cover detection sensor (PS2)
[13]	Alignment home sensor (PS4)	-	-

- *: The position to install the main tray full detection sensor differs between the FS-534 and FS-534SD. (The main tray capacity for the FS-534 is 3,000 sheets. The capacity for the FS-534SD is 2,000 sheets.) The illustration shows the sensor position for the FS-534SD.

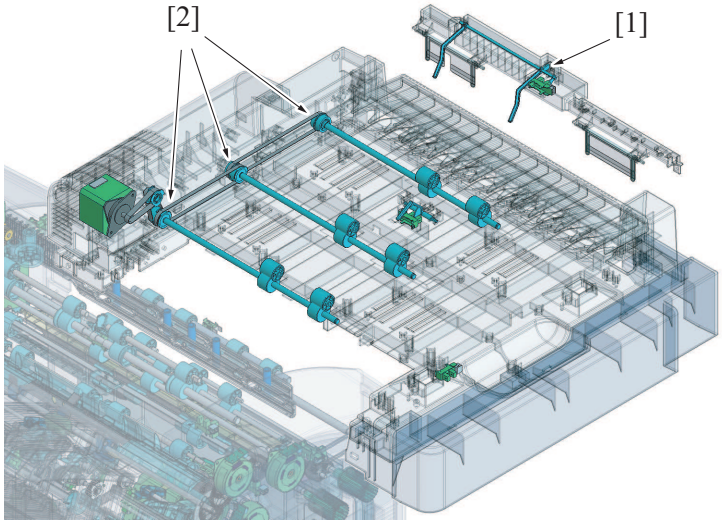
3.3 Main mechanical part configuration

3.3.1 Overall configuration



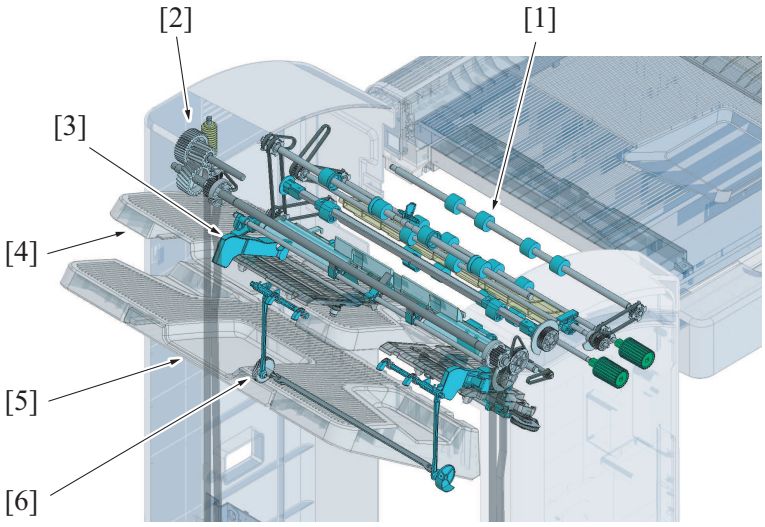
[1]	Exit tray full detection mechanism (when paper exit/ reverse section of the MFP is mounted)	[2]	RU section horizontal transport roller
[3]	Punch section: Punch kit PK-520	[4]	Paper feed/transport section
[5]	Alignment section	[6]	Sub tray
[7]	Main tray	[8]	Exit section
[9]	Saddle tray	[10]	Saddle section: Finisher FS-534SD only
[11]	Staple section	[12]	Punch dust box: Punch kit PK-520
[13]	RU section (horizontal transport section)	-	-

3.3.2 RU section (horizontal transport section)



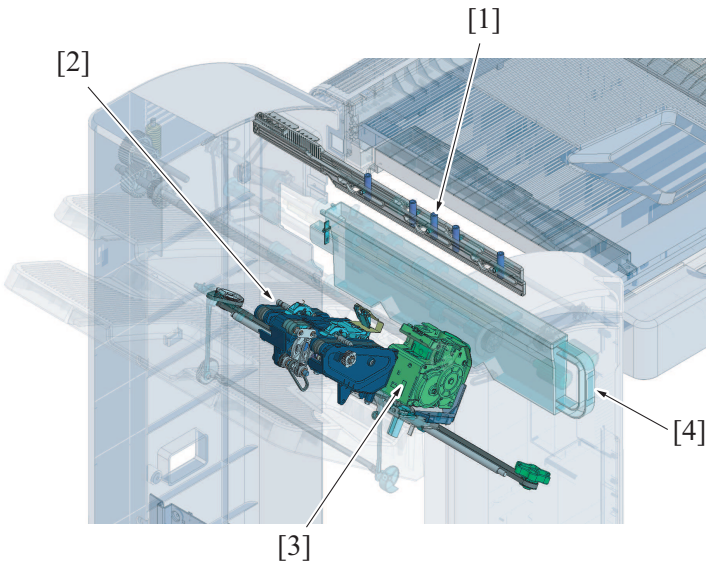
[1]	3rd exit tray full detection sensor actuator	[2]	RU section horizontal transport roller

3.3.3 Paper feed/transport section, Alignment section, Tray section



[1]	Paper feed/transport section	[2]	Main tray up/down section
[3]	Alignment section	[4]	Sub tray
[5]	Main tray	[6]	Main tray paper surface detection mechanism

3.3.4 Punch section, Staple section, Exit section



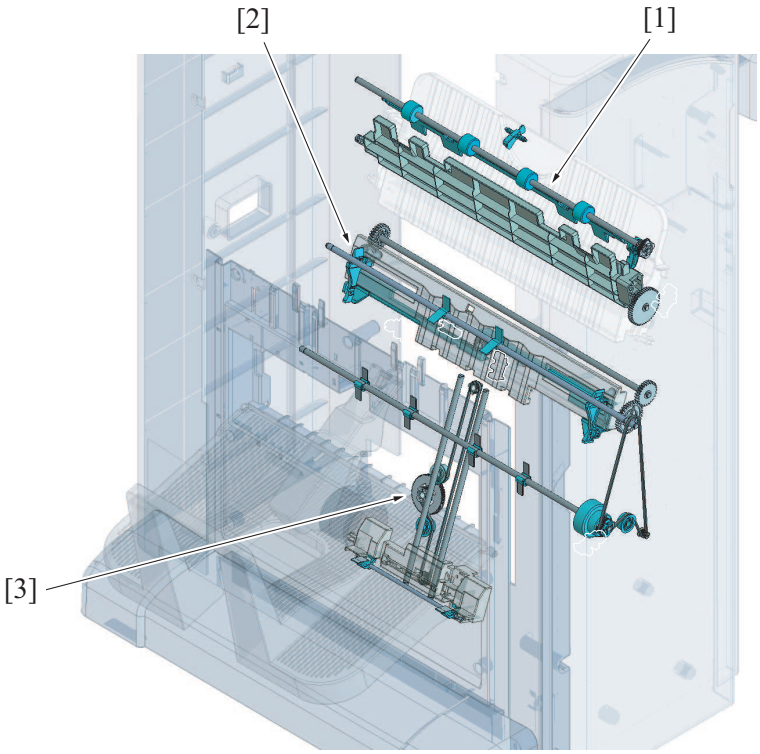
[1]	Punch section: Punch kit PK-520	[2]	Exit section
[3]	Staple section	[4]	Punch dust box: Punch kit PK-520

3.3.5 Saddle section

NOTE

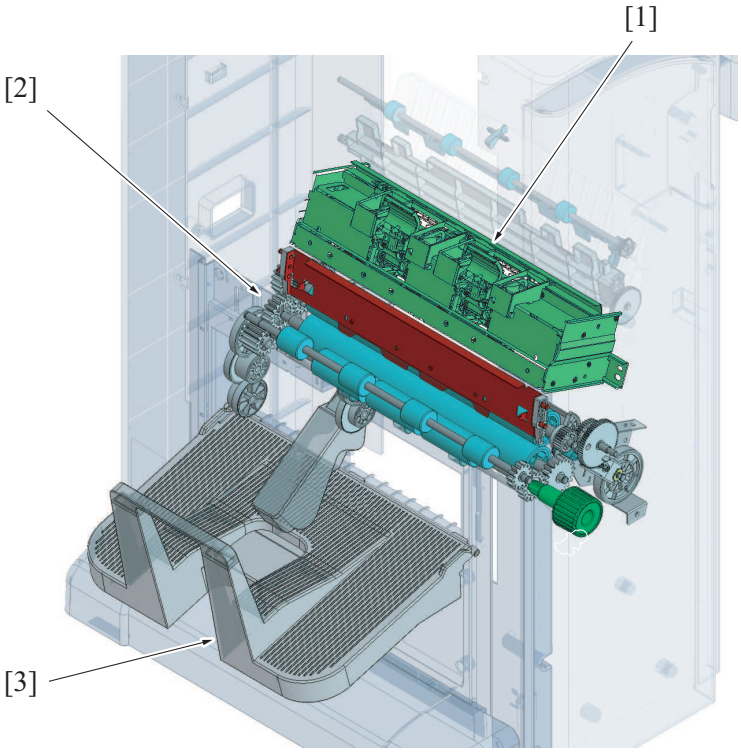
- **FS-534SD only**

(1) Alignment section



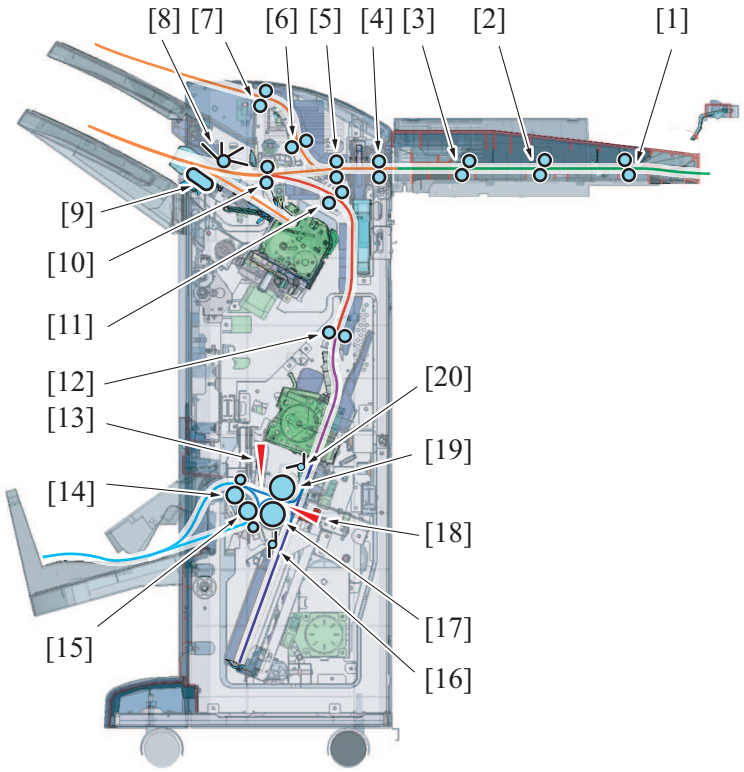
[1]	Saddle stitcher paper feed section	[2]	Center folding stacker CD alignment section
[3]	Center folding stacker FD alignment section	-	-

(2) Folding section



[1]	Center staple unit	[2]	Folding section (center folding section/tri-folding section)
[3]	Saddle tray	-	-

3.4 Main roller configuration



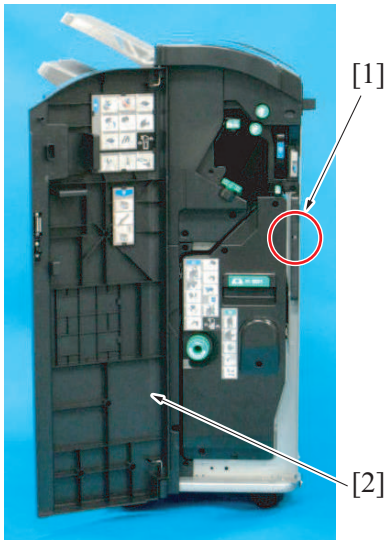
[1]	RU section horizontal transport roller/1	[2]	RU section horizontal transport roller/2
[3]	RU section paper feed roller/3	[4]	FNS section paper feed roller
[5]	FNS section transport roller	[6]	Sub tray section vertical transport roller
[7]	Sub tray section exit roller	[8]	Exit section upper paddle
[9]	Exit section lower paddle	[10]	Receiving roller
[11]	FNS section exit roller	[12]	Saddle section paper feed roller
[13]	Tri-folding knife	[14]	Saddle section exit roller
[15]	Tri-folding roller	[16]	Center folding section lower paddle
[17]	Center folding roller/2	[18]	Center folding knife
[19]	Center folding roller/1	[20]	Center folding section upper paddle

4. FNS SECTION

4.1 Door open/close detection mechanism

4.1.1 Front door open/close detection mechanism

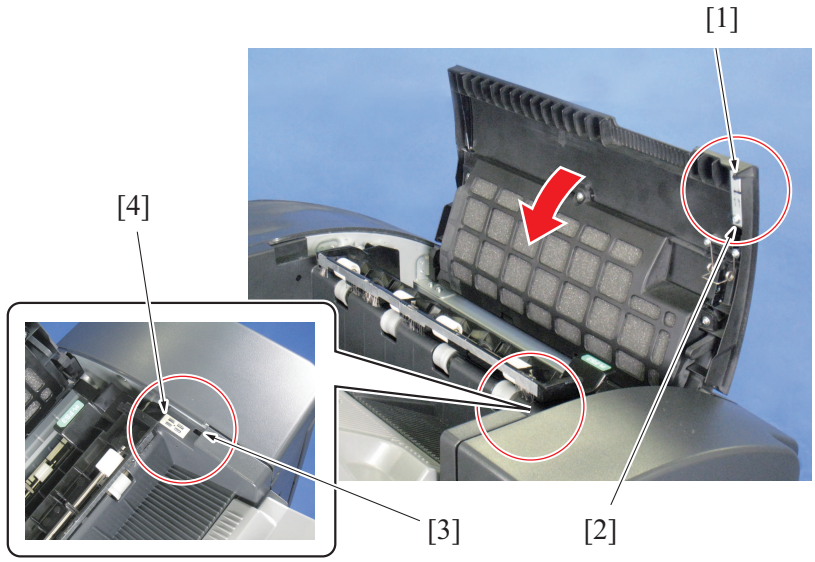
- The front door open detect switch installed at the front right of the FNS section detects open/close of the finisher's front door.
- Open the front door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Front door open detect switch (SW1)	[2]	Front door

4.1.2 Upper door open/close detection mechanism

- The upper cover open/close detection sensor is installed at the front left of the FNS section to detect open/close of the finisher upper door.
- Open the upper door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.

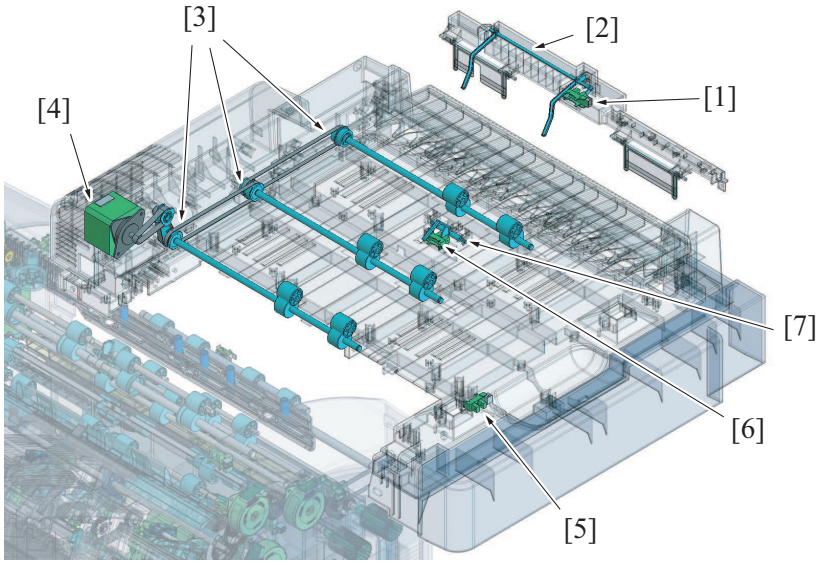


[1]	Upper door open/close detection lever	[2]	Upper door lock plate
[3]	Upper cover open/close detection sensor (PS32)	[4]	Upper door lock magnet

5. RU SECTION (RU-513)

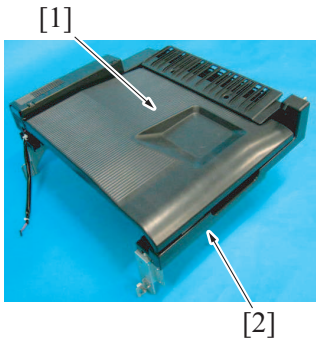
5.1 Configuration

- The RU section (horizontal transport section) transfers paper that is fed out from the MFP paper exit section to an optional finisher paper feed section.
- The RU door is installed at the upper part of the RU section. Access to the horizontal transport roller is enabled by opening the door upward. To be used for periodical cleaning of the roller and dealing with the paper misfeed at the RU section and other necessary operations.



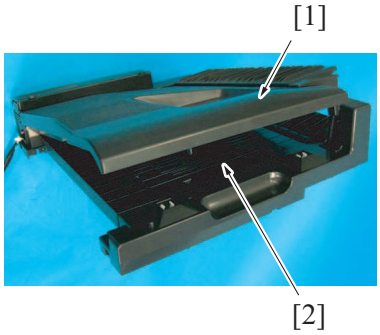
[1]	3rd exit tray full sensor (PS1): Exit section of MFP	[2]	3rd exit tray full sensor actuator: Exit section of MFP
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

3rd tray on the RU section



[1]	3rd tray	[2]	Relay unit RU-513

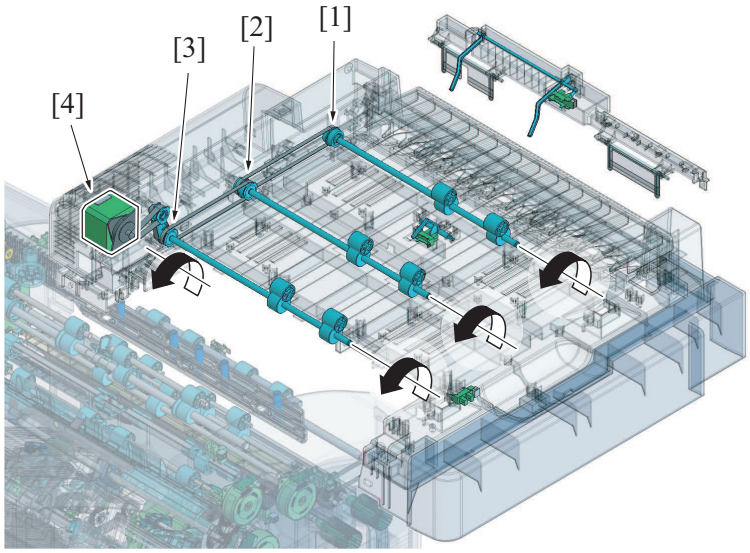
RU section door is opened



[1]	RU section door	[2]	Horizontal transport section

5.2 Drive

- The RU transport motor drives the RU section. It drives three RU section horizontal transport roller.
- The RU section horizontal transport roller is driven using the drive belt.



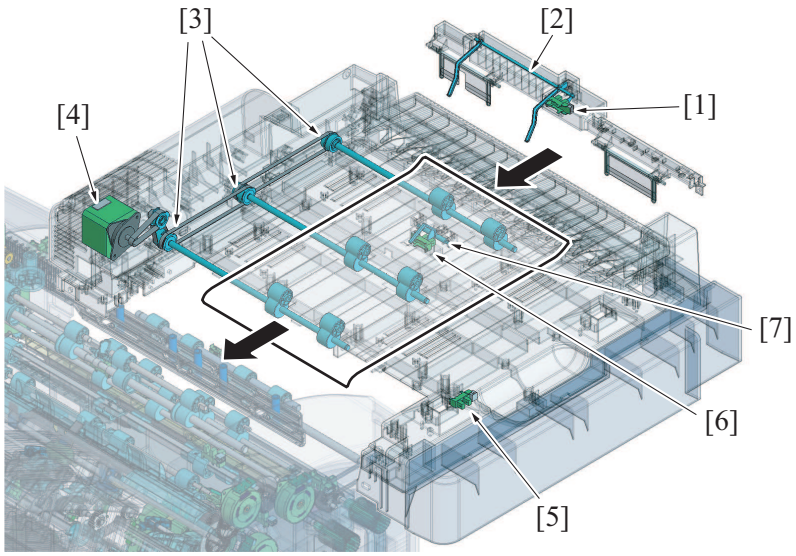
[1]	RU section horizontal transport roller/1	[2]	RU section horizontal transport roller/2
[3]	RU section horizontal transport roller/3	[4]	RU transport motor (M1)

5.3 Operation

5.3.1 Paper transport control

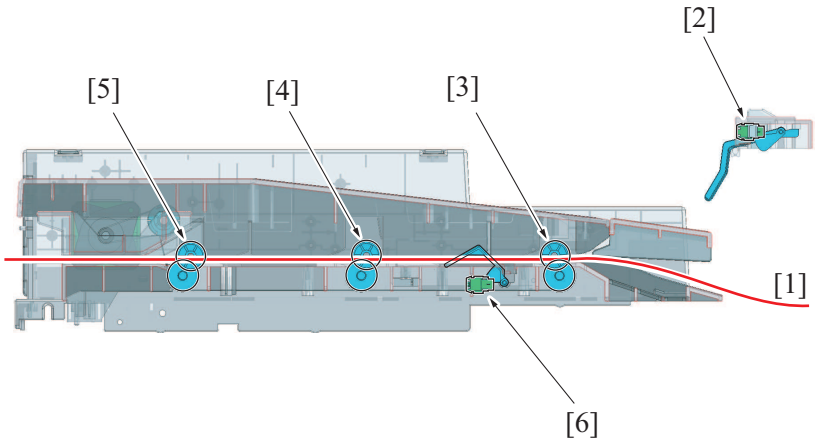
- It transports the paper that is discharged from the lower exit of the MFP paper exit section, to the RU section with the feed guide.
- It transports the paper to the FNS section, using three RU section horizontal transport rollers.
- The RU entrance sensor actuator is installed downstream of the paper path of the RU section horizontal transport roller/1, and the RU entrance sensor detects the paper transportation status.

Perspective view



[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

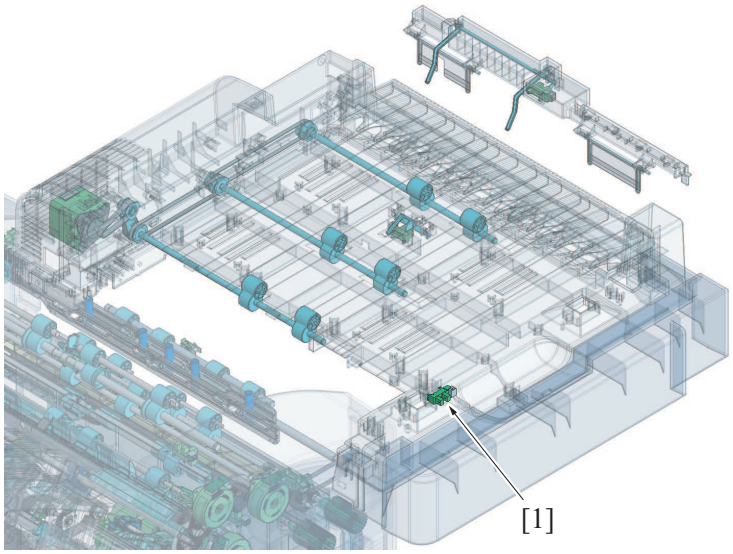
Front view



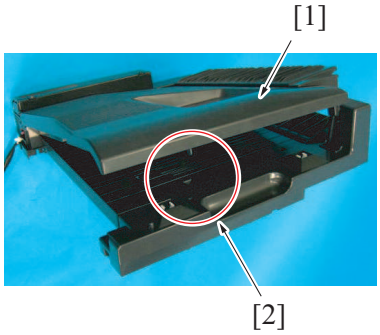
[1]	Paper	[2]	3rd exit tray full sensor (PS1)
[3]	RU section horizontal transport roller/1	[4]	RU section horizontal transport roller/2
[5]	RU section horizontal transport roller/3	[6]	RU entrance sensor (PS2)

5.3.2 RU section door open/close detection mechanism

- The RU cover open/close detection sensor installed at the front left of the RU section, detects open/close of the RU door.
- Opening the RU door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



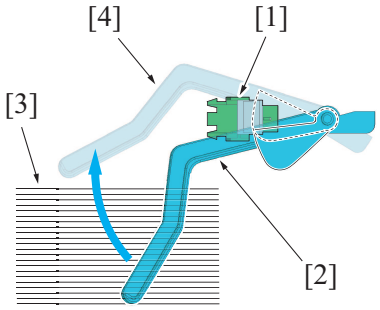
[1]	RU cover open/close detection sensor (PS3)	-	-



[1]	RU door	[2]	RU cover open/close detection sensor (PS3)

5.3.3 3rd exit tray full detection mechanism

- When a predetermined quantity of paper is discharged to the 3rd exit tray, the 3rd exit tray full sensor actuator will be pushed up by the discharged paper. When the actuator is pushed up to the predetermined position, the 3rd exit tray full sensor will be blocked by the actuator to detect the exit tray full.
- The 3rd tray full is detected, the warning screen will display on the control panel. All setting operations and jobs will be disabled when the warning message is displayed on the screen. The warning screen will be released by removing the paper on the 3rd exit tray.

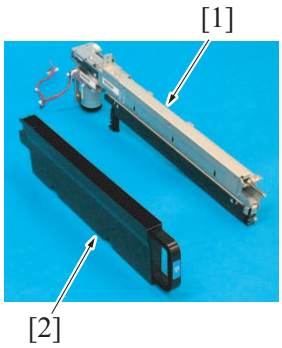


[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator (no paper)
[3]	Paper	[4]	3rd exit tray full sensor actuator (exit tray full)

6. PUNCH SECTION (PK-520)

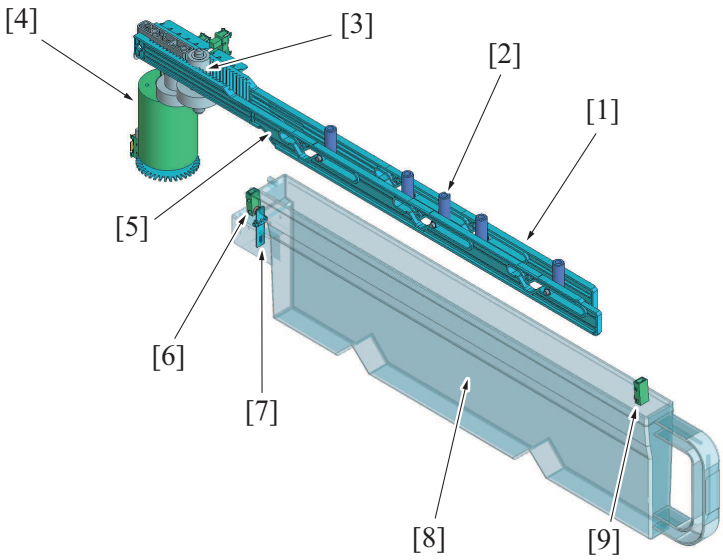
6.1 Configuration

- The punch function can be added to the finishing mode by installing the optional punch kit PK-520 to the finisher FS-534.
- At the punch section, the holes are punched at the trailing edge of the paper, transported from the RU section (horizontal transport section) when the paper is fed into the FNS section (finisher section). Holes are punched sheet by sheet.
- The punch kits for North America, Europe, and other market areas have the configuration to switch the number of punch holes.
  NOTE
  - **2-hole punch kits and 4-hole punch kits do not have the function to switch the number of punch holes.**
  - **"Finishing" cannot be selected using a different punch kit. (Example: The three-hole punch mode cannot be selected when the 4-hole punch kit is installed.)**
- Punch dust generated by punching is received in the punch dust box.
- The paper with punched holes is transported to the transport section from the punch section.
- When the punch holes are not specified at "Finishing", the paper is transported to the transport section from the FNS paper feed section without punching holes.

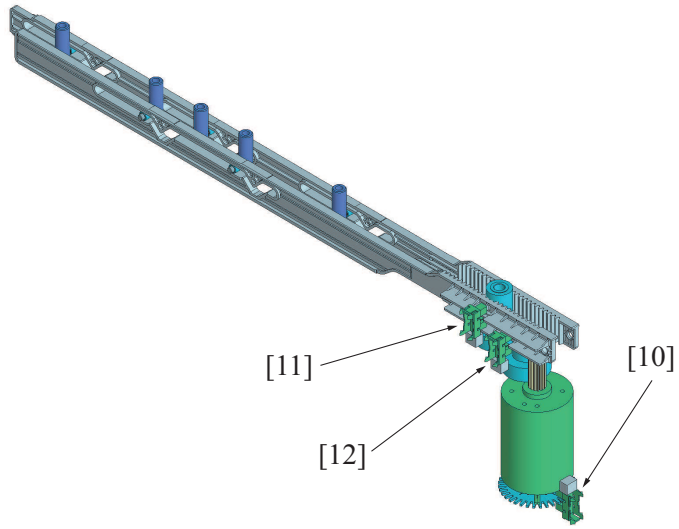


[1]	Punch unit	[2]	Punch dust box

Front view



Rear view

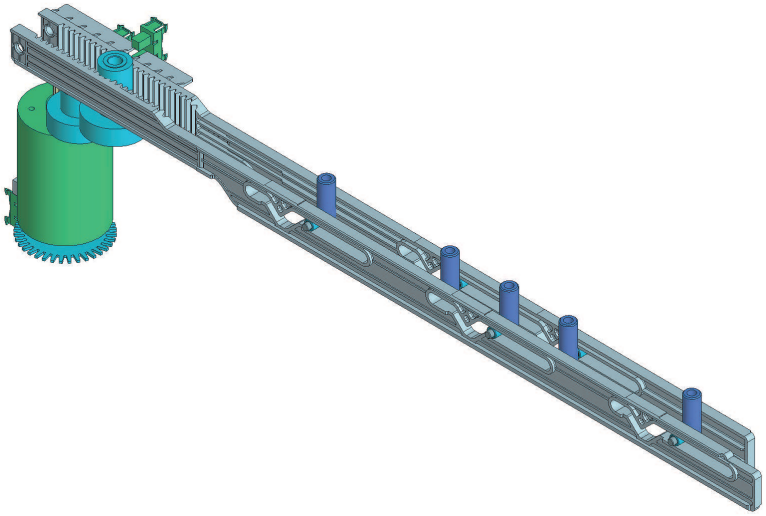


[1]	Puncher frame 1 *1	[2]	Puncher *2
[3]	Puncher drive gear	[4]	Punch drive motor (M1)
[5]	Puncher frame 2 *3	[6]	Punch dust full sensor/in (PS5)
[7]	Punch dust full sensor actuator	[8]	Punch dust box
[9]	Punch dust full sensor/out (PS4)	[10]	Punch motor sensor (PS3)
[11]	Punch home sensor (PS1)	[12]	Punch position sensor (PS2)

- *1: The shape of the puncher frame is varied depending on the type of punch kit.
- *2: The number of the puncher is varied depending on the type of punch kit.
- *3: The shape of the puncher frame is varied depending on the type of punch kit. 2 holes punch kit does not have the puncher frame 2.

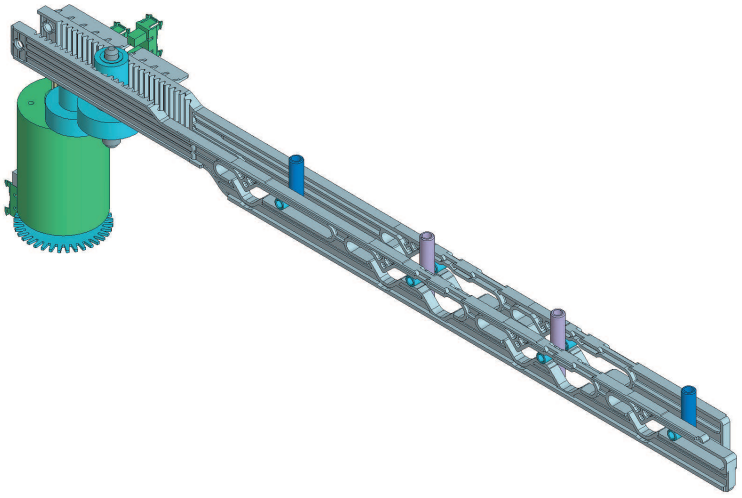
6.1.1 Punch kit type

2 holes/3 holes kit (Selectable the hole number)



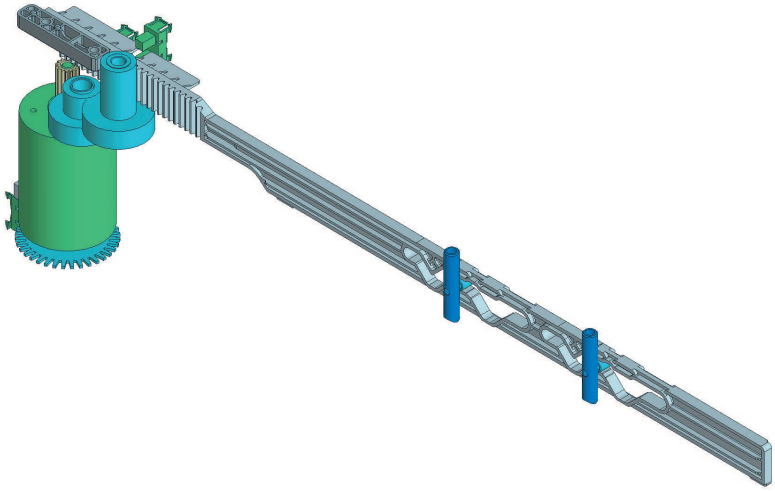
- Attachable marketing area: Europe, US, Others 1-5

2 holes/4 holes kit (Selectable the hole number)



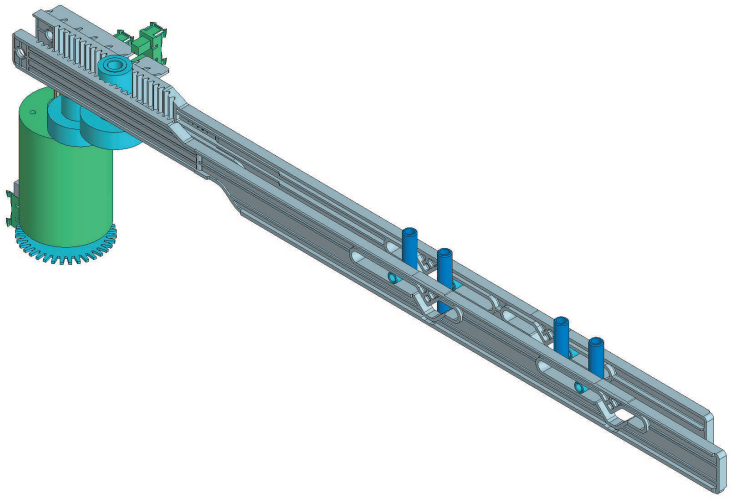
- Attachable marketing area: Europe, US, Others 1-5

2 holes punch kit



- Attachable marketing area: Japan

4 holes punch kit

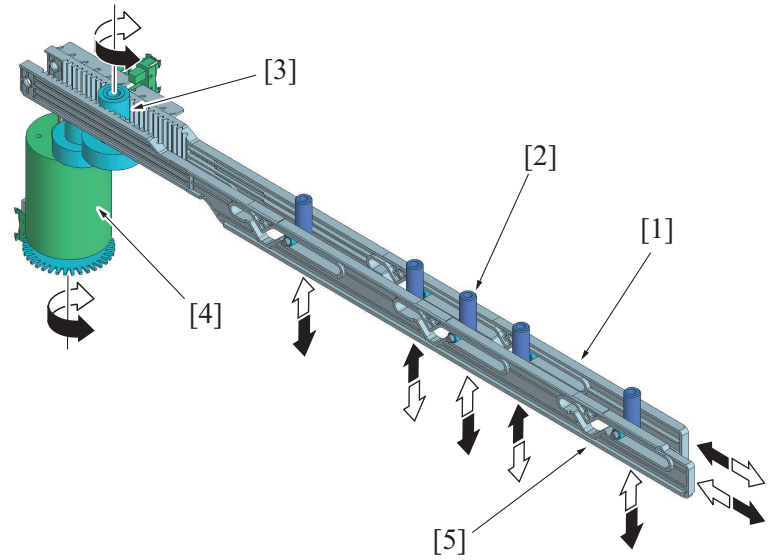


- Attachable marketing area: Europe

6.2 Drive

- The drive source for the punch section is the punch drive motor. The puncher frame is driven in forward/reverse direction by rotating the punch drive motor in forward/reverse direction.
- When the puncher frame moves in forward/reverse direction, the puncher moves up/down by the cam of the puncher frame to punch the holes on the paper.
- Puncher frame 1 and the puncher frame 2 have cams with different shapes. It enables the puncher to move up/down at different timings.
- When the puncher drive gear rotates clockwise, the puncher frame 1 shifts to the front side, and the puncher frame 2 shifts to the back side. When the puncher drive gear rotates counter-clockwise, the puncher frame 1 shifts to the back side, and the puncher frame 2 shifts to the front side. The puncher connected to the puncher frame then moves up/down with the cam. Switching the forward/reverse direction of the punch drive motor, switches the number of punch holes.

Front view



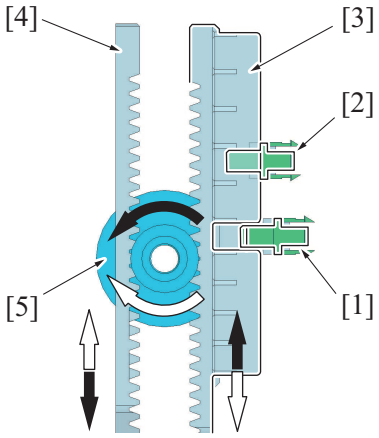
[1]	Puncher frame 1 *1	[2]	Puncher *2
[3]	Puncher drive gear	[4]	Punch drive motor (M1)
[5]	Puncher frame 2 *1	-	-

- *1: The shape of the puncher frame is varied depending on the type of punch kit.
- *2: The number of the puncher is varied depending on the type of punch kit.

NOTE

- **The illustration explains with an example for "2-holes/3-holes kit".**
- **With "2 holes/3 holes kit", the 2-holes puncher moves down when the puncher drive gear rotates clockwise. When the puncher drive gear rotates counter-clockwise, the 3-holes puncher moves down. The number of the punch holes is switched by the same configuration for "2-holes/4-holes kits".**
- **The "2-holes kit" and the "4-holes kit" do not have the punch hole switching function.**

Upper view

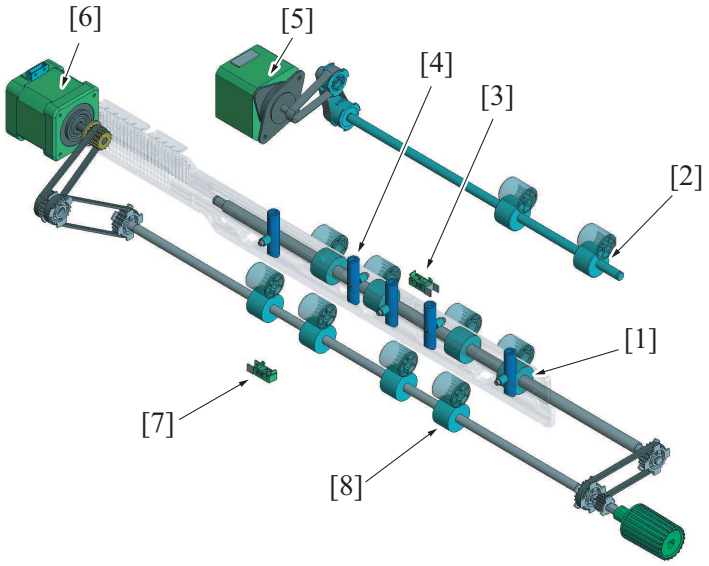


[1]	Punch home sensor (PS1)	[2]	Punch position sensor (PS2)
[3]	Puncher frame 1	[4]	Puncher frame 2
[5]	Puncher drive gear	-	-

6.3 Operation

6.3.1 Skew correction mechanism

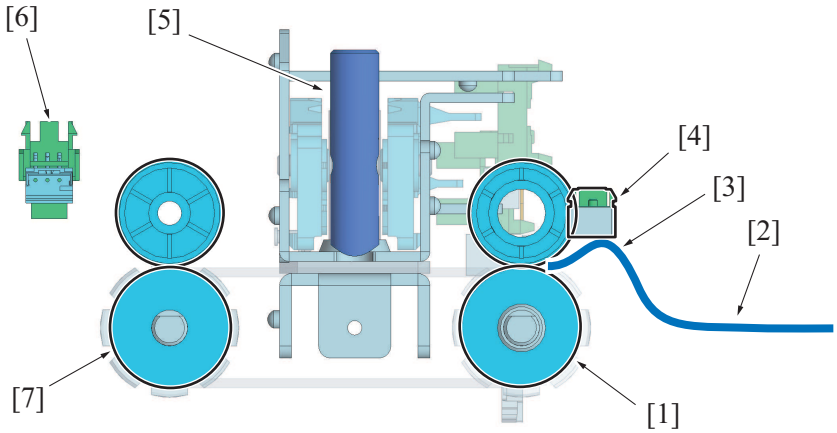
- When punching holes, punch resist loop is formed upstream of FNS section transport roller/1 to remove the skew of the paper.



[1]	FNS section paper feed roller	[2]	RU section horizontal transport roller/3
[3]	FNS entrance sensor (PS4)	[4]	Puncher
[5]	RU transport motor (M1)	[6]	FNS entry transport motor (M2)
[7]	Main tray exit sensor (PS16)	[8]	FNS section transport roller

(1) Skew correction process

1. The paper is transported to the FNS section (finisher section) by the RU transport motor driving the RU section horizontal transport roller/3.
2. When the leading edge of the paper reaches to the FNS section paper feed roller, it is detected by the FNS entrance sensor.
3. The paper is pressed to the FNS section paper feed roller which is at a halt to form the loop at the leading edge of the paper to remove the skew of the paper.
4. The FNS entry transport motor is turned ON when the specified period of time has passed after the leading edge of the paper turns the FNS entrance sensor ON, to start rotating the FNS section paper feed roller and the FNS section transport roller.
5. The paper which skew is removed is transported to the punch section by the FNS section paper feed roller, and then stop the specified position.
6. The holes are punched by the puncher.
7. The punched paper is transported to inside the transport section by the FNS section transport roller.



[1]	FNS section paper feed roller	[2]	Paper
[3]	The resist loop is created at the leading edge of the paper	[4]	FNS entrance sensor (PS4)
[5]	Puncher	[6]	Main tray exit sensor (PS16)
[7]	FNS section transport roller	-	-

(2) Punch Regist Loop Size Adjustment function

- Then the punch holes tilt, punch resist value for the Service Mode can be adjusted to adjust the punch holes.
- Punch resist value (resist loop value) changes by changing the timing the FNS section paper feed roller starts rotating. Tilt of the punch holes can be adjusted by removing the skew of the paper at the resist loop.
- For details of the adjustment procedures, see “Service Mode/Finisher/FS-FN adjustment/Punch Registration Loop Adj.”

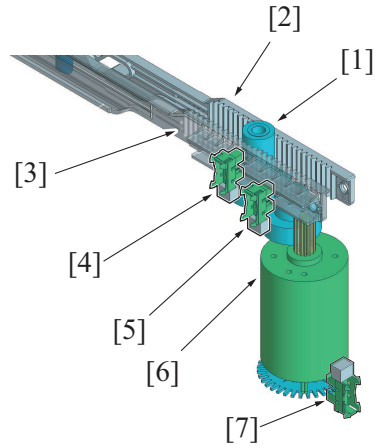
(a) Setting range

- -4.0 to +4.0

6.3.2 Puncher up/down status detection configuration

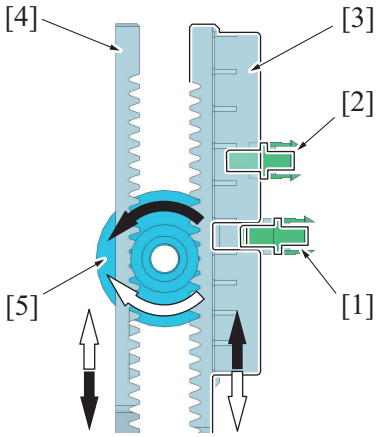
- When the puncher drive gear rotates clockwise, the puncher frame 1 shifts to the front side, and the puncher frame 2 shifts to the back side. When the puncher drive gear rotates counter-clockwise, the puncher frame 1 shifts to the back side, and the puncher frame 2 shifts to the front side. The puncher connected to the puncher frame then moves up/down with the cam. Switching the forward/reverse direction of the punch drive motor, switches the number of punch holes.
  PJ.6.2 Drive
- Puncher frame 1 has two light-blocking plates to detect the position of the puncher frame.
- The punch drive motor has a round light-blocking plate and the puncher motor sensor on the same shaft to detect the rotation value (pulse) of the punch drive motor.
- The Up/down status of the puncher is detected by the coordination input from the puncher position sensor, punch home sensor, and the punch motor sensor.

Rear view



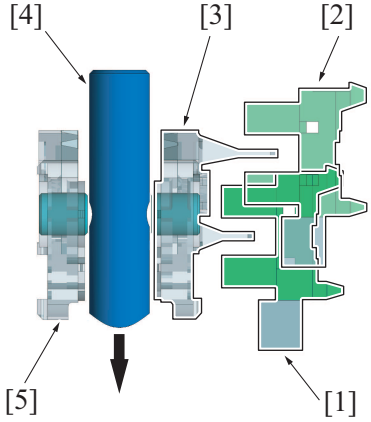
[1]	Puncher drive gear	[2]	Puncher frame 2
[3]	Puncher frame 1	[4]	Punch home sensor (PS1)
[5]	Punch position sensor (PS2)	[6]	Punch drive motor (M1)
[7]	Punch motor sensor (PS3)	-	-

Upper view



[1]	Punch home sensor (PS1)	[2]	Punch position sensor (PS2)
[3]	Puncher frame 1	[4]	Puncher frame 2
[5]	Puncher drive gear	-	-

Front view



[1]	Punch position sensor (PS2)	[2]	Punch home sensor (PS1)
[3]	Puncher frame 1	[4]	Puncher
[5]	Puncher frame 2	-	-

6.3.3 Punch operation noise suppression

(1) Sound-absorbing material for punching operation

- A sound-absorbing material is installed inside the finisher upper door.
- It absorbs noises that are generated during punch operation with the punch unit to suppress it from being leaked out of the machine.



[1]	Upper door	[2]	Sound-absorbing material*

- ***: The sound-absorbing material does not require to be replaced on a regular basis.**

(2) Punching operation noise suppression control

- The punching force of the punch motor is controlled in accordance with the thickness of the paper (paper weight).
- It suppresses noises that are generated during plain paper punching operation with the punch unit.
- Use 100% punching force for punching thick paper. Use 60% punching force for punching paper other than thick paper. Thus, it reduces the operation noise during paper punching.

NOTE

- **The punching operation noise reduction control can be disabled when the Engine FW DipSW switch No. 17 is turned to Off. For details on setting, see Engine FW DipSW .**

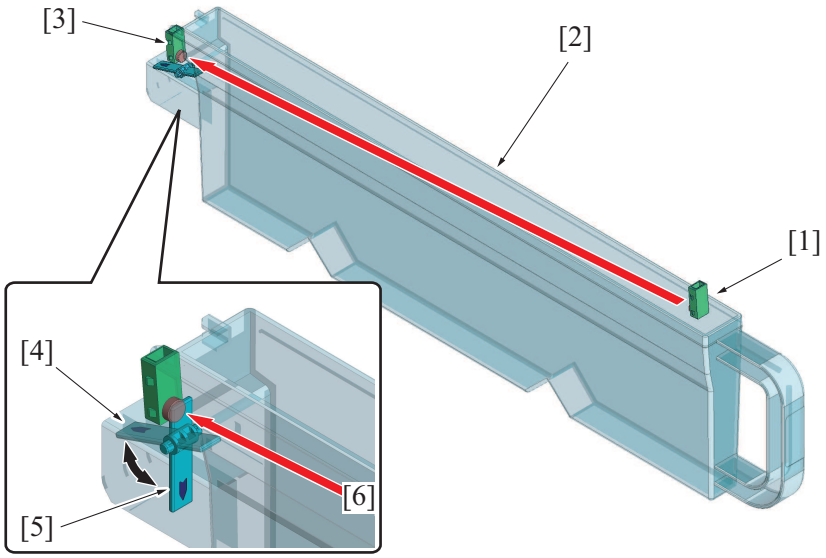
6.3.4 Punch dust box full detection mechanism

- Punch dust created by punching holes on the paper, is collected in the punch dust box.
- The punch unit has a sensor to detect a punch dust full condition at the front side (emission) and the back side (receiving). The sensor detects the status of the punch dust.
- When the punch dust is accumulated inside the punch dust box, the sensor light on punch dust full sensor/out side is interfered by the punch dust. The punch dust box is determined to be full when the sensor light is blocked. A message is displayed on the control panel to indicate a "punch dust full" condition when a punch dust box full is detected.

NOTE

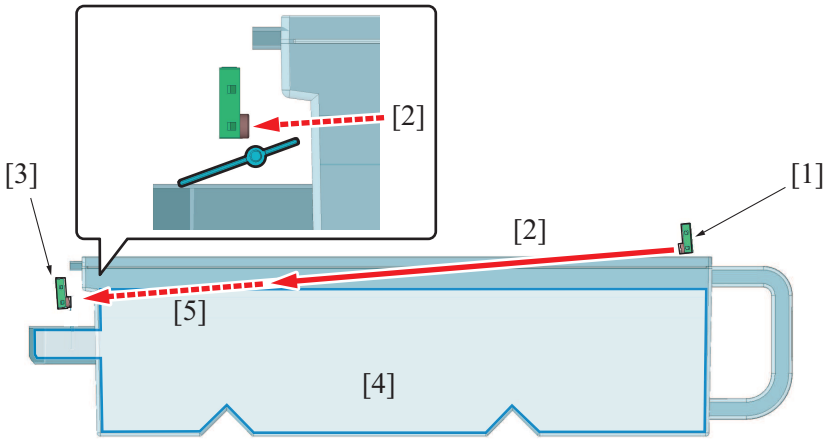
- **When the punch dust box is removed, the sensor light on punch dust full sensor/out side is blocked by the actuator on the punch unit. When the front door is closed is point and the punch job is set a message is displayed on the control panel to indicate a "Punch dust full" condition.**
- **When the empty punch dust box is installed, the sensor light blocked by the actuator, reaches punch dust full sensor/in, and the "punch dust full" message on the control panel disappears.**

Front view



[1]	Punch dust full sensor/out (PS4)	[2]	Punch dust box
[3]	Punch dust full sensor/in (PS5)	[4]	Actuator (Punch dust box is installed position)
[5]	Actuator (Punch dust box is not installed position)	[6]	Sensor light

Side view



[1]	Punch dust full sensor/out (PS4)	[2]	Sensor light
[3]	Punch dust full sensor/in (PS5)	[4]	Punch dust (full detection level)
[5]	Punch dust blocked the sensor light	-	-

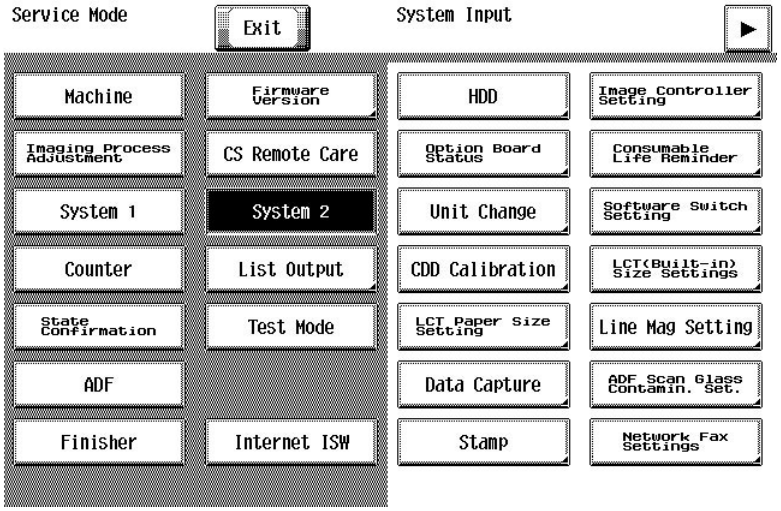
Punch dust full message: typical



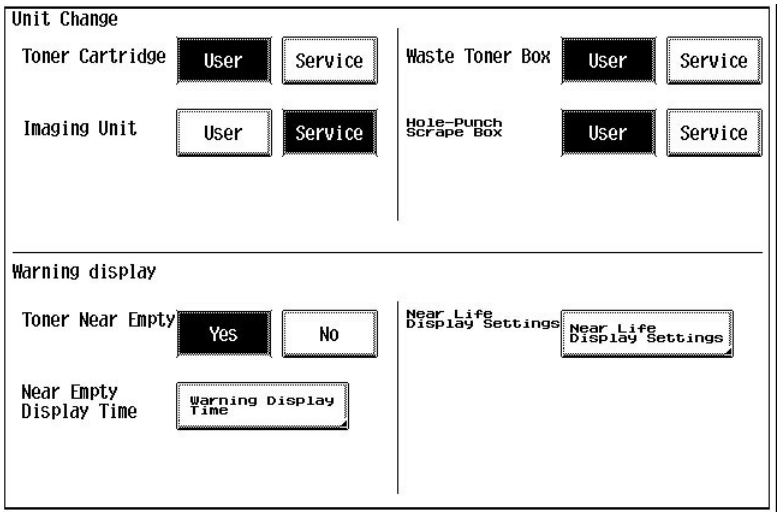
(1) Unit change function

- The screen to be displayed when a punch dust full is detected can be enabled or disabled in the “Unit Change” in the Service Mode.

Service Mode/System screen: typical



System 2/Unit Change screen: typical



NOTE

- **The Service Mode screen display, details, menus, and default settings may change when the FS-534 is installed to the MFP.**
- **For details of the Service Mode, see "Unit Change".**

7. TRANSPORT SECTION

7.1 Configuration

7.1.1 Paper path

- The transport section transports the paper from the RU section (horizontal transport section) to the three paper paths within the FNS section (finisher section).

(1) Paper path to the sub tray

- The paper path switching gate, moves the paper transported from the RU section to the sub tray paper path to discharge the paper to the sub tray.

NOTE

- **The paper is directly discharged to the sub tray without passing through the alignment and exit sections. If "Sub Tray" is selected as exit tray for a print job, the offset option (sort/group/staple) is unavailable.**

(2) Paper path to the main tray

- The paper path switching gate moves the paper transported from the RU section to the main tray paper path. The paper passes through the alignment and exit sections, and then moves to the main tray.

(3) Paper path to the saddle section

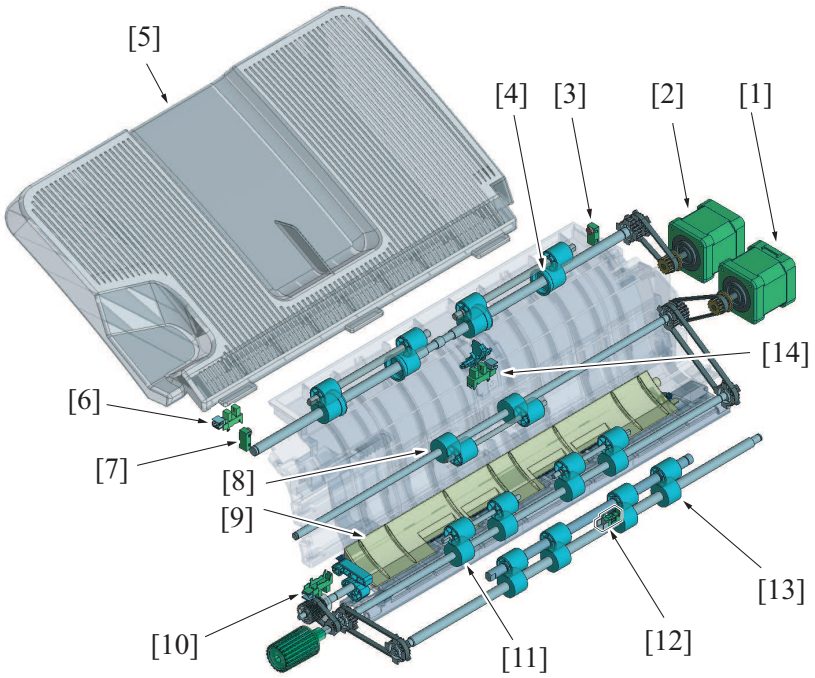
NOTE

- **FS-534SD only**

- The paper path switching gate moves the paper transported from the RU section to the main tray paper path. Switchback of the paper is done at the transport section and then the paper passes through the vertical transport section, and moves to the saddle section.

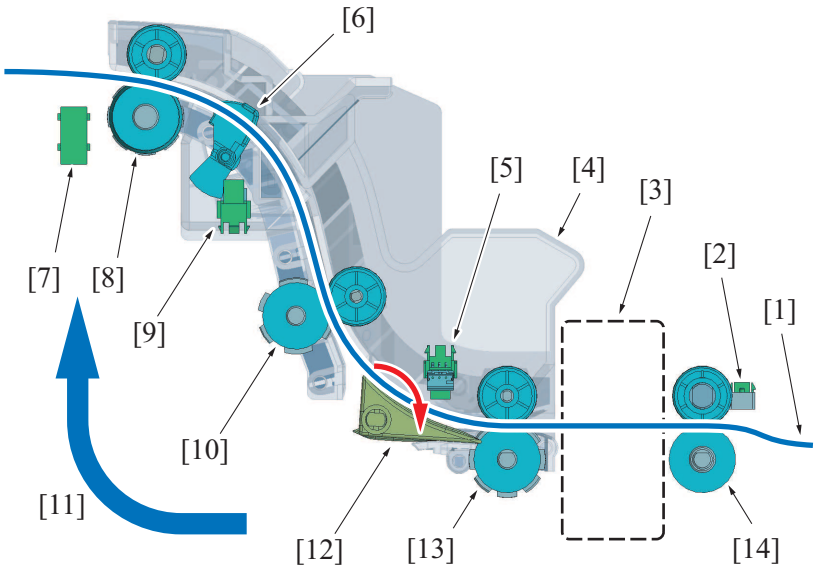
7.1.2 Paper feed section - sub tray section

Front perspective view



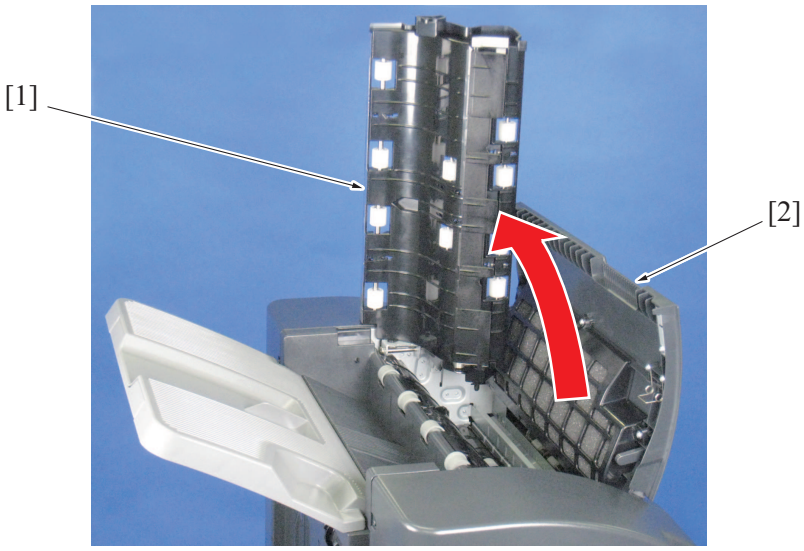
[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Sub tray full detection sensor/out (PS9)	[4]	Sub tray section exit roller
[5]	Sub tray	[6]	Upper cover open/close detection sensor (PS32)
[7]	Sub tray full detection sensor/in (PS10)	[8]	Sub tray section vertical transport roller
[9]	Paper path switching gate	[10]	Exchange folded paper output sensor (PS30)
[11]	FNS section transport roller	[12]	FNS entrance sensor (PS4)
[13]	FNS section paper feed roller	[14]	Sub tray exit sensor (PS8)

Front view



[1]	Paper path	[2]	FNS entrance sensor (PS4)
[3]	Punch kit PK-520	[4]	Jam removal cover (sub tray transport route)
[5]	Exchange folded paper output sensor (PS30)	[6]	Sub tray exit sensor actuator
[7]	Sub tray full detection sensor	[8]	Sub tray section exit roller
[9]	Sub tray exit sensor (PS8)	[10]	Sub tray section vertical transport roller
[11]	Paper feeding direction	[12]	Paper path switching gate (lower position)
[13]	FNS section transport roller	[14]	FNS section paper feed roller

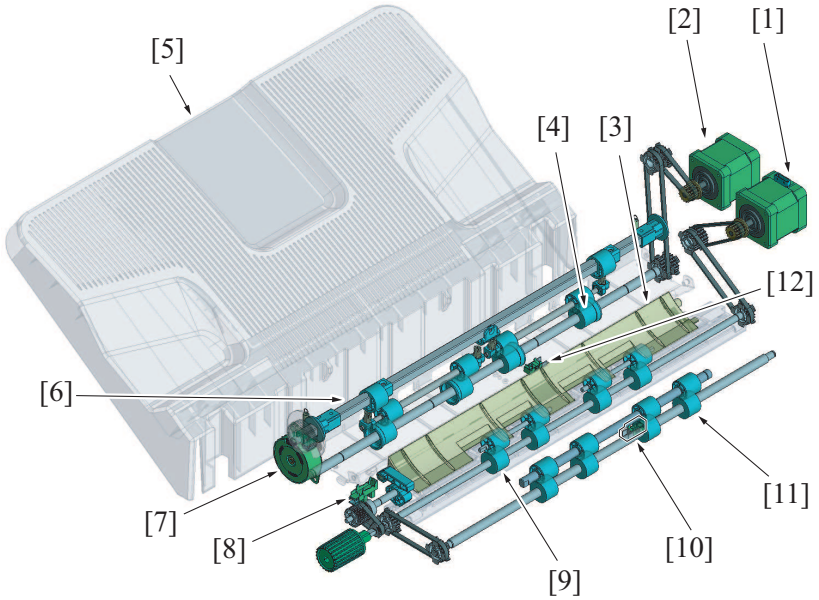
Exterior view



[1]	Jam removal cover	[2]	Upper door

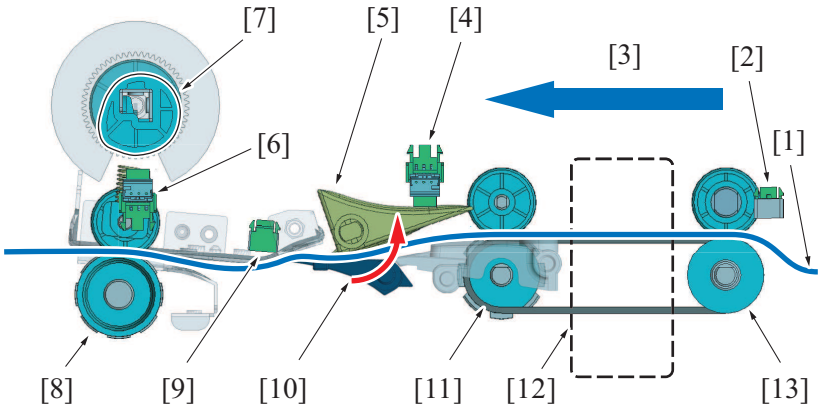
7.1.3 Paper feed section - main tray section

Front perspective view



[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Paper path switching gate	[4]	Receiving roller
[5]	Main tray	[6]	Receiving roller pressure cam
[7]	Receiving roller retraction motor (M4)	[8]	Exchange folded paper output sensor (PS30)
[9]	FNS section transport roller	[10]	FNS entrance sensor (PS4)
[11]	FNS section paper feed roller	[12]	Main tray exit sensor (PS16)

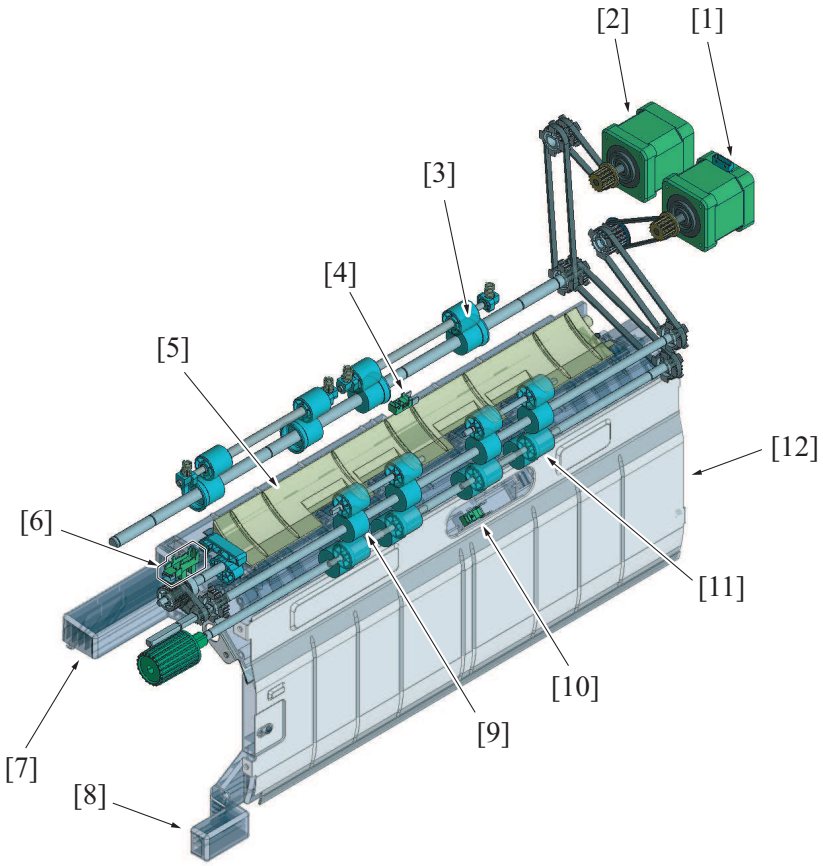
Front view



[1]	Paper path	[2]	FNS entrance sensor (PS4)
[3]	Paper feeding direction	[4]	Exchange folded paper output sensor (PS30)
[5]	Paper path switching gate (upper position)	[6]	Receiving roller retraction sensor (PS11)
[7]	Receiving roller pressure cam	[8]	Receiving roller
[9]	Main tray exit sensor (PS16)	[10]	Movable paper guide
[11]	FNS section transport roller	[12]	Punch kit PK-520
[13]	FNS section paper feed roller	-	-

7.1.4 Main tray section - saddle section

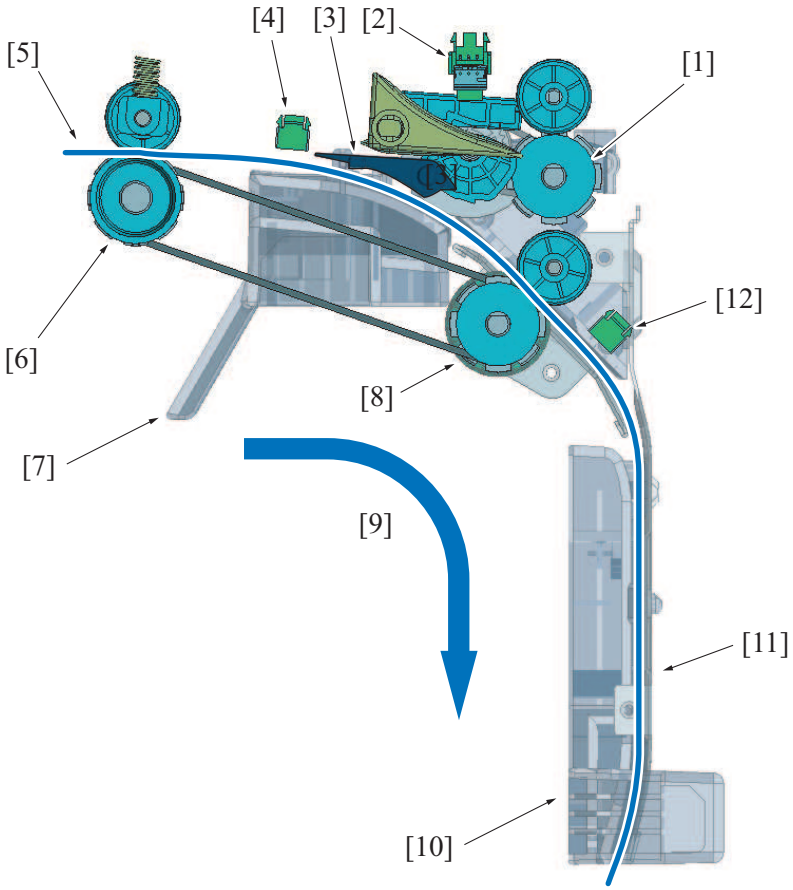
Front perspective view



[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Receiving roller	[4]	Main tray exit sensor (PS16)
[5]	Paper path switching gate	[6]	Exchange folded paper output sensor (PS30)
[7]	Jam removal cover (horizontal transport section)	[8]	Jam removal cover (vertical transport section)*1
[9]	FNS section transport roller	[10]	Saddle exit sensor (PS5)
[11]	FNS section exit roller	[12]	FNS section vertical transport guide

- *1: FS-534SD only

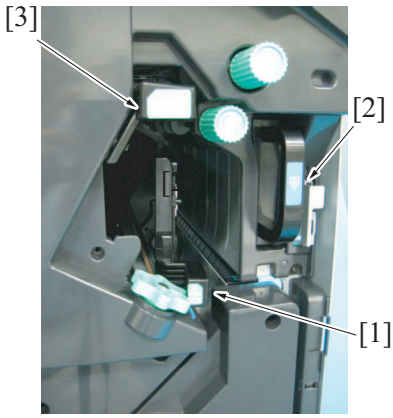
Front view



[1]	FNS section transport roller	[2]	Exchange folded paper output sensor (PS30)
[3]	Movable paper guide	[4]	Main tray exit sensor (PS16)
[5]	Paper path	[6]	Receiving roller
[7]	Jam removal cover (horizontal transport section)	[8]	FNS section exit roller
[9]	Paper feeding direction	[10]	Jam removal cover (vertical transport section)*1
[11]	FNS section vertical transport guide	[12]	Saddle exit sensor (PS5)

- *1: FS-534SD only

Exterior view



[1]	Jam removal cover (vertical transport section) (Open position)	[2]	Punch dust box *1
[3]	Jam removal cover (horizontal transport section) (Close position) *2	-	-

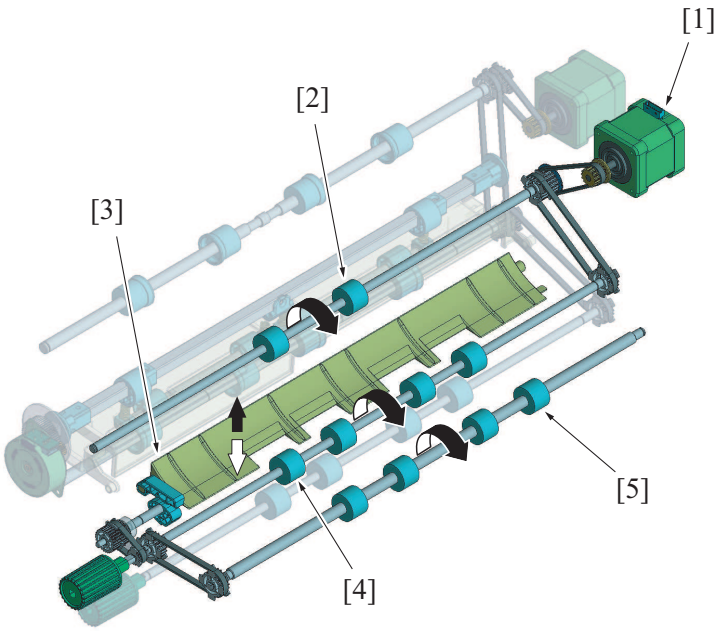
- *1: Only when the PK-520 is added to the finisher.
- *2: FS-534SD only

7.2 Drive

The driving source of the FNS section is the FNS entry transport motor, FNS discharge motor, and receiving roller retraction motor, and the following parts are driven.

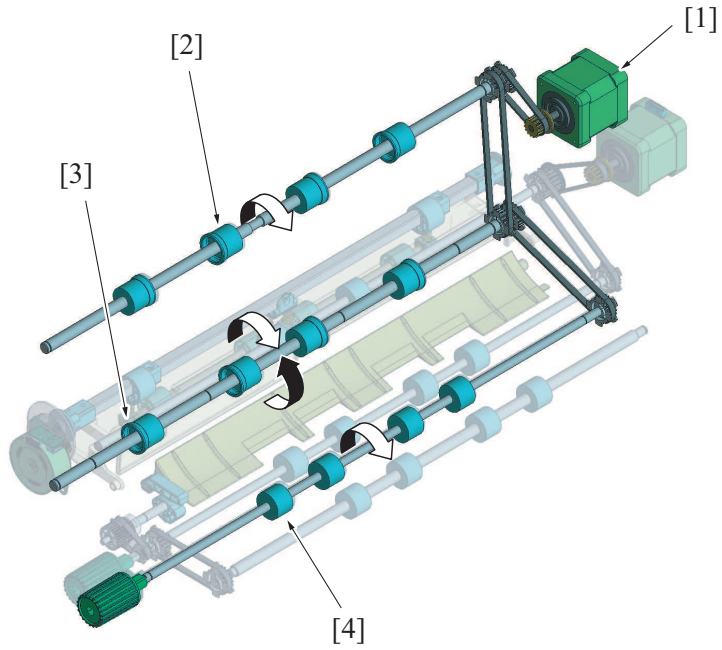
Driving source	Driving parts	Functions
FNS entry transport motor (M2)	FNS section paper feed roller	Feeds paper to the FNS section
	FNS section vertical transport roller	Transports paper to each paper path in the FNS section.
	Paper path switching gate	Switches paper path by the paper path switching gate up/down movement triggered by the cam.
	Sub tray section vertical transport roller	Transports paper to the sub tray section exit roller. (sub tray paper path)
FNS discharge motor (M3)	Sub tray section exit roller	Transports paper to the sub tray. (sub tray paper path)
	Receiving roller	• Normal rotation: Transports paper to alignment section. (main tray paper path) • Reverse rotation: Transports paper to the saddle section. (saddle section paper path)
	FNS section exit roller	Transports paper from the alignment section to the saddle section via the switchback. (saddle section paper path)
Receiving roller retraction motor (M4)	Receiving roller pressure roll	The receiving roller pressure roll is moved up/down by the cam. (main tray paper path) • When the pressure roll is lowered, the paper on the receiving roller is pressed against the receiving roller. When the receiving roller rotates in the normal direction, the paper is transported to the alignment section. When the receiving roller rotates reversely, the paper is switched back through the transport path to the saddle section. • When the pressure roll moves up, the paper on the receiving roller is released. The paper is not transported and brought into a standby state.

7.2.1 FNS entry transport motor



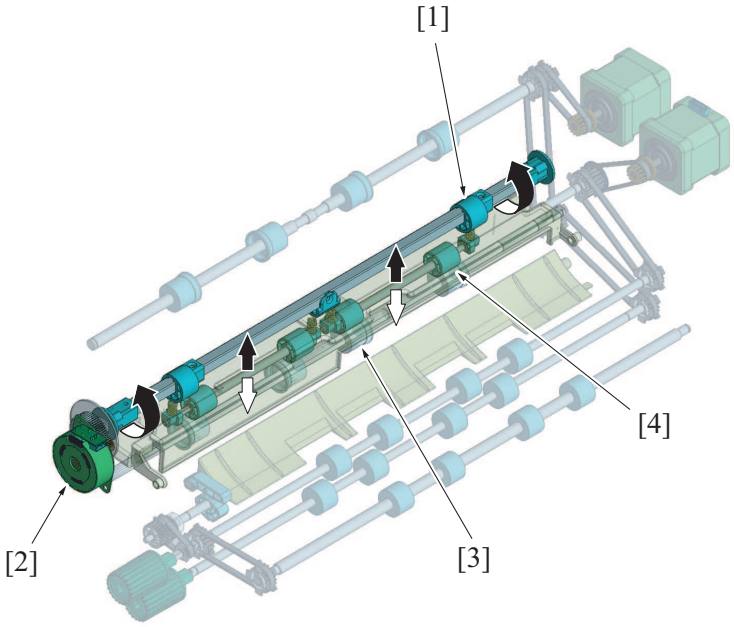
[1]	FNS entry transport motor (M2)	[2]	Sub tray section vertical transport roller
[3]	Paper path switching gate	[4]	FNS section transport roller
[5]	FNS section paper feed roller	-	-

7.2.2 FNS discharge motor



[1]	FNS discharge motor (M3)	[2]	Sub tray section exit roller
[3]	Receiving roller	[4]	FNS section exit roller

7.2.3 Receiving roller retraction motor



[1]	Receiving roller pressure cam	[2]	Receiving roller retraction motor (M4)
[3]	Receiving roller *	[4]	Receiving roller pressure roll

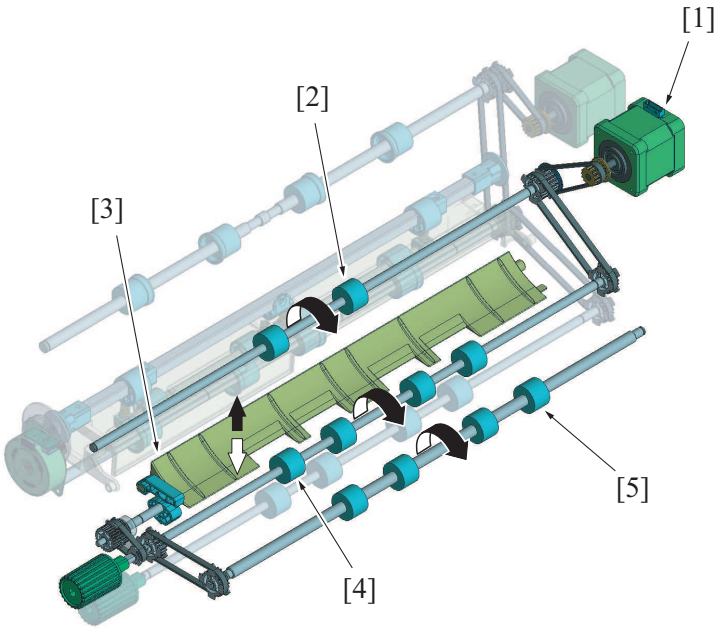
- *: The driving source of the receiving roller is the FNS discharge motor. The driving source of the receiving roller pressure roll is the receiving roller retraction motor.

7.3 Operation

7.3.1 Paper path switching mechanism

- Paper path is switched by the up/down operations of the paper path switching gate to transport paper to each tray or the saddle section.
- The up/down operations of the paper path switching gate is driven by the FNS entry transport motor.
- The position of the paper path switching gate is detected by the exchange folded paper output sensor.

Front perspective view

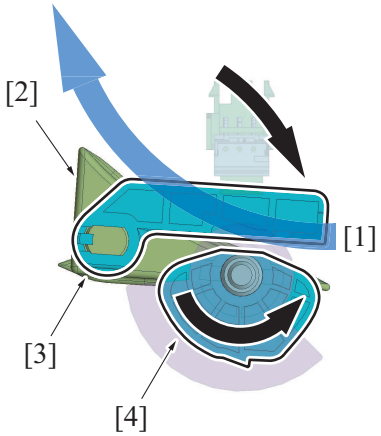


[1]	FNS entry transport motor (M2)	[2]	Sub tray section vertical transport roller
[3]	Paper path switching gate	[4]	FNS section transport roller
[5]	FNS section paper feed roller	-	-

(1) Gate lower position (paper path: sub tray)

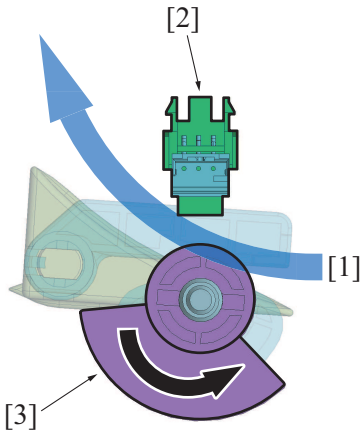
- When the cam rotates, the paper path switching gate moves down to block the paper path to the main tray. The paper passes on the top of the paper path switching gate and is transported to the sub tray.
- When the detection plate located on the shaft, on which the cam is located, rotates, the exchange folded paper output sensor is unblocked. This causes machine to determine that the gate is at the lower position.
- When the paper is transported through the sub tray paper path, the sub tray exit sensor located downstream of the paper path switching gate detects the paper conveyance.

Front view: Illustration on the relationship between the cam and paper path switching gate



[1]	Paper	[2]	Paper path switching gate (lower position)
[3]	Lever	[4]	Cam

Front view: Illustration on the relationship between the detection plate and the exchange folded paper output sensor

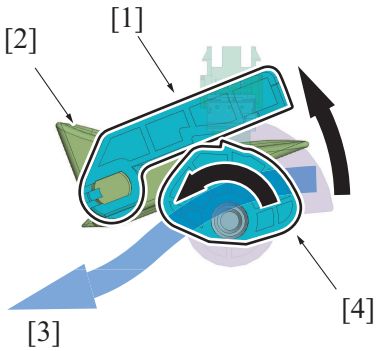


[1]	Paper	[2]	Exchange folded paper output sensor (PS30)
[3]	Detection plate	-	-

(2) Gate upper position (paper path: main tray)

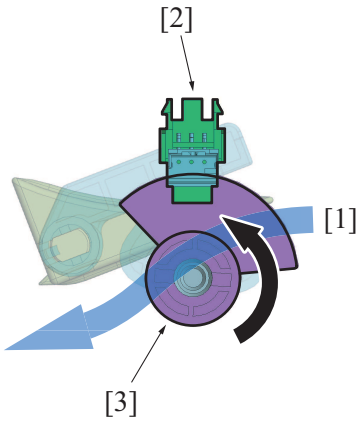
- When the cam rotates, the paper path switching gate moves up to block the paper path to the sub tray. The paper passes on the bottom of the paper path switching gate and is transported to the main tray.
- When the detection plate located on the shaft, on which the cam is located, rotates, the exchange folded paper output sensor is blocked. This causes machine to determine that the gate is at the upper position.
- When the paper is transported through the main tray paper path, the main tray exit sensor located downstream of the paper path switching gate detects the paper conveyance.

Front view: Illustration on the relationship between the cam and paper path switching gate



[1]	Lever	[2]	Paper path switching gate (upper position)
[3]	Paper	[4]	Cam

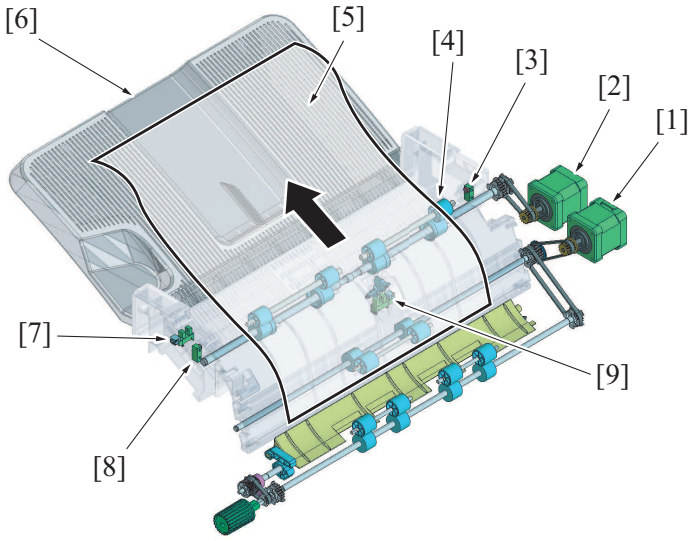
Front view: Illustration on the relationship between the detection plate and the exchange folded paper output sensor



[1]	Paper	[2]	Exchange folded paper output sensor (PS30)
[3]	Detection plate	-	-

7.3.2 Sub tray exit mechanism

- Paper transported from the RU section is discharged to the sub tray by the sub tray section exit roller, via the FNS section paper feed roller, FNS section transport roller, and sub tray section vertical transport roller.
- To transport paper to the sub tray, the paper path switching gate also operates.
- The sub tray section exit roller is driven by the FNS discharge motor.

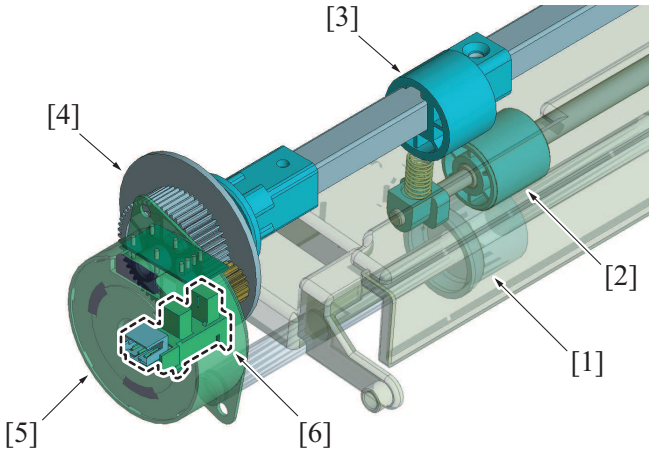


[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Sub tray full detection sensor/out (PS9)	[4]	Sub tray section exit roller
[5]	Paper	[6]	Sub tray
[7]	Upper cover open/close detection sensor (PS32)	[8]	Sub tray full detection sensor/in (PS10)
[9]	Sub tray exit sensor (PS8)	-	-

7.3.3 Receiving roller section up/down function

- The up/down movement of the receiving roll, switches the timing of transporting the paper to the alignment section. (Buffer control)
- The up/down operations of the receiving roll are driven by the receiving roller retraction motor.
- The position of the receiving roll is detected by the receiving roller retraction sensor.

Front perspective view

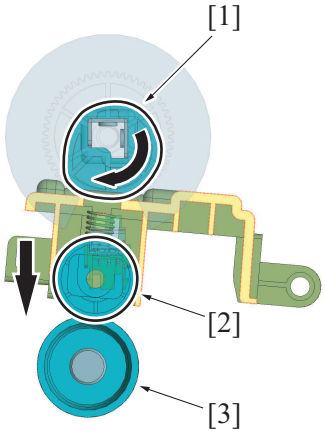


[1]	Receiving roller	[2]	Receiving roll
[3]	Receiving roller pressure cam	[4]	Detection plate
[5]	Receiving roller retraction motor (M4)	[6]	Receiving roller retraction sensor (PS11)

(1) Receiving roller: pressure position

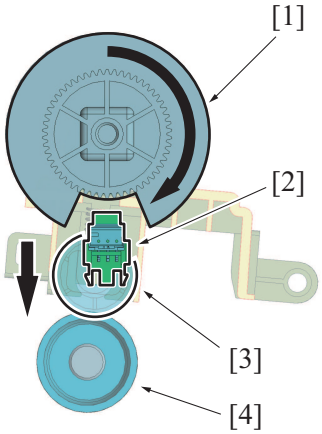
- When the cam rotates, the receiving roll is lowered and pressed against the receiving roller. The paper is transported to the alignment section by the receiving roller.
- When the detection plate located on the shaft, on which the cam is located, rotates, the receiving roller retraction sensor is unblocked. This causes machine to determine that the receiving roll moves down (pressed).

Front view: Illustration on the relationship between the cam and roll



[1]	Receiving roller pressure cam (pressure position)	[2]	Receiving roll (pressure position)
[3]	Receiving roller	-	-

Front view: Illustration on the relationship between the detection plate and sensor

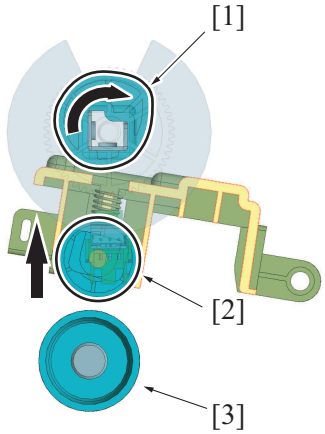


[1]	Detection plate (pressure position)	[2]	Receiving roller retraction sensor (PS11) (unblocked)
[3]	Receiving roll (pressure position)	[4]	Receiving roller

(2) Receiving roller: release position

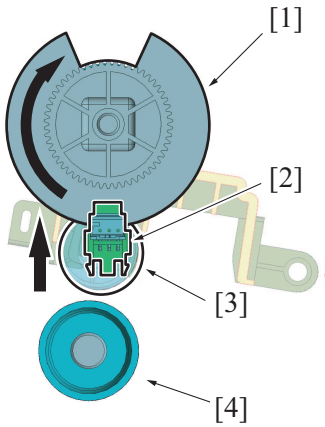
- The receiving roll is lifted by the cam and retracted from the receiving roller. The paper is brought to a standby state on the transport paper path.
- The detection plate located on the shaft, on which the cam is located, rotates and blocks the receiving roller retraction sensor. This causes machine to determine that the receiving roll moves up (retracted).

Front view: Illustration on the relationship between the cam and roll



[1]	Receiving roller pressure cam (release position)	[2]	Receiving roll (release position)
[3]	Receiving roller	-	-

Front view: Illustration on the relationship between the detection plate and sensor

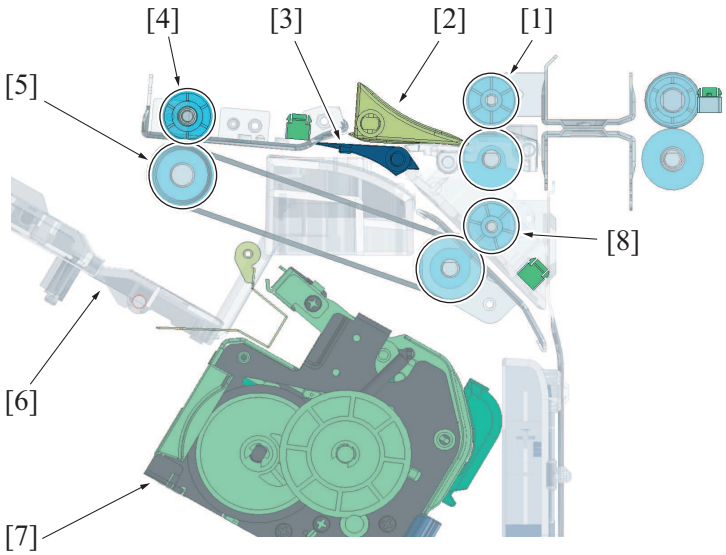


[1]	Detection plate (release position)	[2]	Receiving roller retraction sensor (PS11) (blocked)
[3]	Receiving roll (release position)	[4]	Receiving roller

7.3.4 Buffer control

- The receiving roller section up/down mechanism is provided to achieve high productivity, by eliminating the time loss for the next sheet of paper during the offset and staple operations.
- This allows handling a print job without reducing the paper transport speed even under the condition where the preceding sets of sheets are being aligned and stapled.

Front view

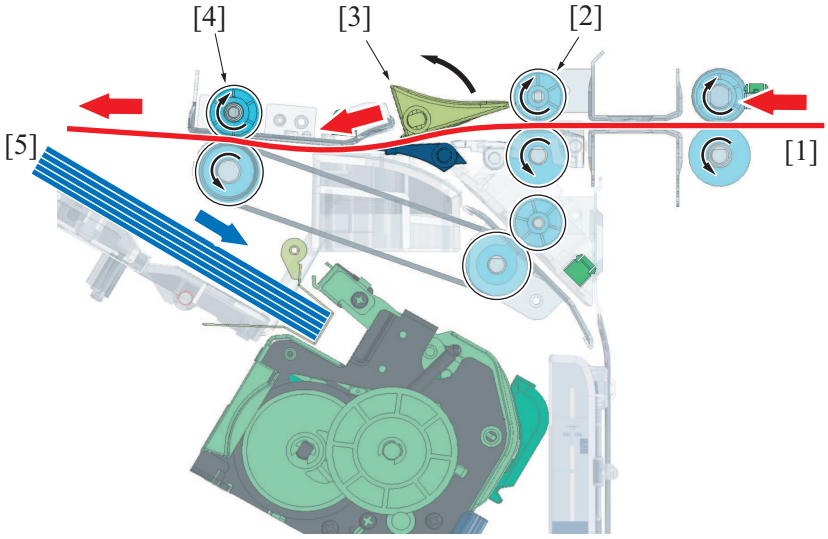


[1]	FNS section transport roller	[2]	Paper path switching gate
[3]	Movable paper guide	[4]	Receiving roll
[5]	Receiving roller	[6]	Alignment tray
[7]	Staple unit	[8]	FNS section exit roller

(1) Paper transport operation

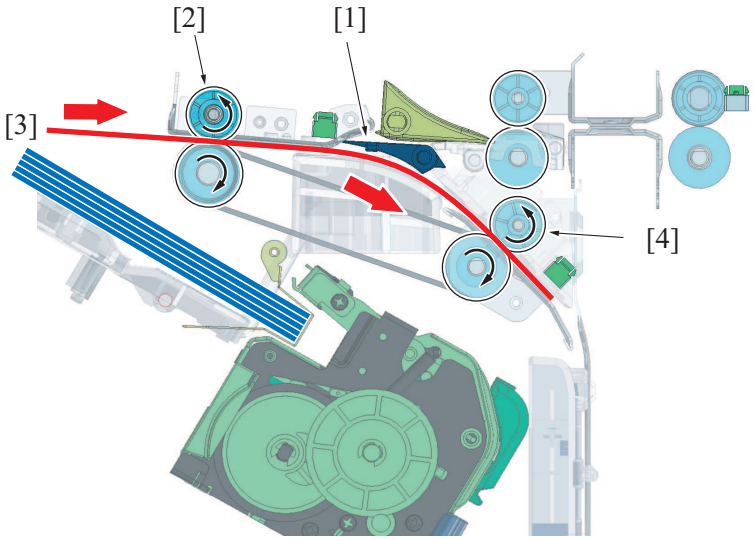
- The following explains the example of a print job where 5 sheets of paper is stapled together and 2 sets are output.

1. When the first set of paper passes, the receiving roll transports the paper to the alignment section without being lifted. The 5 sheets of the first set are aligned and then stapled.



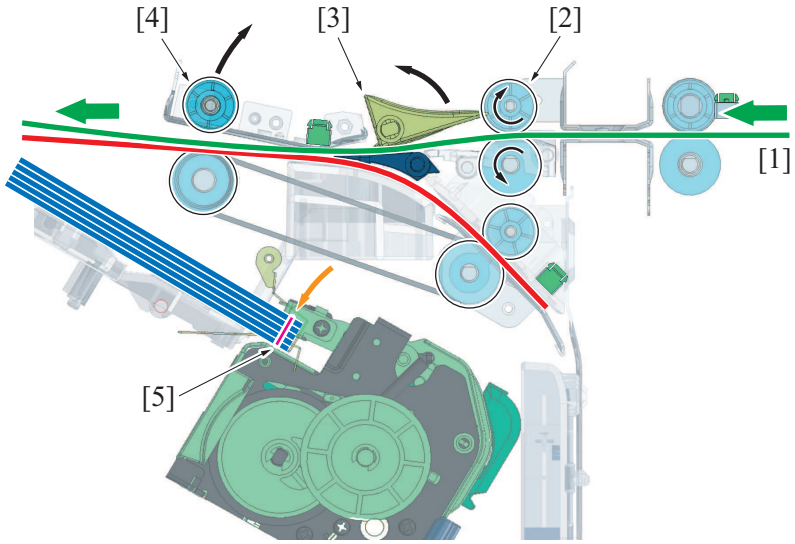
[1] First sheet in the second set
[2] FNS section transport roller (forward rotation)
[3] Paper path switching gate (upper position)
[4] Receiving roll (pressure, forward rotation)
[5] First set of sheets (transported to the alignment section)

2. While the first set of sheets is being aligned, the first sheet in the second set causes the receiving roller to rotate in the reverse direction when the trailing edge of the sheet passes the movable paper guide. This causes the first sheet to move on the switchback until its trailing edge reaches the path to the saddle section. (This operation is performed to avoid blocking the paper path for the second sheet.)



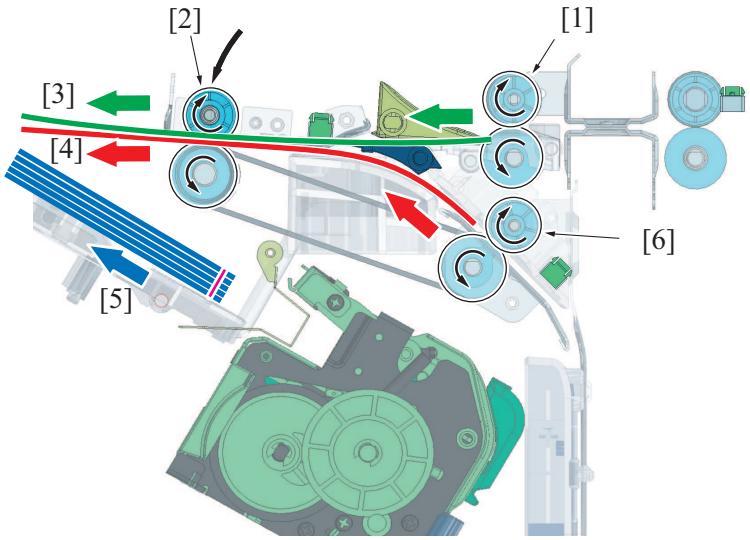
[1] Movable paper guide
[2] Receiving roll (pressure, reverse rotation)
[3] First sheet in the second set (switchback)
[4] FNS section exit roller (reverse rotation)

3. The receiving roll is lifted. The first sheet of paper that lost the force of being transported stays on the transport path.
4. While the first set is being stapled, the second sheet of the second set is transported and it is placed on the top of the first sheet of the second set.



[1] Second sheet of the second set
[2] FNS section transport roller (forward rotation)
[3] Paper path switching gate (upper position)
[4] Receiving roll (release, stop)
[5] First sheet (staple)

5. The receiving roll is lowered onto the 2nd set. Two sheets of the second set are discharged to the alignment section. (Paper transport time is reduced by moving multiple sheets in one paper transport operation.)
6. While the first and second sheets of the second set are transported to the alignment section, the stapled first set is discharged to the main tray.



[1] FNS section transport roller (forward rotation)
[2] Receiving roll (pressure, forward rotation)
[3] Second sheet of the second set
[4] First sheet in the second set
[5] First set of sheets
[6] FNS section exit roller (forward rotation)

7. The receiving roll is not lifted when the third to fifth sheets of the second set passes through the roller. These sheets are transported to the alignment section in the normal manner.
8. When the fifth sheet of the second set is transported to the alignment tray, the second set is stapled.
9. The operations described above are repeated when multiple staple jobs are performed.

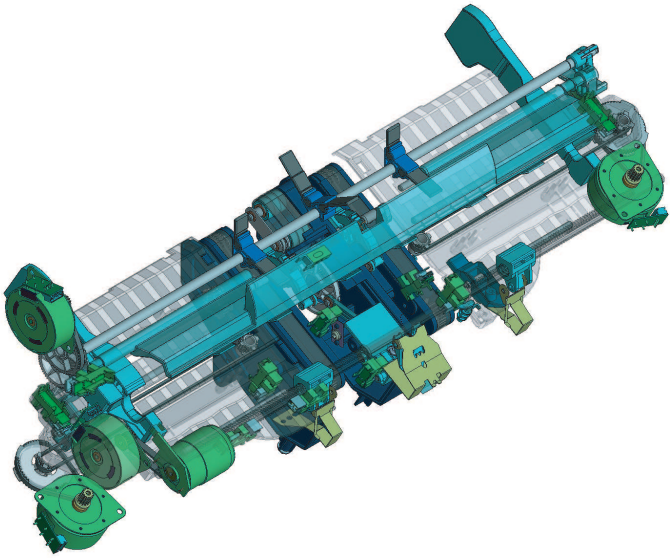
8. ALIGNMENT SECTION

8.1 Configuration

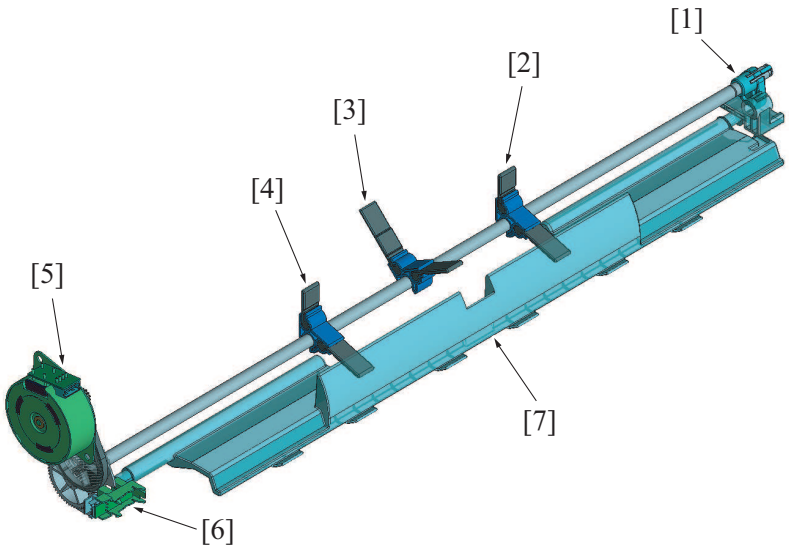
In the alignment section, paper transported from the transport section is aligned and discharged to the main tray.

1. Upper paddle section
   - Paper ejected from the receiving roller in the transport section is guided to the alignment section by the lowered paper guide.
   - The paper led to the alignment section will be switchbacked to the alignment tray by the upper paddle.
2. Exit section (Receiving operation)
   - The paper is switched back to the alignment tray by the lower paddle.
3. Stopper section
   - The paper that was switched back is aligned at its trailing edge by being pressed to the trailing edge stopper. (Paper alignment operation in FD)
   - If paper is stapled (2-point stapling), the stopper is retracted to the position where it does not interfere with the trailing edge stopper/F and trailing edge stopper/R.
4. Alignment tray section
   - When the first sheet is sent, the alignment plate is moved to the center to support the paper passing through the top of the plate. (Alignment plates are used as paper guide.)
   - If paper is not offset stacked, it is placed between the alignment plates so that both ends of the paper are aligned at the center position of the alignment tray. (Paper alignment operation in CD)
   - The paper gathered at the front or rear side on the alignment plate will be aligned on both sides of the paper. This process is repeated to sort out the paper. (CD alignment and shift operation of the paper)
5. Exit section (Exit operation)
   - The trailing edge stopper/C is shifted to press the paper out, and then the gripper receives the paper. The gripper then discharges the paper to the main tray.

Alignment section: Front perspective view



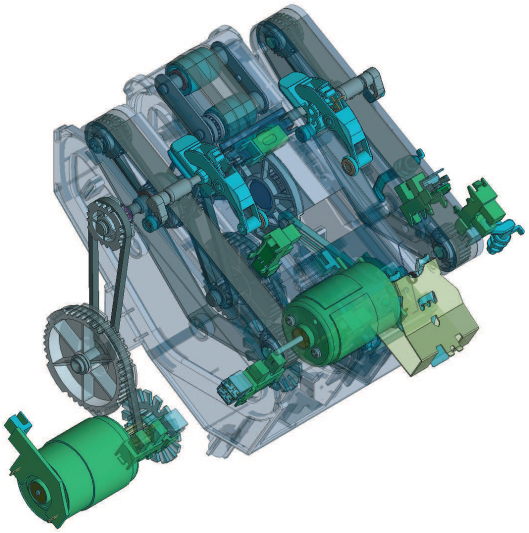
8.1.1 Upper paddle section



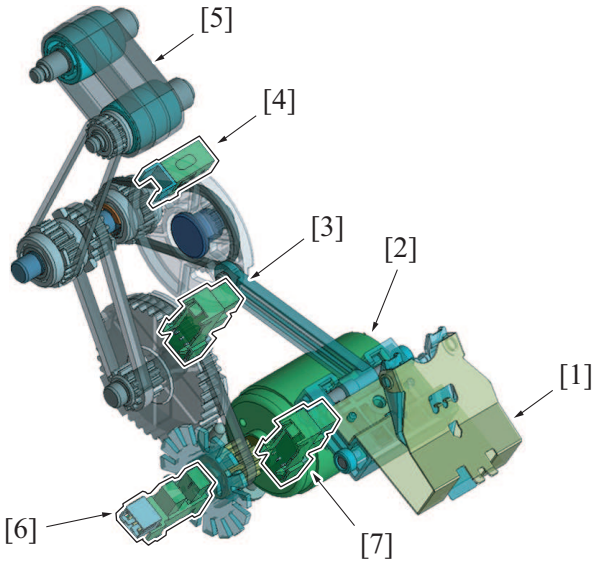
[1]	Cam	[2]	Upper paddle (rear)
[3]	Upper paddle (center)	[4]	Upper paddle (front)
[5]	FNS paddle motor (M5)	[6]	Upper paddle home position detection sensor (PS14)
[7]	Paper guide	-	-

8.1.2 Exit section

Exit section: Front perspective view

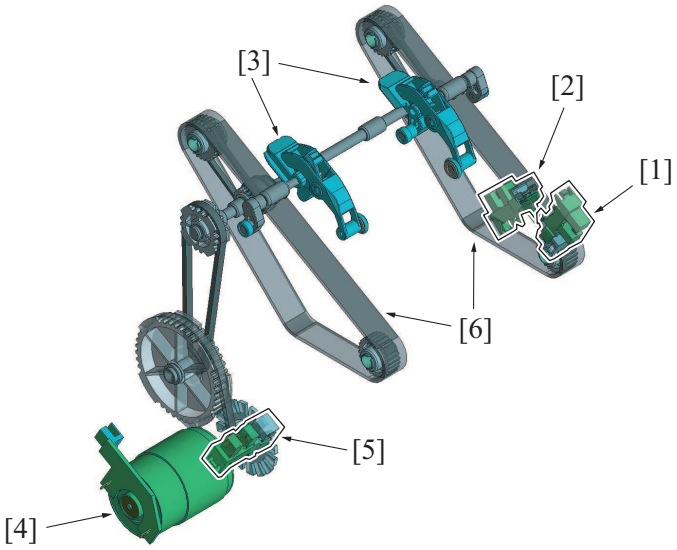


(1) Lower paddle section



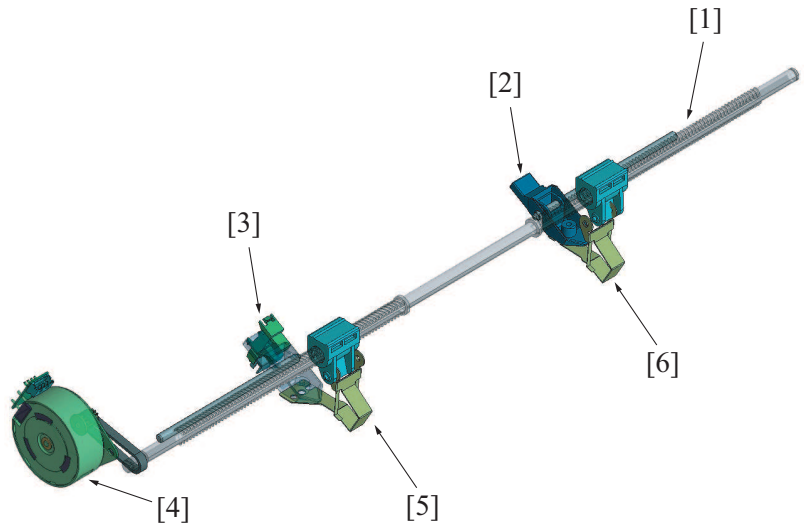
[1]	Trailing edge stopper/C	[2]	Pre-eject drive motor (M9)
[3]	Pre-eject away sensor (PS22)	[4]	Staple stacker paper detection sensor (PS31)
[5]	Lower paddle	[6]	Pre-eject encorder sensor (PS15)
[7]	Pre-eject home sensor (PS21)	-	-

(2) Gripper section



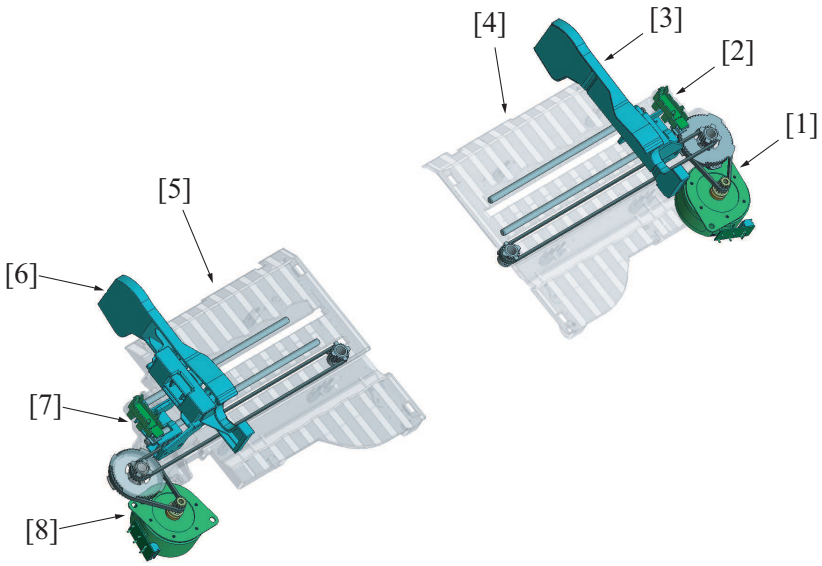
[1]	Gripper home position sensor (PS18)	[2]	Gripper position detection sensor (PS19)
[3]	Gripper	[4]	Bundle eject motor (M10)
[5]	Gripper motor sensor (PS17)	[6]	Paper transport belt

8.1.3 Stopper section (FD alignment section)



[1]	Stopper moving shaft	[2]	Holder
[3]	Trailing edge stopper home position detection sensor (PS20)	[4]	Trailing edge stopper motor (M6)
[5]	Trailing edge stopper/Fr	[6]	Trailing edge stopper/Rr

8.1.4 Alignment tray section (CD alignment section)



[1]	Alignment motor/Rear (M8)	[2]	Alignment plate/R home sensor (PS13)
[3]	Alignment plate/R	[4]	Alignment tray (rear)
[5]	Alignment tray (front)	[6]	Alignment plate/F
[7]	Alignment plate/F home sensor (PS12)	[8]	Alignment motor/Front (M7)

8.2 Drive

8.2.1 Drive outline

The driving source of the alignment section is the FNS paddle motor, pre-eject drive motor, bundle eject motor, trailing edge stopper motor, alignment motor, and the following parts are driven.

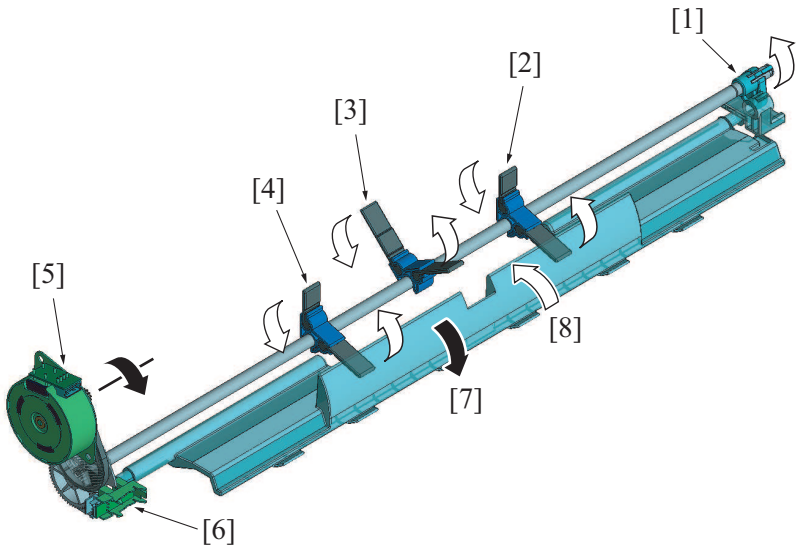
Driving source	Driving parts	Function
FNS paddle motor (M5)	Paper guide	Transports paper to the alignment tray.
	Upper paddle	Draws and drops paper to the alignment tray.
Pre-eject drive motor (M9)	Lower paddle	Presses paper against the stopper in the alignment tray.
	Trailing edge stopper/C	• Aligns the trailing edge of paper (Alignment operation in FD)

Driving source	Driving parts	Function
		• Pushes paper out to the main tray after alignment.
Bundle eject motor (M10)	Paper transport belt	Moves the gripper.
	Gripper	Grips the trailing edge of paper and discharges it to the main tray.
Trailing edge stopper motor (M6)	Trailing edge stopper /Fr	Moves the trailing edge stopper/Fr forward. It moves back and forth according to the paper width to keep the trailing edge of the paper batch at the front side.
	Trailing edge stopper /Rr	Moves the trailing edge stopper/Rr backward. It moves back and forth according to the paper width to keep the trailing edge of the paper batch at the back side.
Alignment motor/Front (M7)	Alignment plate/F	• Aligns both ends of paper (Alignment operation in CD) • Pushes paper to the front or rear. (Shift operation)
Alignment motor/Rear (M8)	Alignment plate/R	

8.2.2 Upper paddle section

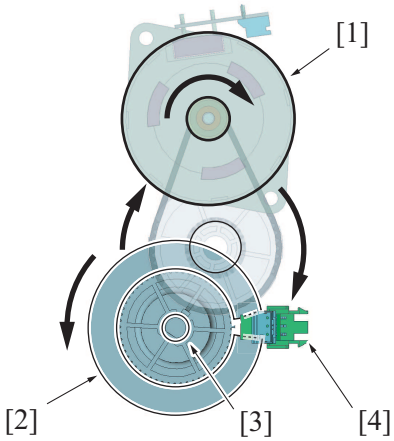
- When the FNS paddle motor rotates, the upper paddles (3 pieces) located on the upper paddle shaft, rotates to draw and drop the paper to the alignment tray.
- The cam located on the upper paddle shaft rotates to move the paper guide up and down.

Front perspective view



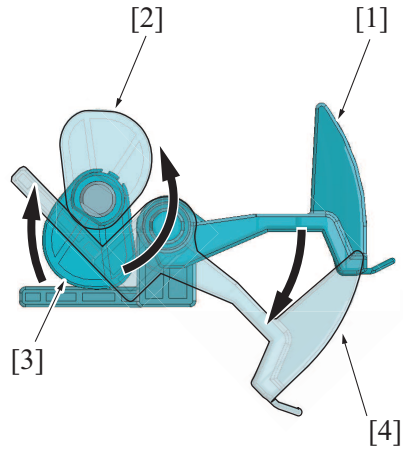
[1]	Cam	[2]	Upper paddle (rear)
[3]	Upper paddle (center)	[4]	Upper paddle (front)
[5]	FNS paddle motor (M5)	[6]	Upper paddle home position detection sensor (PS14)
[7]	Paper guide (move down)	[8]	Paper guide (move up)

Drive front view



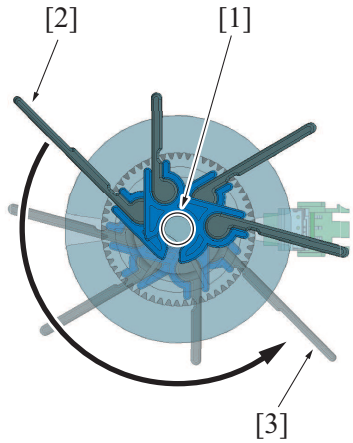
[1]	FNS paddle motor (M5)	[2]	Detection plate (home position)
[3]	Upper paddle turning shaft	[4]	Upper paddle home position detection sensor (PS14)

Paper guide front view



[1]	Paper guide (upper position: home position)	[2]	Cam (upper position)
[3]	Cam (lower position: home position)	[4]	Paper guide (lower position)

Upper paddle front view

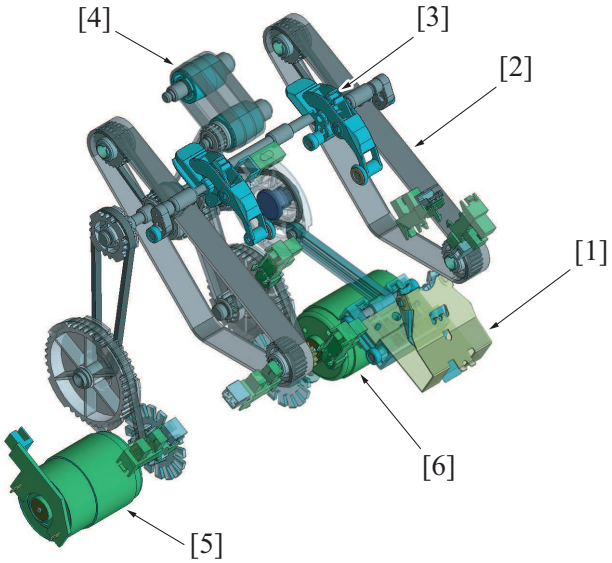


[1]	Upper paddle turning shaft	[2]	Upper paddle (upper position: home position)
[3]	Upper paddle (lower position: make a turn and return to home position.)	-	-

8.2.3 Exit section

- When the pre-eject drive motor rotates clockwise, the lower paddle rotates to press the paper against the trailing edge stopper.
- When the pre-eject drive motor rotates counterclockwise, the trailing edge stopper moves from the home position to the paper exit position to discharge paper to the main tray. When the drive gear makes a turn, the stopper moves from the paper exit position to the home position and is brought into a standby state.

Exit section: Front perspective view

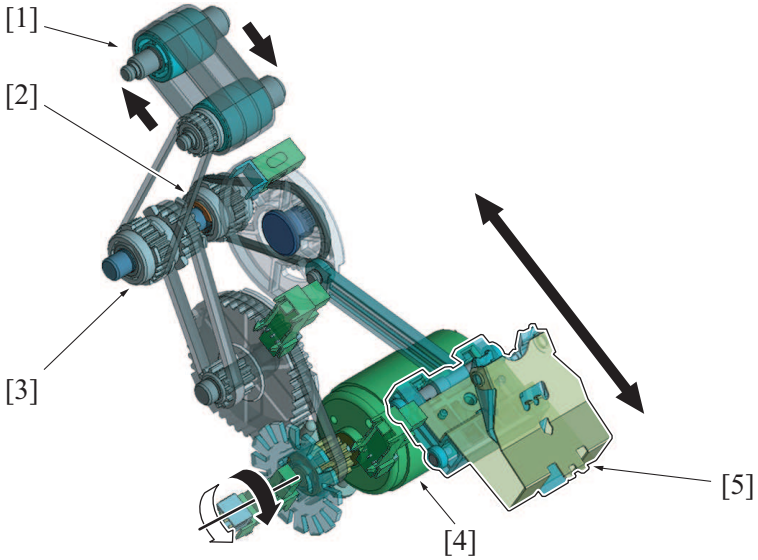


[1]	Trailing edge stopper/C	[2]	Paper transport belt

[3]	Gripper	[4]	Lower paddle
[5]	Bundle eject motor (M10)	[6]	Pre-eject drive motor (M9)

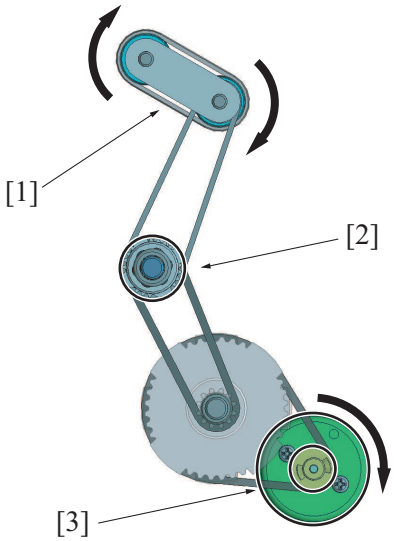
(1) Lower paddle section

Front perspective view



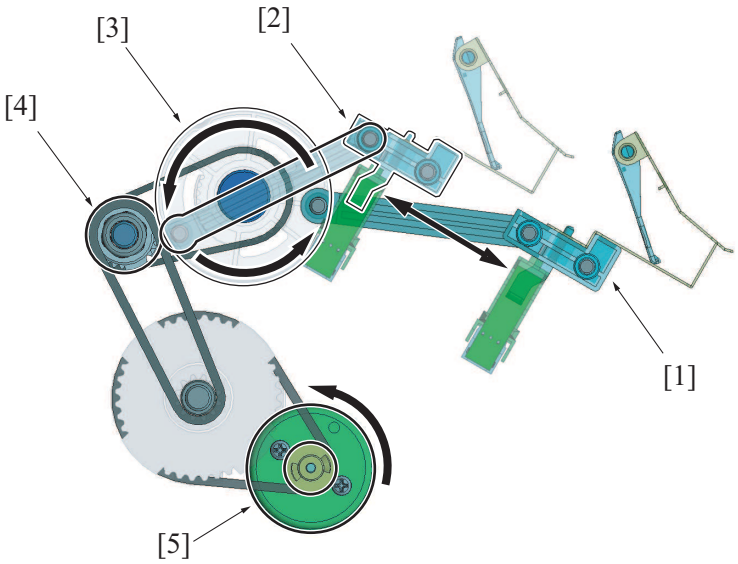
[1]	Lower paddle	[2]	One-way clutch (for trailing edge stopper/C driving)
[3]	One-way clutch (for stopper driving)	[4]	Pre-eject drive motor (M9)
[5]	Trailing edge stopper/C	-	-

Lower paddle drive front view



[1]	Lower paddle	[2]	One-way clutch (for lower paddle driving: transmit driving force only to clockwise rotation)
[3]	Pre-eject drive motor (M9): clockwise rotation	-	-

Trailing edge stopper/C drive front view

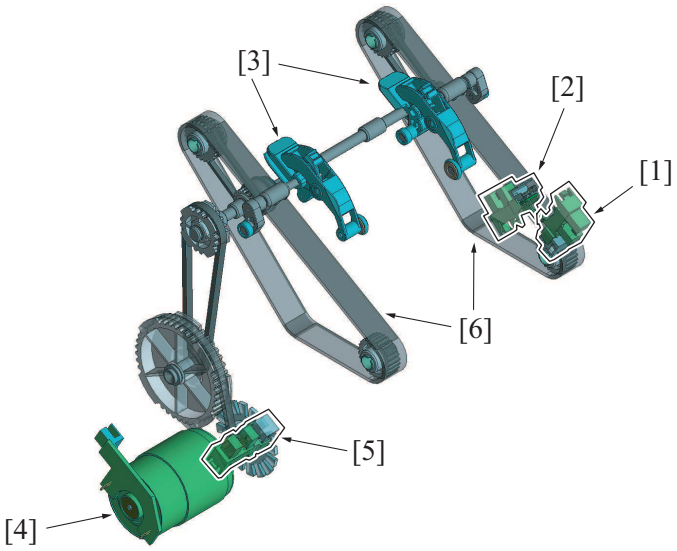


[1]	Trailing edge stopper/C (home position)	[2]	Trailing edge stopper/C (paper exit position)
[3]	Drive gear	[4]	One-way clutch (for trailing edge stopper driving: transmit driving force only to counterclockwise rotation)
[5]	Pre-eject drive motor (M9): counterclockwise rotation	-	-

(2) Gripper section

- The bundle eject motor rotates to turn the paper transport belt. This causes the gripper, fixed to the paper transport belt, to rotate.

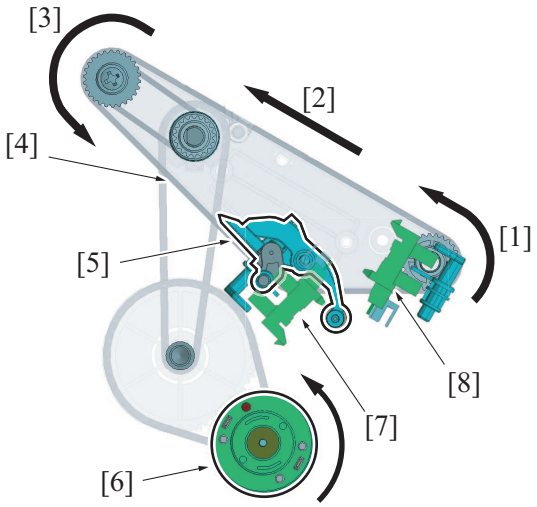
Front perspective view



[1]	Gripper position detection sensor (PS19)	[2]	Gripper home position sensor (PS18)
[3]	Gripper	[4]	Bundle eject motor (M10)
[5]	Gripper motor sensor (PS17)	[6]	Paper transport belt

- The gripper stays at the home position (inside the exit section). It rotates at the position [1] shown in the illustration to grip the trailing edge of paper and transport the paper while keeping the state [2]. The gripper rotates at the position [3] in the illustration to release the paper. When the paper transport belt makes a turn, the gripper returns to the home position [5] and is brought into a standby state.

Gripper drive front view

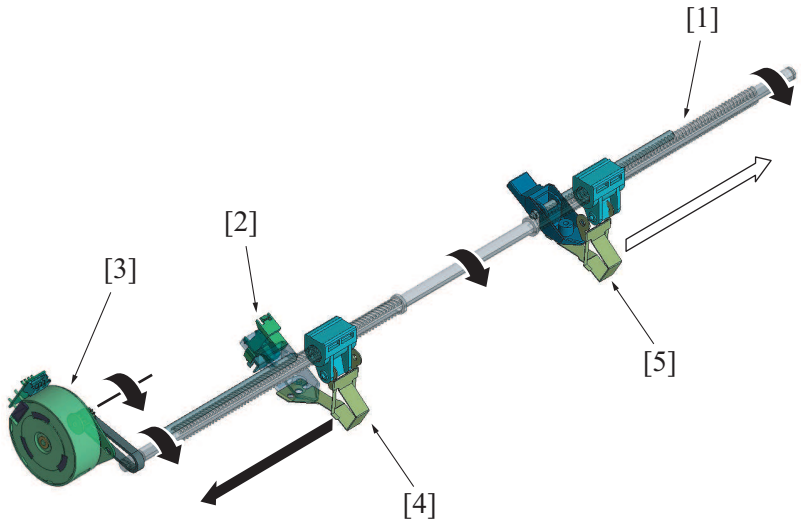


[1]	Gripper position (gripping the paper)	[2]	Gripper position (transporting the paper)
[3]	Gripper position (release the paper)	[4]	Paper transport belt
[5]	Gripper (home position)	[6]	Bundle eject motor (M10)
[7]	Gripper home position sensor (PS18)	[8]	Gripper position detection sensor (PS19)

8.2.4 Stopper section

- The shaft for stopper movement has a different spiral between the front and rear sides. This causes trailing edge stopper/Fr to move forward and trailing edge stopper/Rr to move backward when the trailing edge stopper motor rotates in the normal direction.
- Trailing edge stopper/F and the trailing edge stopper/R shift according to the paper width before starting a job, to hold the trailing edge of the paper.
- For 2-point staple jobs, the trailing edge stoppers/Fr and /Rr are retracted to the position where they do not interfere with the stapler.
- After the job is completed, the trailing edge stopper motor reverses the rotation to return the trailing edge stopper to the home position.

Front perspective view

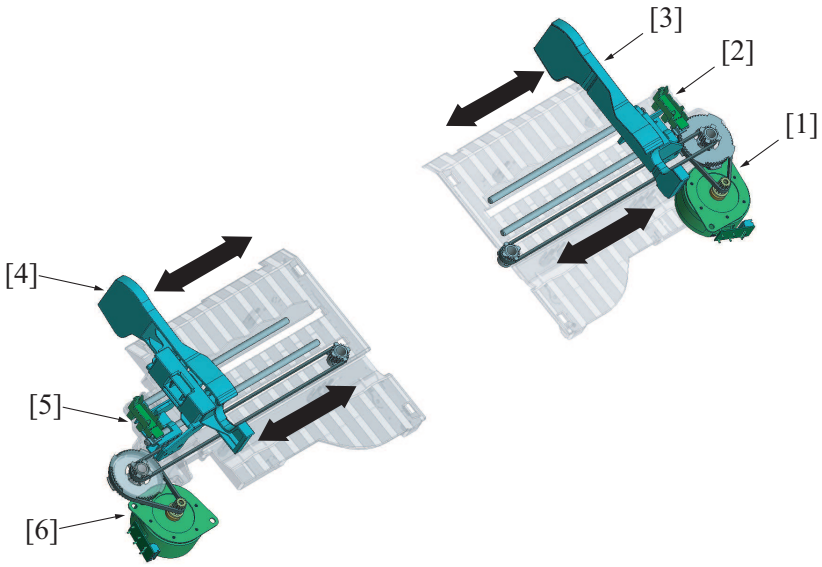


[1]	Stopper moving shaft	[2]	Trailing edge stopper home position detection sensor (PS20)
[3]	Trailing edge stopper motor (M6)	[4]	Trailing edge stopper/Fr: home position
[5]	Trailing edge stopper/Rr: home position	-	-

8.2.5 Alignment tray section

- The normal or reverse rotation of the alignment motor, allows the normal or reverse rotation of the drive belt. This causes the alignment plates to move forward or backward.
- Alignment plates/F and /R are each equipped with a drive motor, allowing them to operate independently. This enables paper alignment to the center, as well as paper shift to the front and rear.

Front perspective view



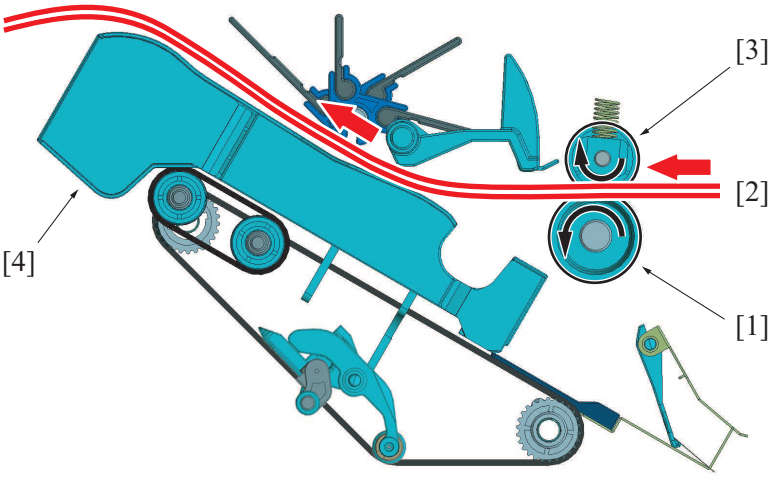
[1]	Alignment motor/Rear (M8)	[2]	Alignment plate/R home sensor (PS13)
[3]	Alignment plate /R: home position	[4]	Alignment plate /F: home position
[5]	Alignment plate/F home sensor (PS12)	[6]	Alignment motor/Front (M7)

8.3 Operation

8.3.1 Paper transport control in alignment section

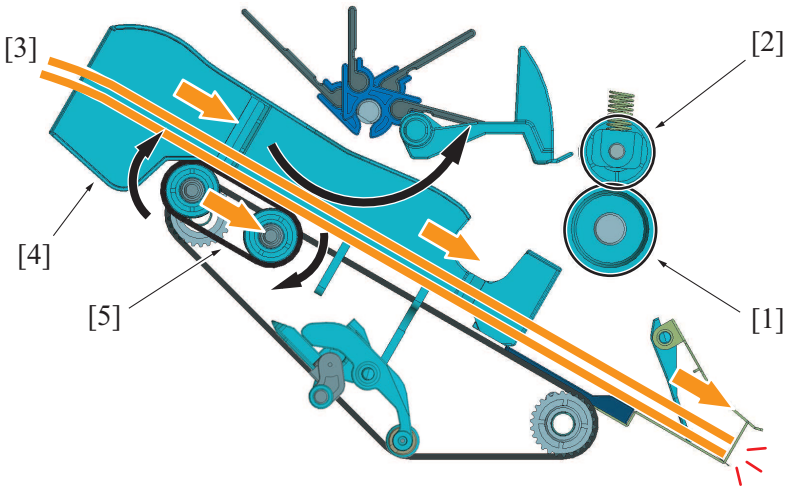
Paper transported to the alignment section, is conveyed and aligned with the following operations.

1. The receiving roller in the transport section ejects paper *1.
   NOTE
   - ***1: For plain paper, due to buffer control, the first and second sheets of paper are ejected at the same time. For other than plain paper, the first paper is ejected.**
     For details of the buffer control, see " PJ.7.3.4 Buffer control".
   - **The description below explains the paper transport control for plain paper.**
2. The alignment plates/F and /R are moved to the center.
3. The first and second sheets are transported onto the top of the alignment plates.
   NOTE
   - **This is to prevent the leading edge of the sheets from touching the lower paddle and being folded.**



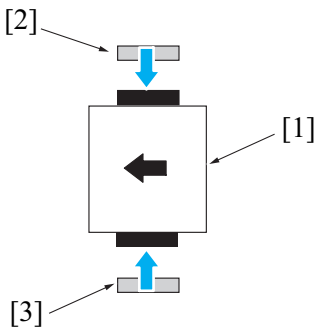
[1] Receiving roller
[2] First and second sheets (for plain paper)
[3] Receiving roll
[4] Alignment plate/F, Alignment plate/R (moved to the center)

4. The alignment plates return their home position. The alignment plate/F and the alignment plate/R shift to the waiting position according to the paper width immediately before the trailing edge of the paper passes the receiving roller.
5. When the trailing edge of the sheet passes through the receiving roller, the paper guide is lowered to guide the trailing edge of the sheet to the alignment tray.
6. The upper paddle rotates, and the upper and lower paddles grip the sheet. The sheet is transported into the alignment tray. (Operation on switchback) The sheets are transported into the alignment tray and are stopped by the trailing edge stopper. This allows aligning the trailing edge of the sheets. (paper alignment operation in FD)



[1] Receiving roller
[2] Receiving roll
[3] First and second sheets
[4] Alignment plate/F, Alignment plate/R (Retracted to the home position)
[5] Lower paddle (rotation)

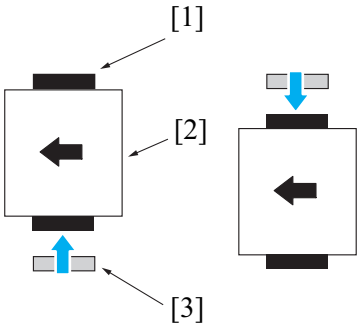
7. The alignment plates move to align the ends of the sheets. (Paper alignment in CD)
   - The sheets are placed between the alignment plates/F and /R corresponding to the paper width so that their both ends are aligned.
     Upper view



[1] Paper
[2] Alignment plate /R (moving forward to front side)
[3] Alignment plate/F (moving backward to rear side)

   - The alignment operations described above are performed for all sheets of paper in the job to align the ends of the sets of paper.

8. When offset is selected as finishing option, the alignment plates are moved to shift the sets of paper.
   - Depending on the width of paper, the alignment plate/F or /R pushes the sets of paper to the rear side (or to the front side) from one side so that the sets of the paper are shifted.
     Upper view



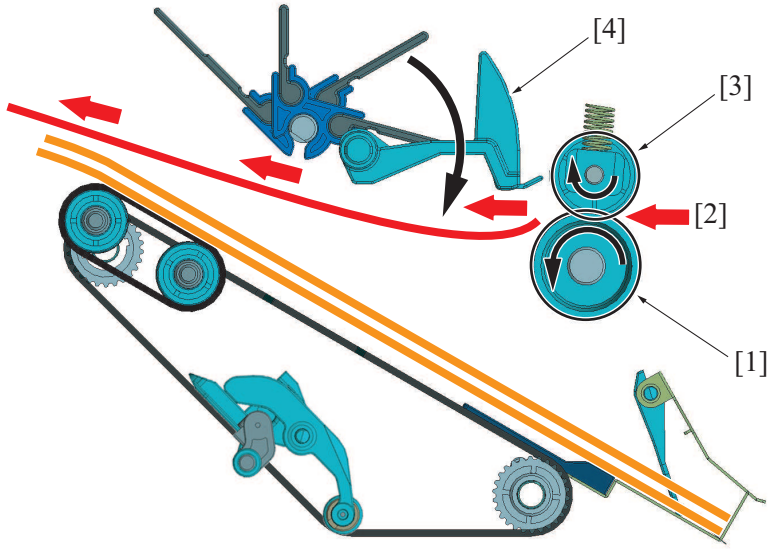
[1] Alignment plate/R
[2] Paper
[3] Alignment plate/F

NOTE

• The offset of paper (amount of shift) is 20 mm (13/16 inches).

   - The sheets are shifted by alternatively repeating the above operation.

9. The third sheet is ejected by the receiving roller of the transport section.

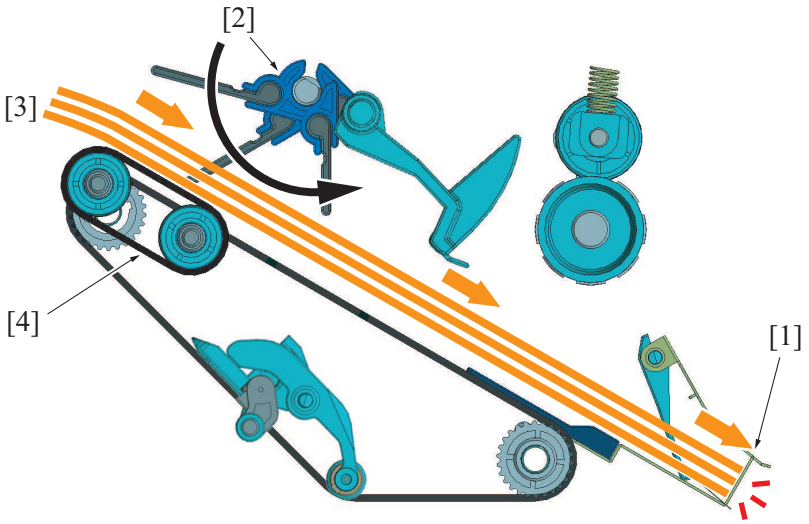


[1] Receiving roller
[2] Third sheet
[3] Receiving roll
[4] Paper guide (upper position)

10. When the trailing edge of the sheet passes through the receiving roller, the paper guide is lowered to guide the trailing edge of the sheet to the alignment tray.
11. The upper paddle rotates. The sheet is transported into the alignment tray. (Operation on switchback)

NOTE

- **When the switchback operation for the 3rd sheet or later, the lower paddle does not rotate.**



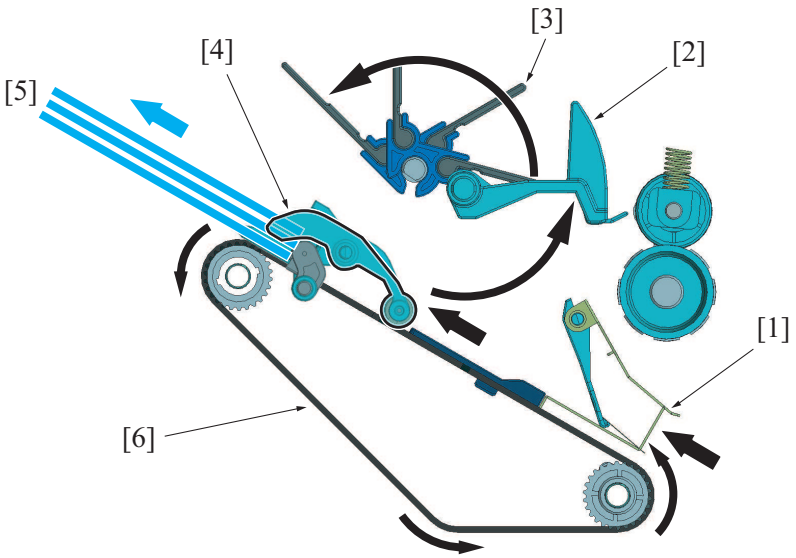
[1] Trailing edge stopper
[2] Upper paddle (rotation)
[3] Paper
[4] Lower paddle (rotation)

12. The sheet is stopped by the trailing edge stopper. This allows aligning the trailing edge of the sheets. (Paper alignment operation in FD)
13. The alignment plates move to align the ends of the sheets. (Paper alignment operation in CD)

NOTE

- **CD alignment operation is omitted since it is described in steps 7 to 8.**

14. For staple mode, the trailing edges of the sheets are stapled at this timing.
15. When all paper alignment is completed, the trailing edge stopper pushes the sheets to the position where the gripper can grip them.
16. The gripper grips the trailing edges of the sets of paper in the alignment tray and transports them to the paper exit position.



[1] Trailing edge stopper/C (paper gripping position)
[2] Paper guide (upper position: home position)
[3] Upper paddle (upper position: home position)
[4] Gripper (move)
[5] Paper bunch
[6] Paper transport belt (rotation)

17. The gripper releases the sets of paper to discharge them to the main tray. The gripper is moved to the home position and brought into a standby state.

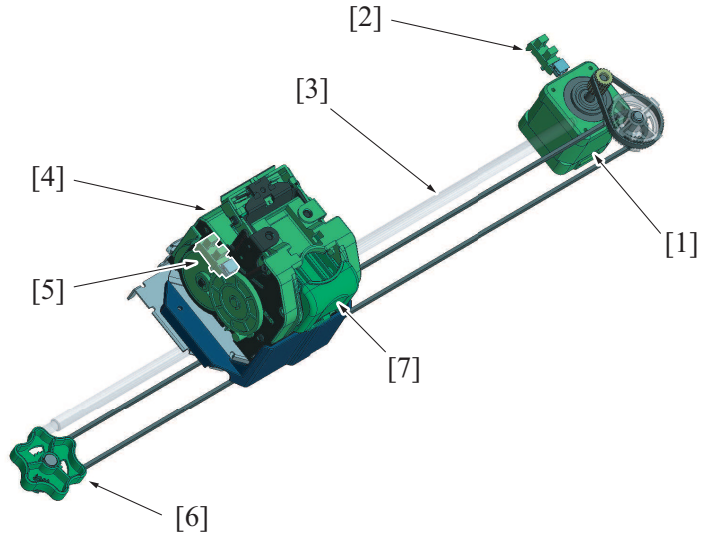
9. STAPLER SECTION

9.1 Configuration/Drive

In the stapler section, staples are pressed through the sheets aligned in the alignment section so that the sheets are fastened together as a batch.

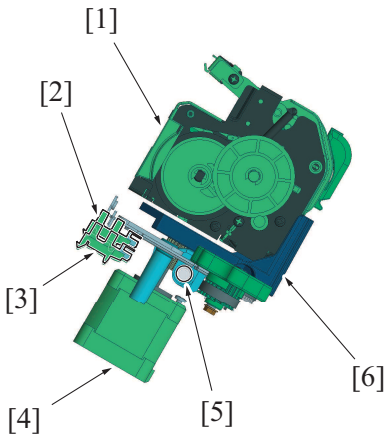
9.1.1 Configuration

Front perspective view



[1]	Side stapler movement motor (M13)	[2]	Stapler home position sensor (Rear) (PS23)
[3]	Shaft	[4]	Stapler unit
[5]	Stapler position sensor (Center) (PS24)	[6]	Stapler move dial
[7]	Staple cartridge	-	-

Front view



[1]	Stapler unit	[2]	Stapler home position sensor (Rear) (PS23)
[3]	Stapler position sensor (Center) (PS24)	[4]	Side stapler movement motor (M13)
[5]	Shaft	[6]	Stapler holder

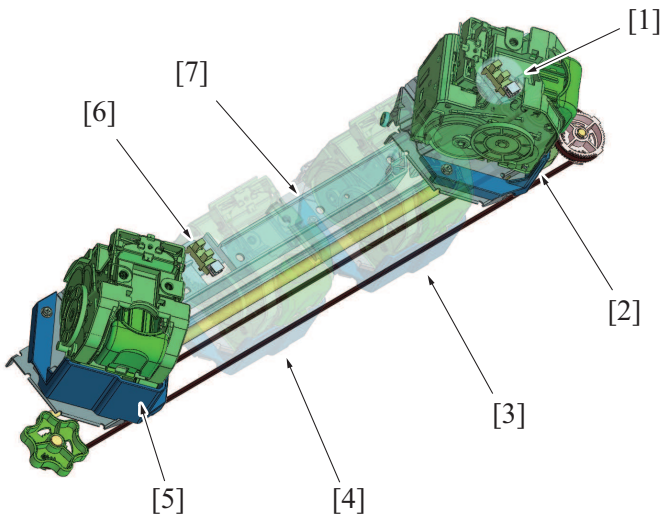
9.1.2 Drive

- The driving source of the staple section is the side stapler movement motors, stapler motor built into the staple unit, and the following parts are driven.

Driving source	Driving parts	Function
Side stapler movement motor	Staple unit	Back and forth movement and rotation of the stapler unit
Stapler	Clincher staple arm	Fastening of sheets with staples

- When the side stapler movement motor rotates, the belt is driven by the pulley and the stapler holder attached to the belt moves back and forth along the shaft.
- When the staple unit moves to the stapler home position, the staple cartridge replacement or the corner staple position, the shape of the slide guide plate causes the staple unit to rotate.
  NOTE
  - **The staple unit is rotated at the staple cartridge replacement position to ease replacement work.**

Front perspective view



[1]	Stapler home position sensor (Rear) (PS23)	[2]	Stapler unit (home position)
[3]	Stapler unit (2-staple position)	[4]	Stapler unit (2-staple position)
[5]	Stapler unit (staple cartridge replacement position)	[6]	Stapler position sensor (Center) (PS24)
[7]	Slide guide plate	-	

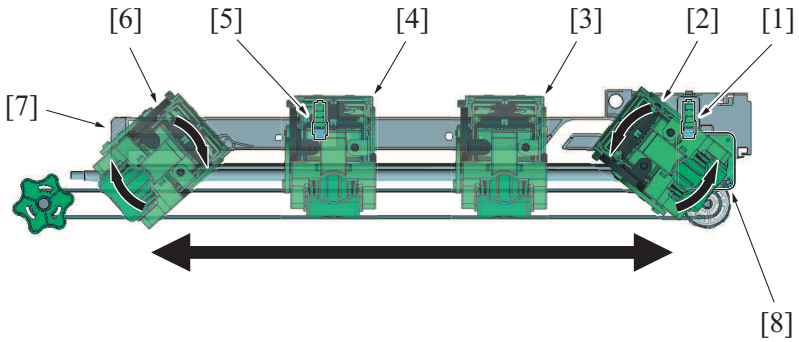
9.2 Operation

9.2.1 Stapler positioning control

(1) Stapler home position detection control

- The stapler home position sensor (rear) detects the stapler home position. The stapler's staple position is detected by the amount of motor rotation provided by the stapler home position sensor (rear) and stapler position sensor (center).
- In the corner staple mode, the stapler moves to the corner staple position and staples paper.
- In the 2-staple mode, the stapler moves to the 2-staple position (rear) and staples paper. Then it moves to the next 2-staple position (front) and staples the paper. After the stapling operation is completed, the stapler returns to the home position.

Upper view



[1]	Stapler home position sensor (Rear) (PS23)	[2]	Stapler unit (home position)
[3]	Stapler unit (2-staple position: rear)	[4]	Stapler unit (2-staple position: front)
[5]	Stapler position sensor (Center) (PS24)	[6]	Stapler unit (staple cartridge replacement position)
[7]	Slide guide plate	[8]	Side stapler movement motor (M13)

(2) Staple cartridge replacement position detection control

- The stapler position sensor (center) detects the staple cartridge replacement position. (The stapler determines that it arrives at the replacement position based on how much the side stapler movement motor rotates after the stapler passes the stapler position sensor (center).
- When staple empty is detected, the staple unit moves to the staple cartridge replacement position, rotates, and stays at the position.
- User can replace the staple cartridge by opening the front door.
  NOTE
  - **Using the stapler move dial, user can replace the staple cartridge without moving the staple unit.**
- When staple cartridge replacement is completed and the front door is closed, the stapler returns to the home position.

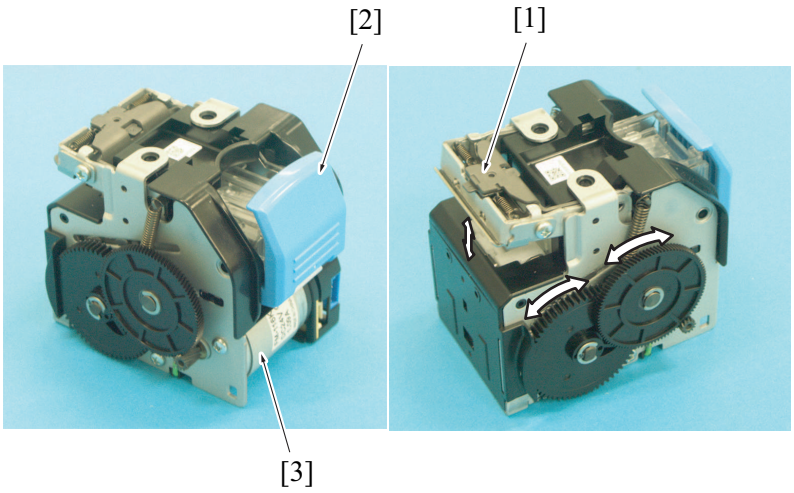
9.2.2 Stapling control

(1) Stapling operation

- The stapling operation is driven by the stapler motor.

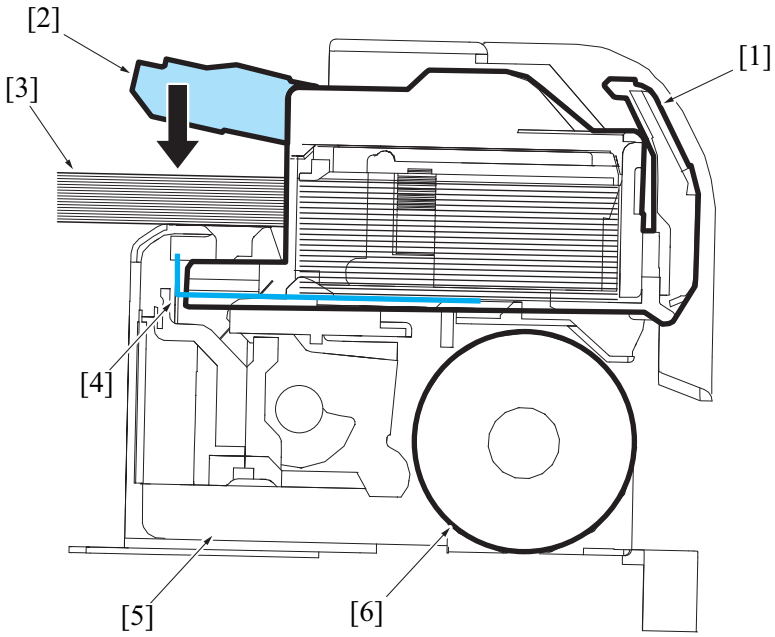
- In the stapling operation, the clincher staple arm is lowered by the stapler motor. The clincher staple arm presses the sheets. (This is called clamp operation.) Then a staple is pushed up by the staple arm from the stapler side. The staple is pressed through the sheets and bent from the clincher staple arm side, so that the sheets are fastened together. The stapler motor then lifts the clincher staple arm and lowers the staple arm to complete the stapling operation.
- The number of sheets that user wishes to staple are placed into the alignment tray and the stapling operation is performed. However, if the number exceeds the upper limit, the stack of sheets is discharged to the exit tray without being stapled.
  NOTE
  - **Refer to Sort staple for the specifications on the number of sheets that can be stapled.**

Overall view



[1]	Clincher staple arm	[2]	Staple cartridge
[3]	Stapler motor	-	-

Front view

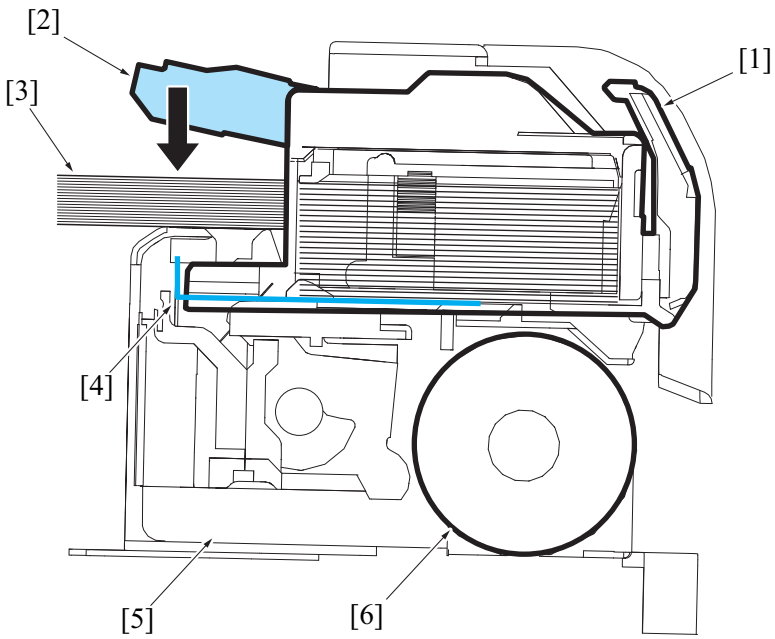


[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor

9.2.3 Staple empty detection control

(1) Staple cartridge

- The stapler is provided with a staple cartridge used only for the stapler.
- To reload the stapler with staples, the staple cartridge is first loaded with staples (staple sheet type: 5000 staples) and then the staple cartridge is attached to the stapler.
  For information on how to load staplers, refer to the user's guide.

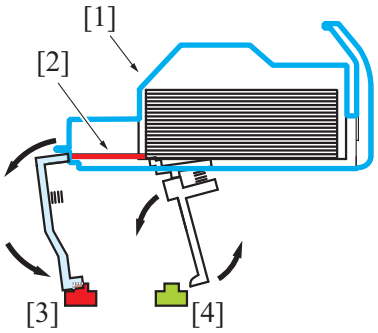


[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor

(2) Staple empty detection mechanism

- The stapler includes the self-priming sensor and staple empty sensor to detect the status of the staple cartridge and staples.
- The staple cartridge is loaded with staple sheets, and a staple sheet is conveyed to the clinch position (staple position) from the lowest one.

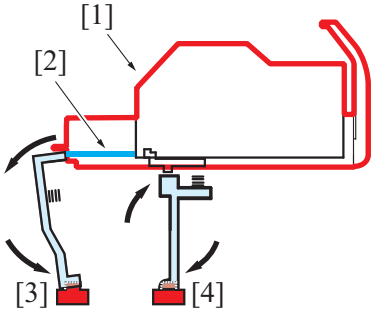
State where staple sheets are loaded



[1] Staple cartridge (loaded with staple sheets)
[2] Staple sheet fed from the cartridge
[3] Self-priming sensor (blocked)
[4] Staple empty sensor (unblocked)

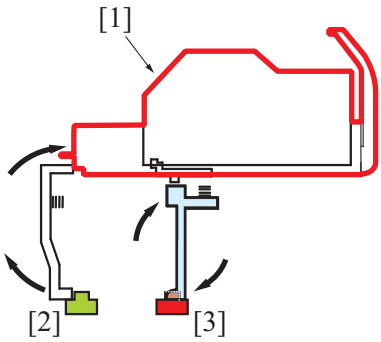
- While the staple cartridge is loaded, if the trailing edge of the last staple sheet in the cartridge passes the actuator of the staple empty sensor, the actuator is raised by the spring force.
- When the actuator is raised, the staple empty sensor is blocked and machine determines that the cartridge is empty. The control panel displays the staple empty message.

State where the last staple sheet is fed



[1] Staple cartridge (staple empty)
[2] Staple sheet (remainder)
[3] Self-priming sensor (blocked)
[4] Staple empty sensor (blocked)

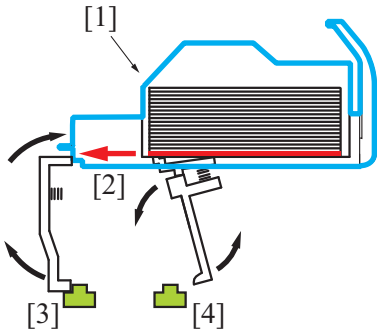
State where staple sheet runs out



[1] Staple cartridge (empty)
[2] Self-priming sensor (unblocked)
[3] Staple empty sensor (blocked)

- Even when the staple empty sensor detects the trailing edge of the last staple sheet, the staple sheet (staples: about 20) fed from the cartridge remains at the cartridge's front section. In this case, the actuator of the self-priming sensor is pressed down by the leading edge of the staple sheet.
- If the actuator is pressed down, the self-priming sensor is blocked and machine determines that the staple sheet is fed to the clinch position (staple position).
- Even when staple empty is detected, printing is not disabled. Paper is discharged without being stapled.
- After staple empty is detected, when the staple cartridge is loaded with staple sheets and the stapler is loaded with the cartridge, the actuator of the staple empty sensor is pressed down by the staple sheets.
- When the actuator is pressed down, the staple empty sensor is unblocked and staple empty condition is cleared. At this point, the staple empty sensor detects the staple sheets (unblocked). However, if the leading edge of the staple sheet cannot be detected by the self-priming sensor (unblocked), the clinch operation is repeated up to 20 times to feed the leading edge of the staple sheet to the position (clinch position) where it can be detected by the self-priming sensor.

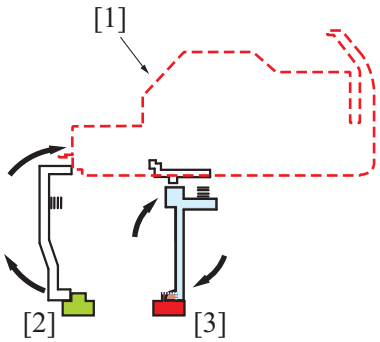
State where staple sheet is not fed



[1] Staple cartridge (loaded with staple sheets)
[2] Staple sheet is fed by clinch operation
[3] Self-priming sensor (unblocked)
[4] Staple empty sensor (unblocked)

- If the self-priming sensor cannot detect the leading edge of the staple sheet after clinch operations, machine determines that the staple sheet is not properly fed (staple sheet is not properly set) and the control panel displays the staple empty message.
- If the staple empty message appears even after staple sheets are loaded, check whether the staple sheets is properly set in the staple cartridge. If the cartridge is clogged with a staple sheet, clear the sheet.
- If staple empty occurs, the stapler stays at the staple cartridge replacement position. (position where staples can be supplied only by opening the front door).

(a) When the staple cartridge is not loaded



[1]	Staple cartridge (not mounted)	[2]	Self-priming sensor (unblocked)
[3]	Staple empty sensor (blocked)	-	-

- The actuator of the staple empty sensor is raised by the spring force. The staple empty sensor is blocked.
- The actuator of the self-priming sensor is raised by the spring force. The self-priming sensor is unblocked.
- MFP determines that the cartridge is empty and the control panel displays the staple empty message.

9.2.4 Clogged staple detection control

- Stapling operation is performed by lowering of the clincher staple arm and lifting of the staple arm.
- The staple arm position is detected by the staple home sensor located in the stapler.
- The stapler determines that the stapling operation is completed if the staple arm returns to the home position within the specified time after the stapling operation. If the staple arm does not return to the home position after the specified time has passed, the machine determines that staple trouble has occurred and an error message appears on the control panel.

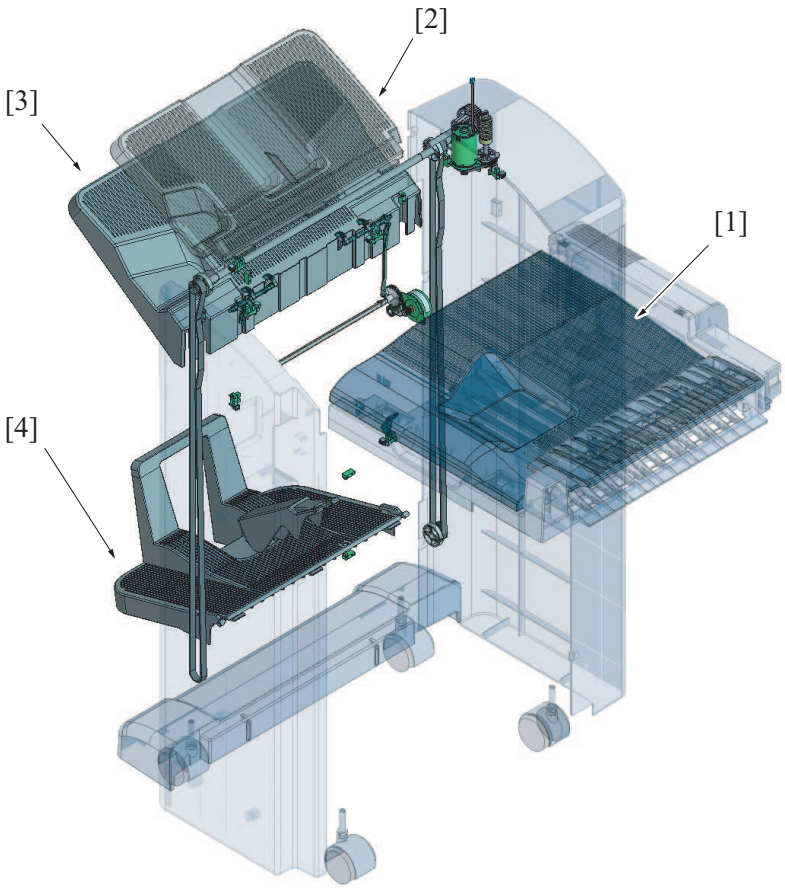
10. RECEIVING SECTION

10.1 Configuration

10.1.1 Configuration outline

- In the receiving section, paper transported into the finisher is placed into each tray.

Overall: Front perspective view



[1]	3rd tray (RU section upper position)	[2]	Sub tray
[3]	Main tray	[4]	Saddle tray: FS-534SD only

(1) Main tray

- Stores paper that is aligned in the alignment section.
- The tray's up/down mechanism moves the tray down depending on the amount of paper loaded, so that a large capacity of paper can be placed. The tray also includes the mechanism for detecting the amount of loaded paper.
- The paper stacking capacity for trays is different between the FS-534 and FS-534SD.

NOTE

- **For details on the paper stacking capacity, refer to Paper process ability .**

(2) Sub tray

- Stores paper that is transported from the transport section without passing through the alignment section.
- The tray is a fixed type without the up/down mechanism. The tray includes the mechanism for detecting the amount of loaded paper.

NOTE

- **For details on the paper stacking capacity, refer to Sub tray.**

(3) 3rd tray

- It stores the paper that is transported from the MFP paper exit section.
- The upper part of the RU section door can be used as the exit tray. The tray includes the mechanism for detecting the amount of loaded paper.

NOTE

- **For details on the paper stacking capacity, refer to 3rd tray.**

(4) Saddle tray

NOTE

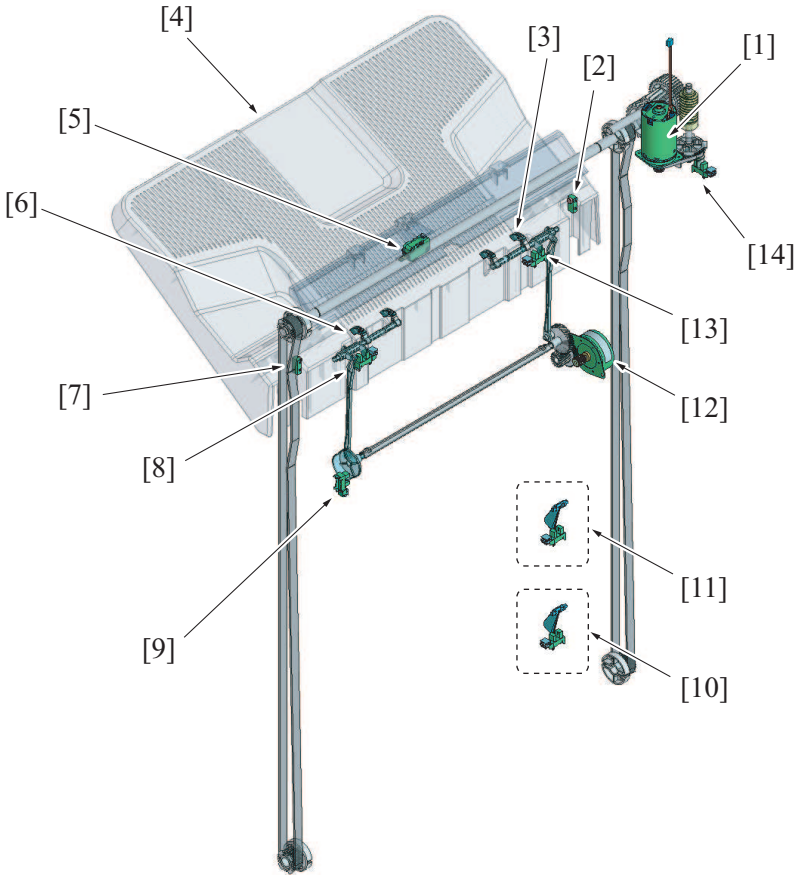
- **FS-534SD only**

- Stores paper that is center-stapled in the saddle section is placed in the tray.
- The tray is a fixed type without the up/down mechanism. The tray does not have the sensor for detecting the amount of loaded paper. (To detect paper full, the number of sets discharged to the tray is counted.)

NOTE
- **For details on the amount of loaded paper, refer to Saddle stitching/folding.**

10.1.2 Main tray

Main tray section: Front perspective view



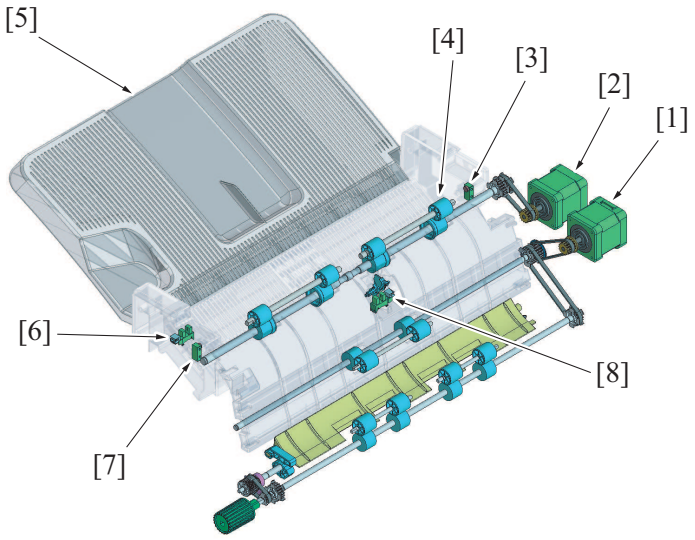
[1]	Main tray up/down motor (M11)	[2]	Main tray upper sensor/out (PS6)
[3]	Paper detection lever/Rr	[4]	Main tray
[5]	Main tray upper position detect switch (SW2)	[6]	Paper detection lever/Fr
[7]	Main tray upper sensor (PS7)	[8]	Main tray upper position sensor/F (PS27)
[9]	Paper delivery control sensor (PS28)	[10]	Main tray full detection sensor (PS29) *1
[11]	Main tray full detection sensor (PS29) *2	[12]	Paper receiving control motor (M12)
[13]	Main tray upper position sensor/R (PS26)	[14]	Stacker motor sensor (PS25)

- *1: Installation position for the FS-534 sensor
- *2: Installation position for the FS-534SD sensor

10.1.3 Sub tray

NOTE
- **For configurations of the paper transport path to the sub tray, refer to PJ.7.1.2 Paper feed section - sub tray section .**

Sub tray section: Front perspective view



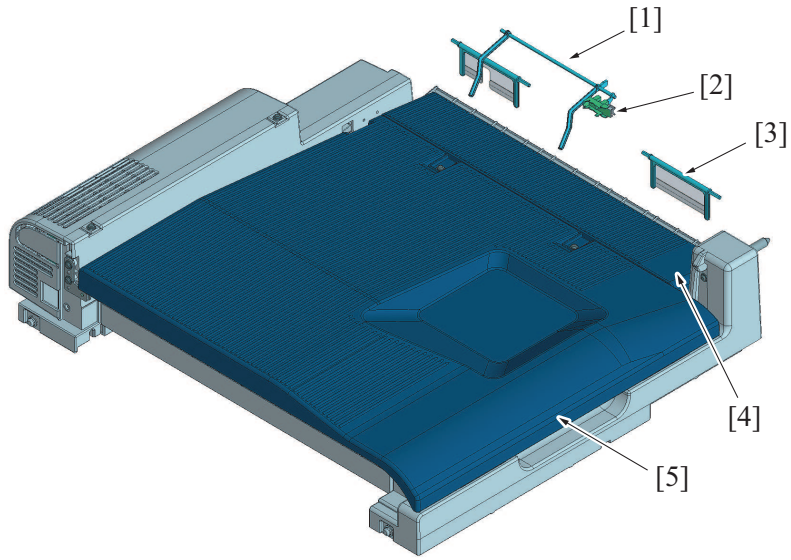
[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Sub tray full detection sensor/out (PS9)	[4]	Sub tray section exit roller
[5]	Sub tray	[6]	Upper cover open/close detection sensor (PS32)
[7]	Sub tray full detection sensor/in (PS10)	[8]	Sub tray exit sensor (PS8)

10.1.4 3rd tray

NOTE

- **For configurations of the paper transport path to the 3rd tray, refer to Configuration .**

3rd tray section: Front perspective view



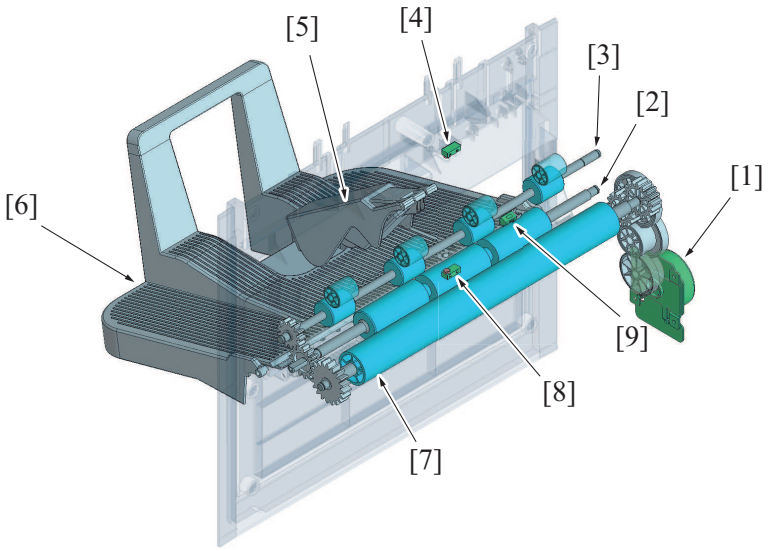
[1]	3rd exit tray full sensor actuator	[2]	3rd exit tray full sensor (PS1)
[3]	Paper press	[4]	Paper feed guide plate
[5]	3rd tray (RU section door)	-	-

10.1.5 Saddle tray

NOTE

- **FS-534SD only**
- **For configurations of the paper transport path to the saddle tray, refer to PJ.11.1 Configuration .**

Saddle tray section: Perspective view



[1]	Center fold roller motor (M5)	[2]	Tri-folding roller
[3]	Saddler section exit roller	[4]	Booklet tray empty detection sensor/in (PS13)
[5]	Paper press	[6]	Saddle tray
[7]	Center folding roller/2	[8]	Booklet tray empty detection sensor/out (PS14)
[9]	Fold exit sensor (PS12)	-	-

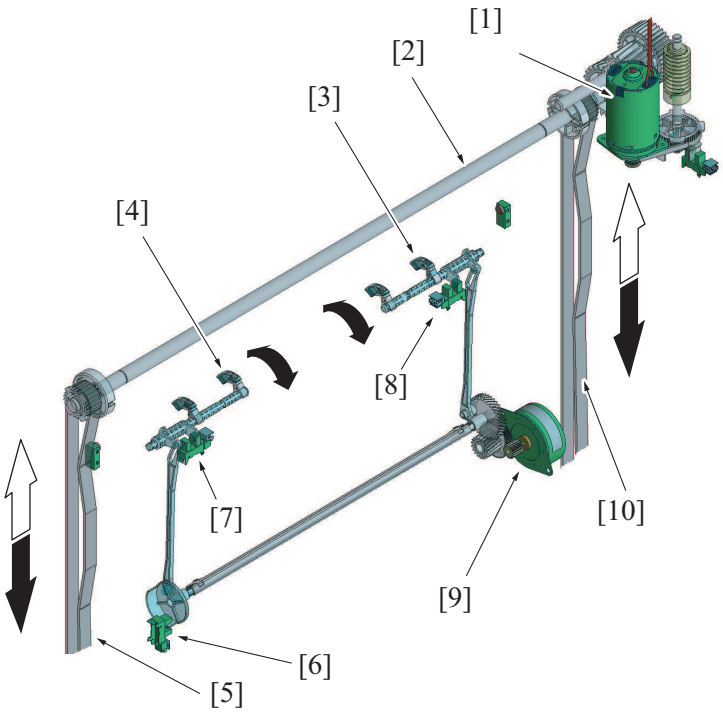
10.2 Drive

The driving source of the main tray section is the main tray up/down motor and the paper receiving control motor, and the following parts are driven.

Driving source	Driving parts	Function
Main tray up/down motor (M11)	Main tray	• Normal rotation: The main tray is lowered depending on the number of sheets discharged into the main tray. • Reverse rotation: After paper is removed, the main tray is lifted to the home position.
Paper receiving control motor (M12)	Paper detection lever	The height of stacked paper (amount of stacked paper) discharged to the main tray is detected.

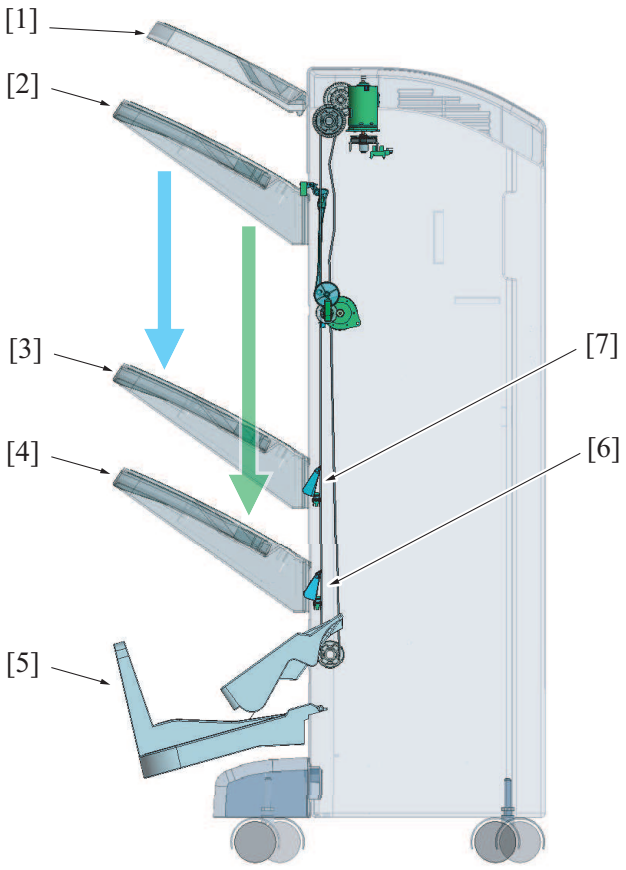
10.2.1 Main tray section

Front perspective view



[1]	Main tray up/down motor (M11)	[2]	Main tray driving shaft
[3]	Paper detection lever/Rr	[4]	Paper detection lever/Fr
[5]	Main tray drive belt/Fr	[6]	Paper delivery control sensor (PS28)
[7]	Main tray upper position sensor/F (PS27)	[8]	Main tray upper position sensor/R (PS26)
[9]	Paper receiving control motor (M12)	[10]	Main tray drive belt/Rr

Front view



[1]	Sub tray	[2]	Main tray (home position)
[3]	Main tray (main tray full position) *1	[4]	Main tray (main tray full position) *2
[5]	Saddle tray	[6]	Main tray full detection sensor (PS29) *2
[7]	Main tray full detection sensor (PS29) *1	-	-

- *1: FS-534SD
- *2: FS-534

(1) Mechanism for protecting main tray drive section

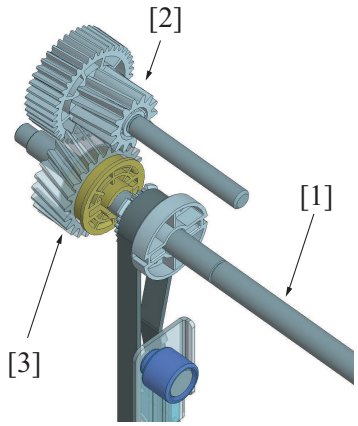
CAUTION

- When the drive connection in the torque limiter is released, the main tray moves down under its own weight.
- To avoid finisher breakage and your injury, before releasing the drive connection in the torque limiter, be sure to support the main tray with your hand.

- The drive connection section of the main tray up/down drive mechanism has a torque limiter to prevent breakage.
- There may be an obstacle below the main tray during its downward movement. If the tray touches the obstacle and the force required to stop the lowering operation exceeds the specified value, the teeth of the drive gear rotates in the reverse direction and the driving force cannot be transmitted to the main tray. The torque limiter is used to prevent this situation from causing the breakage of the main tray drive mechanism and the main tray up/down motor.

- The main tray can be moved only upward with your hands. By manually pushing it upward with the force exceeding the specified value, the main tray can be raised. In contrast, as the torque limiter is not provided for the downward movement, the main tray cannot be lowered by pushing it down. If the tray is forcibly pushed downward, the main tray drive mechanism can be damaged.
- If the main tray needs to be manually lowered for maintenance and repair, the tray can be lowered by releasing the drive connection in the torque limiter.

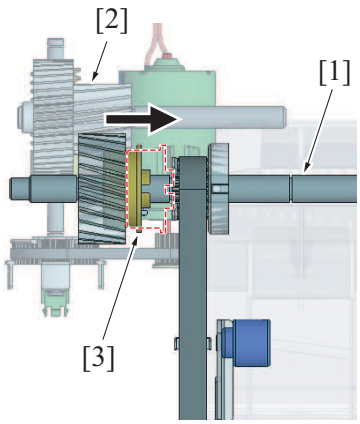
Front perspective view



[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear
[3]	Torque limiter	-	-

(a) Method for releasing the drive connection

1. Remove the rear cover.
2. Support the main tray with your hand so that it does not fall down.
3. Slide the area of the torque limiter, located on the main tray driving shaft, as shown to the front side of the main body. The connection of the drive gears is released and the main tray is lowered.
   Side view



[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear
[3]	Torque limiter	-	-

10.2.2 Sub tray section

NOTE

- **For information on the drive in the sub tray (between transport section and sub tray section), refer to PJ.7.2 Drive in the transport section.**

10.2.3 3re tray section

NOTE

- **The 3rd tray does not have drive parts which requires drives source such as drive motor.**

10.2.4 Saddle tray section

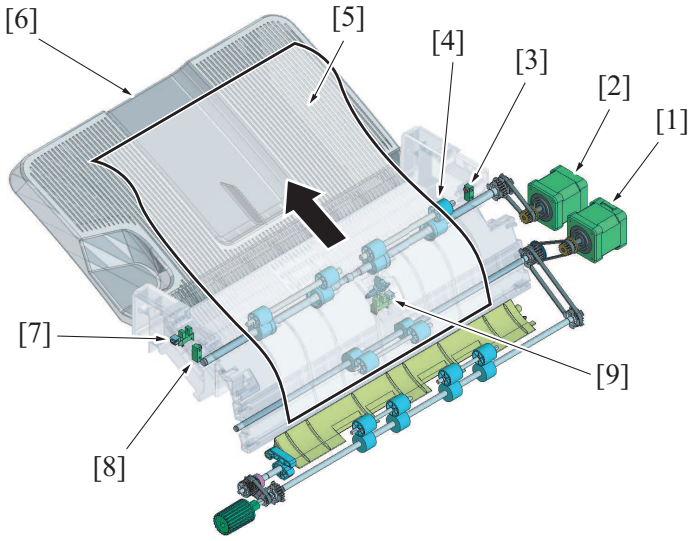
NOTE

- **For information on the drive in the sub tray (between transport section and sub tray section), refer to PJ.11.7.1 Drive in the transport section.**

10.3 Operation

10.3.1 Sub tray exit mechanism

- Paper transported from the RU section is discharged to the sub tray by the sub tray exit roller via the FNS paper feed roller, FNS transport roller, and sub tray vertical transport roller.
- To transport paper to the sub tray, the paper path switching gate also operates.
- The sub tray exit roller is driven by the FNS discharge motor.

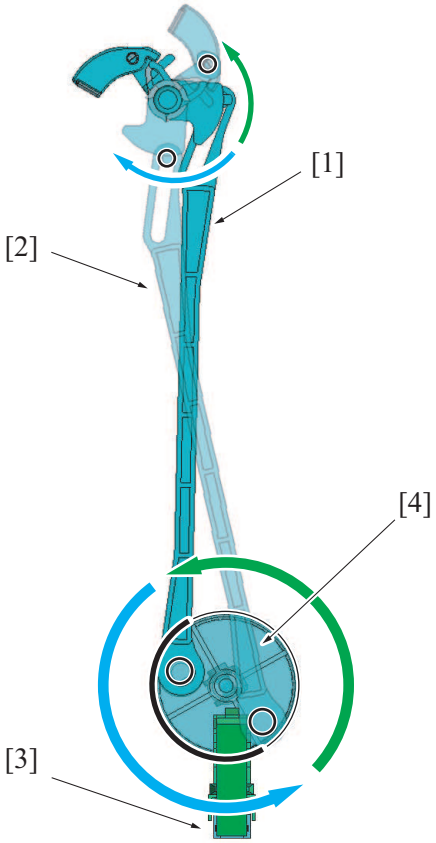


[1]	FNS entry transport motor (M2)	[2]	FNS discharge motor (M3)
[3]	Sub tray full detection sensor/out (PS9)	[4]	Sub tray section exit roller
[5]	Paper	[6]	Sub tray
[7]	Upper cover open/close detection sensor (PS32)	[8]	Sub tray full detection sensor/in (PS10)
[9]	Sub tray exit sensor (PS8)	-	-

10.3.2 Main tray paper level detection control

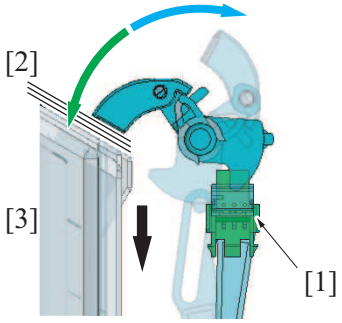
- The height of paper stacked on the main tray is always controlled to the specified level, by lowering the main tray depending on the amount of paper discharged to the main tray.
- The paper level is detected by the main tray upper position sensors/Fr and /Rr. Based on the detection results, the main tray height is controlled.
- The top end of the paper detection lever is lifted when the paper detection lever drive gear makes a half-turn. When the paper receiving control motor makes another half-turn, the end of the lever presses down the top of the trailing edge of the paper stacked on the main tray. Depending on the number of the sheets stacked or the height of the exit tray, the position of the paper detection lever changes.
- When the paper detection lever is at the home position, the main tray upper position sensor is unblocked. When the top end of the lever is lifted, the main tray upper position sensor is blocked. If the amount of stacked paper increases while the end of the lever presses down the top of the trailing edge of the paper stacked on the main tray, the paper detection lever becomes unable to return to the home position and the main tray upper position sensor is blocked. This causes machine to determine that the height of stacked paper exceeds the specified height. In this case, the main tray up/down motor is rotated and the main tray is lowered until the main tray upper position sensor is unblocked. When the main tray is lowered to the main tray full detection sensor, MFP determines that the main tray is full and the control panel displays the main tray full message.
- When main tray full is detected, the control panel displays the warning message. In this state, any main tray related configurations and jobs that use the main tray cannot be performed. The warning screen is cleared by removing the paper on the main tray. By removing the paper from the main tray, the paper detection lever is lowered. This causes machine to determine that the paper is removed and the “main tray full” message disappears.
- When the paper detection lever drive gear makes a turn, paper receiving control motor stops. The position of the paper detection lever drive gear is detected by the paper delivery control sensor.
- The paper level detection control is performed each time when paper is discharged to the tray to always monitor the height of paper. This control also serves as the function of preventing paper stacked on the tray from being disturbed by the paper discharged next.

Front view



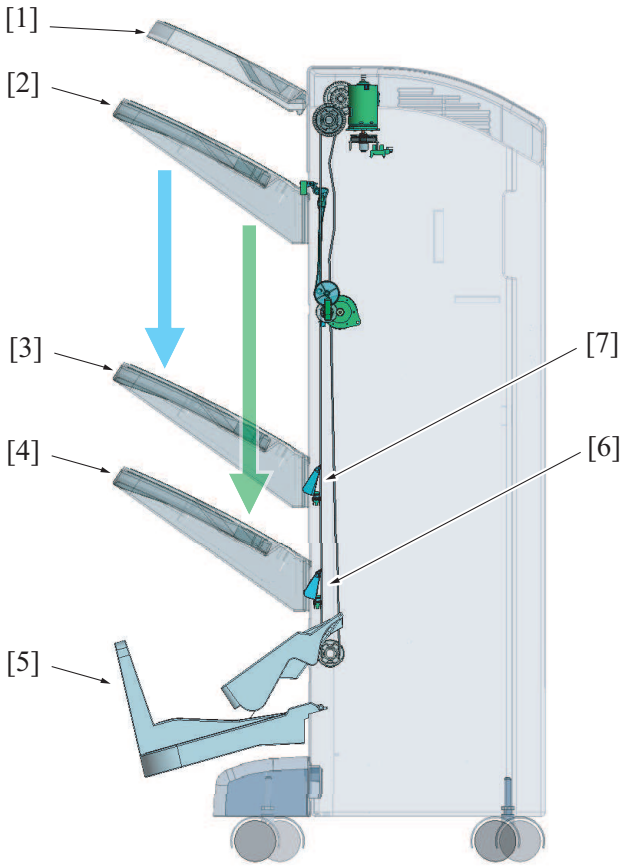
[1]	Paper detection lever (home position)	[2]	Paper detection lever (upper position)
[3]	Paper delivery control sensor (PS28)	[4]	Paper detection lever drive gear

(1) Paper detection lever tip enlarged picture



[1]	• Main tray upper position sensor/F (PS27) • Main tray upper position sensor/R (PS26)	[2]	Paper
[3]	Main tray	-	-

(2) Front view



[1]	Sub tray	[2]	Main tray (home position)
[3]	Main tray (main tray full position) *1	[4]	Main tray (main tray full position) *2
[5]	Saddle tray	[6]	Main tray full detection sensor (PS29) *2
[7]	Main tray full detection sensor (PS29) *1	-	-

- *1: FS-534SD
- *2: FS-534

(3) Amount of paper placed on the main tray

- The amount of paper placed on the main tray is different depending on the mode.
- When either the number or height of stacked sheets reaches the specified value, the main tray full is detected.

(a) Amount of paper placed on the main tray in sort or group mode

- For details on the paper stacking capacity, refer to Number of stacked sheets.

(b) Amount of paper placed on the main tray in sort offset or group offset mode

- For details on the paper stacking capacity, refer to Number of stacked sheets.

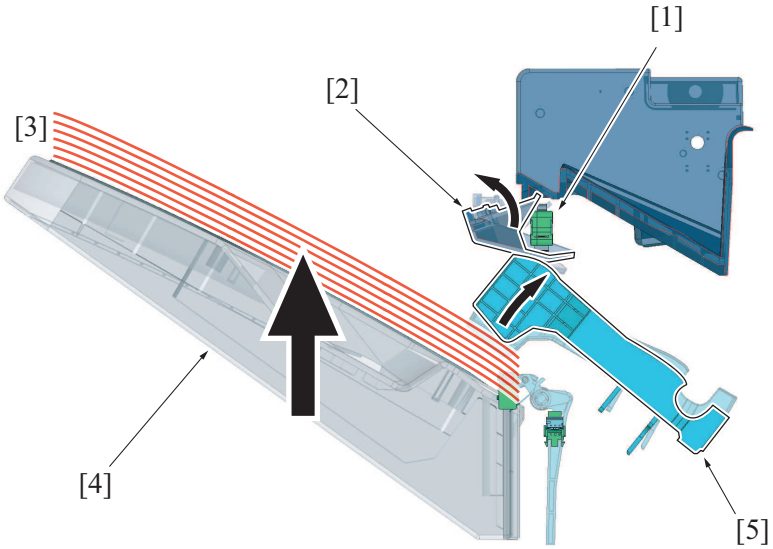
(c) Amount of paper placed on the main tray in staple mode

- For details on the paper stacking capacity, refer to Paper capacity.

10.3.3 Main tray upper detection mechanism

- The main tray includes the upper limit detection mechanism. The mechanism is to avoid malfunction and breakage of the main tray up/down mechanism that may be caused by the tray being lifted higher than the specified position.
- While paper is stacked on the main tray, if the main tray moves up and the top of the stack pushes the alignment plate up, the main tray upper position detect switch cover is raised and the main tray upper position detect switch is pressed. This causes the main tray up/down motor to stop rotating and the main tray to stop moving upward.

  NOTE
  - **In the case of small paper of which width is shorter than the distance formed between the alignment plates when the alignments are at home position, the paper may directly pushes up the main tray upper position detect switch cover. In that case, the main tray upward movement is also stopped.**
  - **While the main tray is moving upward, if user press the main tray upper position detect switch cover by mistake, the main tray upward movement is also stopped. In this case, when the main tray upper position detect switch cover is released, if the top surface of the main tray does not reach the specified height, the main tray moves up again. When the top surface of the main tray reaches the specified height, the upward operation stops.**
  - **For details of the main tray up/down operation, refer to PJ.10.3.2 Main tray paper level detection control .**

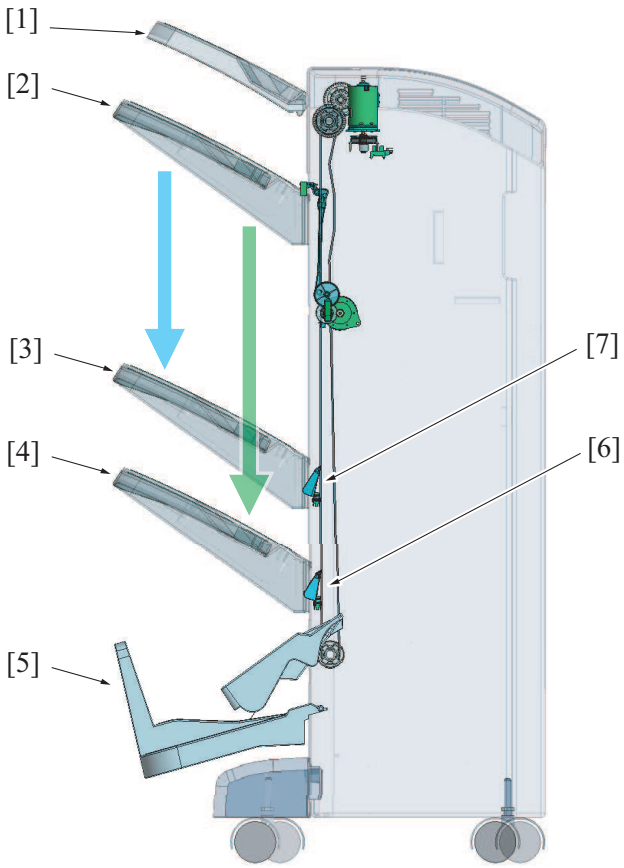


[1]	Main tray upper position detect switch (SW2)	[2]	Main tray upper switch cover
[3]	Paper	[4]	Main tray
[5]	Alignment plate	-	-

10.3.4 Tray full detection mechanism

(1) Main tray

- When machine determines that the amount of paper stacked on the main tray exceeds the specified height, the paper detection lever causes the main tray up/down motor to rotate to lower the main tray to the specified position. When the main tray is lowered to the position of the main tray full detection sensor, the main tray full is determined.
- When paper full is detected, the warning message appears on the control panel. In this state, any main tray related configurations and jobs that use the main tray cannot be performed. The warning screen is cleared by removing paper from the main tray.
  For details of main tray up/down control, refer to PF.10.3.2 Main tray paper level detection control.



[1]	Sub tray	[2]	Main tray (home position)
[3]	Main tray (main tray full position) *1	[4]	Main tray (main tray full position) *2
[5]	Saddle tray	[6]	Main tray full detection sensor (PS29) *2
[7]	Main tray full detection sensor (PS29) *1	-	-

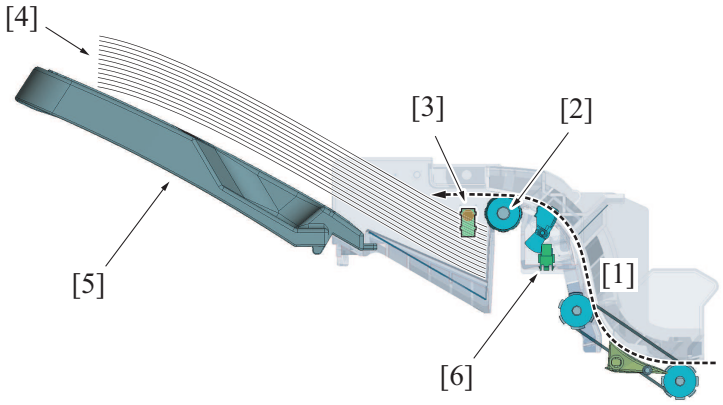
- *1: FS-534SD

- *2: FS-534

(2) Sub tray

- When the specified amount of paper is discharged into the sub tray, the stacked paper blocks the sub tray full detection sensor. The sensor detects it as a full state of the exit tray.
- When the sub tray full is detected, the warning message appears on the control panel. In this state, any sub tray related configurations and jobs that use the sub tray cannot be performed. The warning screen can be cleared by removing the paper on the sub tray.

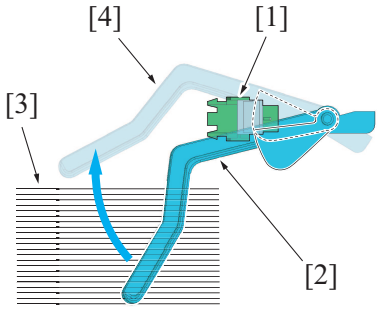
Front view



[1]	Sub tray paper transport route	[2]	Sub tray section exit roller
[3]	• Sub tray full detection sensor/out (PS9) • Sub tray full detection sensor/in (PS10)	[4]	Paper
[5]	Sub tray	[6]	Sub tray exit sensor (PS8)

(3) 3rd tray

- When the specified amount of paper is discharged into the 3rd tray, the stacked paper pushes up the 3rd tray full detection sensor actuator. When the actuator is pushed up to the predetermined position, the 3rd exit tray full sensor will be unblocked by the actuator to detect the exit tray full.
- The warning message will be displayed on the control panel when the 3rd tray full is detected. All setting operations and jobs will be disabled when the warning message is displayed on the screen. The warning message will be released by removing the paper on the 3rd tray.



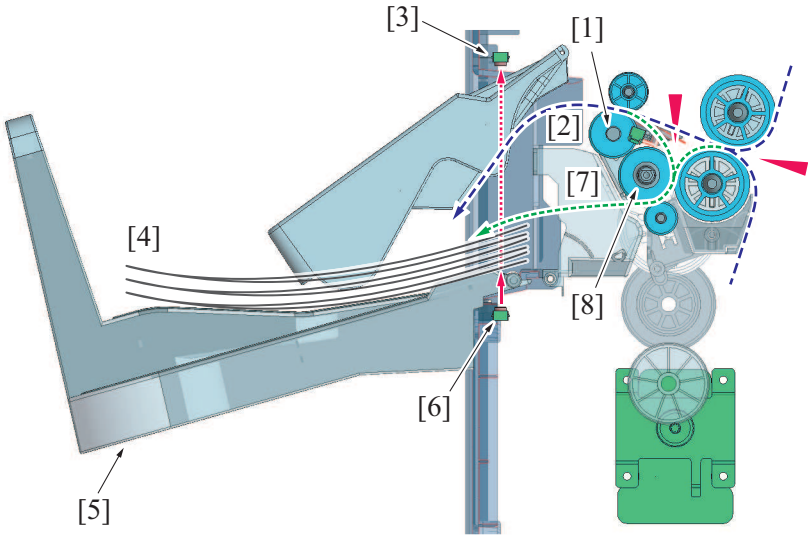
[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator (no paper)
[3]	Paper	[4]	3rd exit tray full sensor actuator (exit tray full)

(4) Saddle tray

NOTE

- **FS-534SD only**

- When paper is discharged to the saddle tray, the light from the saddle tray exit sensor is blocked. When the stacked sheets are removed, the sensor light is unblocked.
- When the specified amount of paper is discharged into the saddle tray, the stacked paper blocks the saddle tray exit sensor. The sensor detects it as a full state of the saddle tray.
  NOTE
  - **For a tri-fold job, if paper is present in the saddle tray when the job is started, the saddle tray full is detected. (Even only one set of sheets remains, tray full is detected.)**
- When the saddle tray full is detected, the warning message appears on the control panel. In this state, any saddle unit related configurations and jobs that use the saddle unit cannot be performed. The warning screen is cleared by removing the paper placed on the saddle unit.



[1]	Saddle section exit roller	[2]	Paper transport route: Center folding
[3]	Booklet tray empty detection sensor/in (PS13)	[4]	Paper
[5]	Saddle tray	[6]	Booklet tray empty detection sensor/out (PS14)
[7]	Paper transport route: Tri-folding	[8]	Tri-folding roller

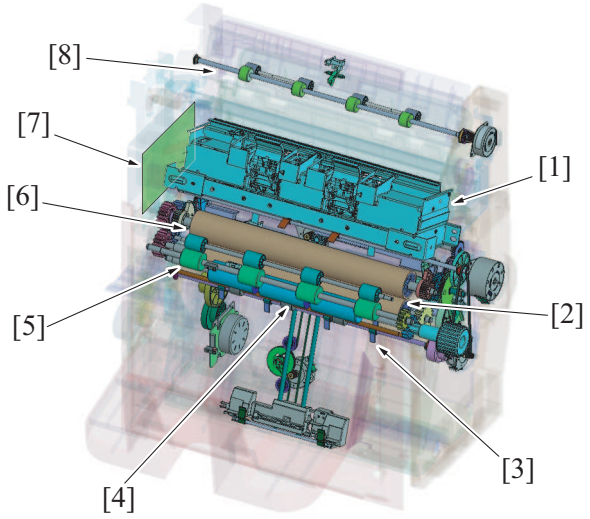
11. SADDLE SECTION

11.1 Configuration

NOTE

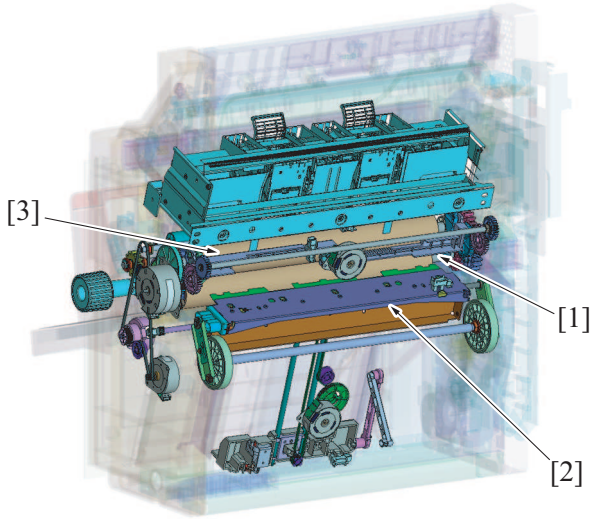
- **FS-534SD only**

Front left side perspective view



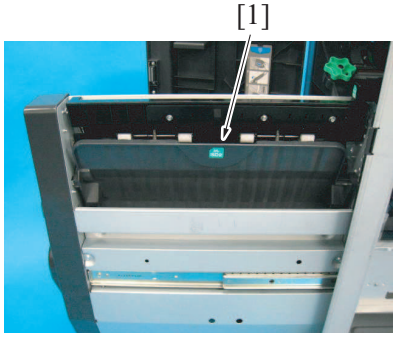
[1]	Staple unit	[2]	Center folding roller/2
[3]	Center fold section lower paddle	[4]	Tri-folding roller
[5]	Saddle section exit roller	[6]	Center fold roller/1
[7]	SD drive board (SDDB)	[8]	Saddle section paper feed roller

Front right side perspective view



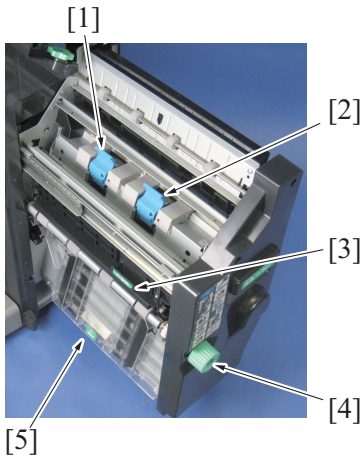
[1]	Center staple alignment plate drive gear/Rr	[2]	Center fold knife
[3]	Center staple alignment plate drive gear/Fr	-	-

Right side view



[1]	Jam removal cover (transport section)	-	-

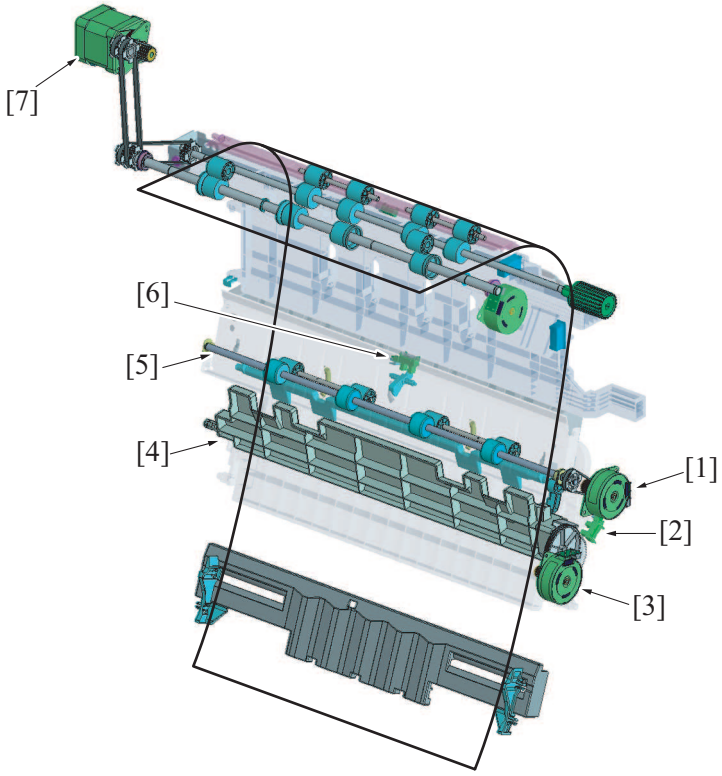
Front left side perspective view



[1]	Staple cartridge (rear side)	[2]	Staple cartridge (front side)
[3]	Jam removal cover (exit section)	[4]	Jam removal dial (folding section)
[5]	Jam removal cover (alignment section)	-	-

11.2 Transport section

11.2.1 Drive



[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover
[5]	SD transport roller	[6]	SD entrance sensor (PS1)
[7]	FNS discharge motor (M3)	-	-

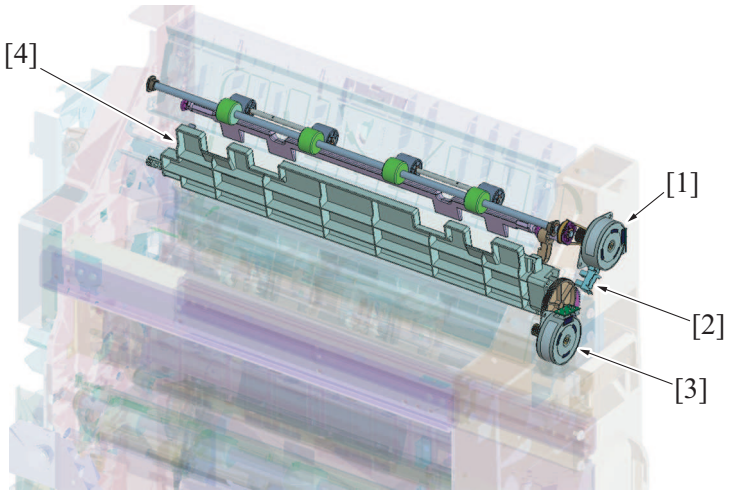
11.2.2 Paper transport

- The FNS discharge motor rotates reversely to transport the paper from the finisher transport section into the saddle unit.
- The paper then is transported to the alignment section by SD transport roller.
- The SD transport roller rotates when the SD transport motor is driven.

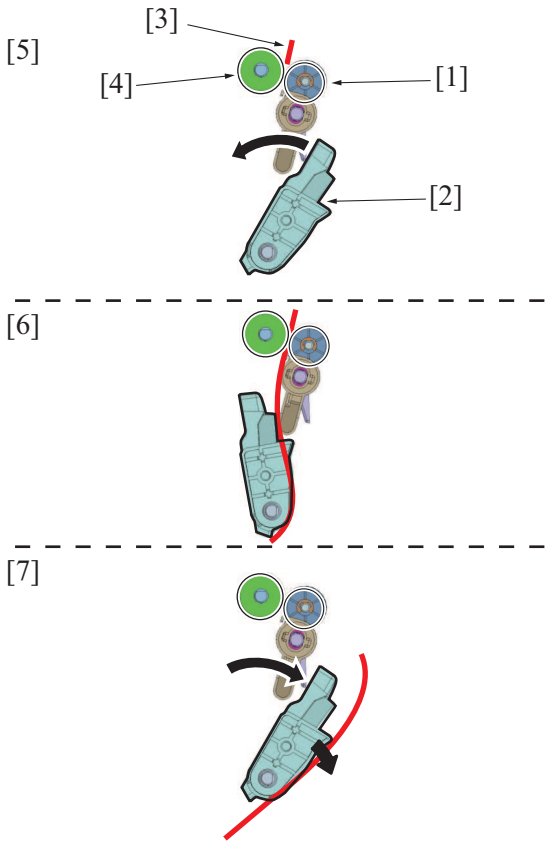
11.2.3 Curl cover

- The paper is transported to the alignment section one–by-one. A paper which is curled may cause paper misfeed at the entrance of the saddle stitcher.

- In order to prevent this paper misfeed, the curl cover is installed so that each paper is transported to the alignment section without fail.
- The curl cover is operated by the paper discharge control motor. Paper receiving opens/closes the feeding port inside the saddle unit entrance when the paper discharge control motor rotates in forward/reverse direction.



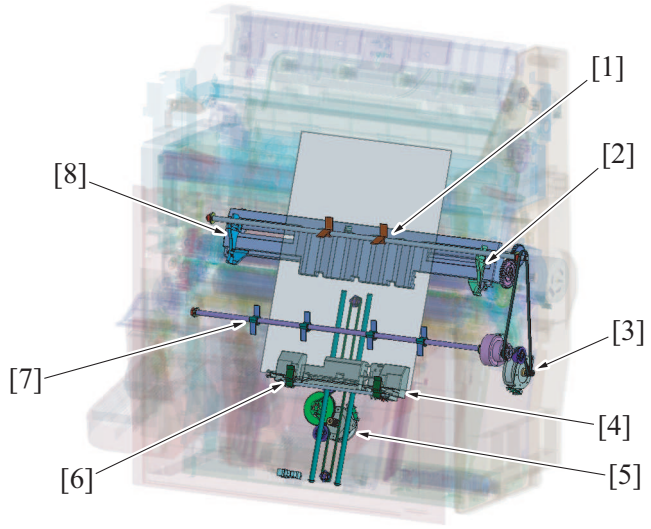
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover



[1]	SD transport roll	[2]	Curl cover
[3]	Paper	[4]	SD transport roller
[5]	Paper transportation from within the finisher	[6]	Curl cover operation
[7]	Next paper standby (moves curl cover to the home position)	-	-

11.3 Alignment section

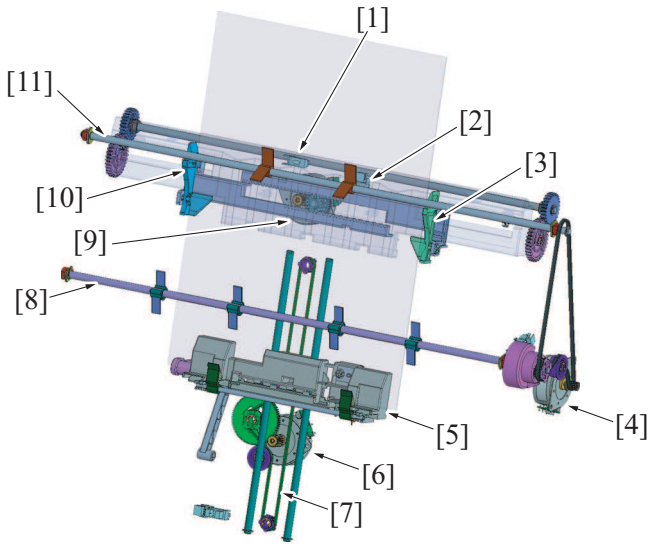
11.3.1 Drive



[1]	Center folding section upper paddle	[2]	Alignment plate/F
[3]	SD paddle motor (M7)	[4]	Stopper guide
[5]	Stopper drive motor (M4)	[6]	Paper grip
[7]	Center folding section lower paddle	[8]	Alignment plate/R

11.3.2 Alignment

- It aligns the paper transported to the alignment section.
- The paper CD alignment is conducted by alignment plate/F and alignment plate/R. The alignment plate shifts by forward/reverse rotation of the alignment motor to align the paper edge.
- The paper FD alignment is conducted by the stopper guide, center folding section upper paddle and center folding section lower paddle.
- The stopper guide moves up when the stopper drive motor rotates in forward/reverse direction to stop at the position which suits the length of the paper transported. The leading edge of the paper stops by the stopper guide to align the leading edge.
- When the paper is transported, the stopper drive motor rotates in forward/reverse direction to operate the stopper guide drive belt, and moves the stopper guide up/down.
- The center folding section upper paddle and the center folding section lower paddle are installed in order to receive the transported paper to the alignment section without fail.
- The paddle is driven by the SD paddle motor.



[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Alignment home sensor (PS4)
[3]	Alignment plate/F	[4]	SD paddle motor (M7)
[5]	Stopper guide	[6]	Stopper drive motor (M4)
[7]	Stopper guide drive belt	[8]	Center folding section lower paddle
[9]	Alignment motor (M3)	[10]	Alignment plate/R
[11]	Center folding section upper paddle	-	-

(1) Alignment operation

- When the saddle exit sensor of the finisher detects the leading edge of the paper, the alignment motor starts rotating in the direction to close the alignment plate, and the alignment plate/F and the alignment plate/R stop at the position where it is slightly wider than the paper width.
- When the specified period of time has passed after the SD entrance sensor detects the trailing edge of the paper, the alignment motor rotates in forward/reverse direction to do oscillation of the alignment plate to align paper.
- The oscillation of the alignment plate is conducted each time a sheet of paper is transported, and the alignment plate is shifted to the standby position after the alignment operation is finished.
- The home position of the alignment plate is detected by the alignment home sensor.

(2) Stopper guide operation

- The stopper guide is moved up according to the paper size.
- The stopper guide moves up and stops at the specified position after the leading edge of the paper passes the main tray exit sensor.

(3) Paddle operation

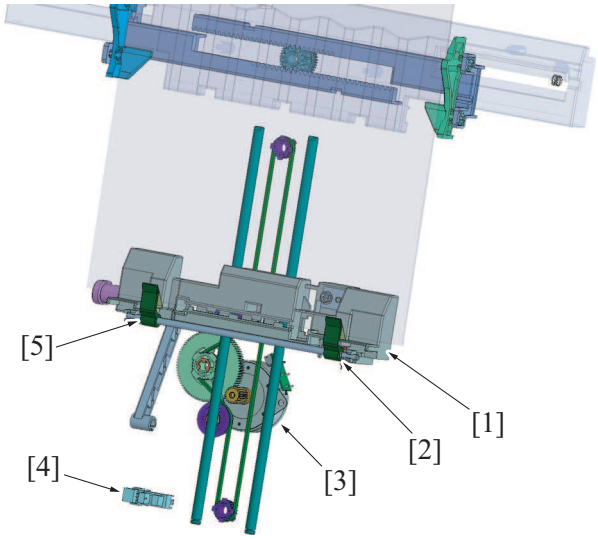
- The up/down paddle is driven by the SD paddle motor. The up/down paddle is driven when the specified period of time has passed after the leading edge of the paper passed the saddle exit sensor of the finisher.
- The up/down paddle stops after the paper trailing edge passes the finisher's main tray exit sensor and the paddle rotates for the specified number of times.

11.3.3 Stopper guide

- At the stopper guide, paper is aligned in the FD direction. Paper conveyed to the aligning section is conveyed to the specified position.
- The exit grip holds the paper when shifting it to the specified position and when stapling papers.
- The alignment section, staple position and other positions (center folding, saddle folding, tri-folding) have their own up/down stop positions. They are controlled by the pulse number of the stopper drive motor.

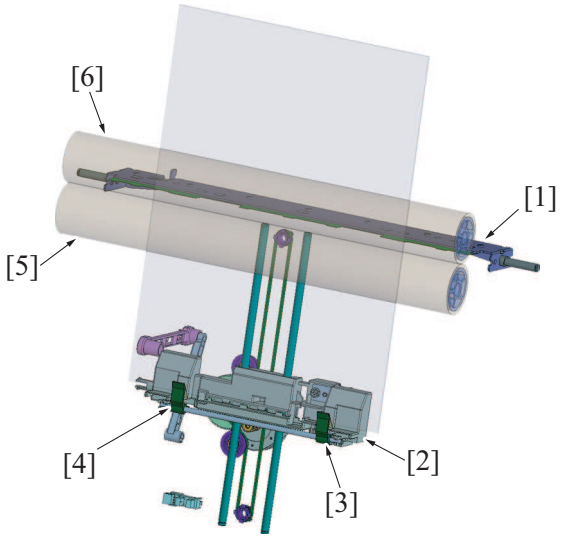
(1) Stopper operation

- The stopper drive motor moves the stopper guide up and down in accordance with the paper size. The stopper home sensor detects the home position.



[1]	Stopper guide	[2]	Exit grip/Fr
[3]	Stopper drive motor (M4)	[4]	Stopper home sensor (PS6)
[5]	Exit grip/Rr	-	-

(2) Stopper control



[1]	Center folding knife assy	[2]	Stopper guide
[3]	Exit grip/Fr	[4]	Exit grip/Rr
[5]	Center folding roller/2	[6]	Center folding roller/1

(a) Folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the folding position.

(b) Saddle stitching mode

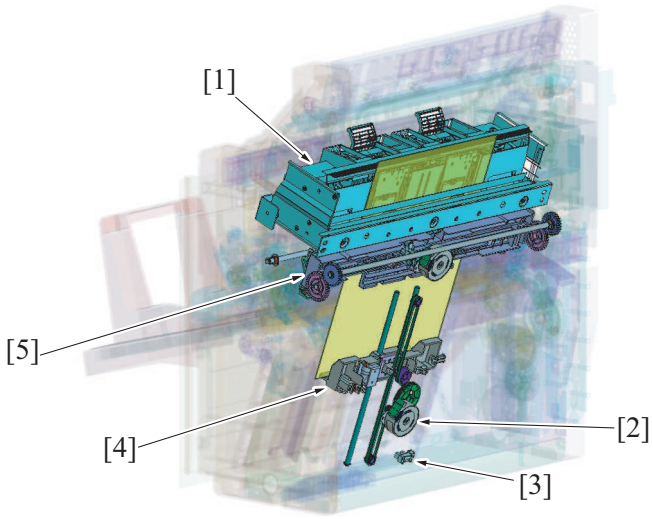
- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the saddle stitching position.
- After a specified period of time since stapling operation was completed, the alignment motor opens the alignment plates and the stopper drive motor starts rotating to move the stopper guide further down and lower the paper to the folding position.

(c) Tri-folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the 1st folding position in the tri-folding.

11.4 Stapler

11.4.1 Drive



[1]	Stapler unit	[2]	Stopper drive motor (M4)

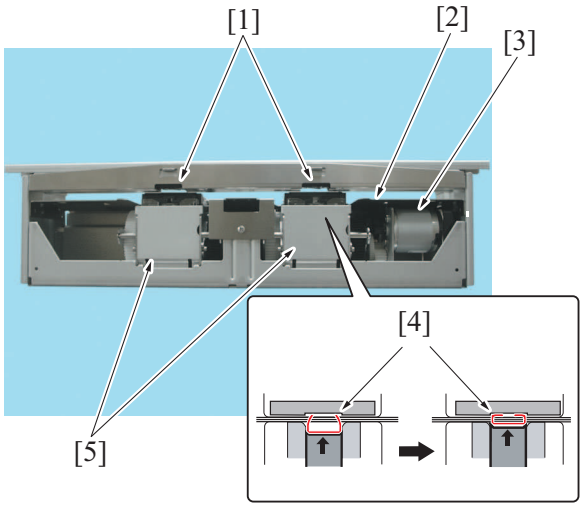
[3]	Stopper home sensor (PS6)	[4]	Stopper guide
[5]	Alignment tray	-	-

11.4.2 Operation

- The stapling operation is performed by the stapler motor.

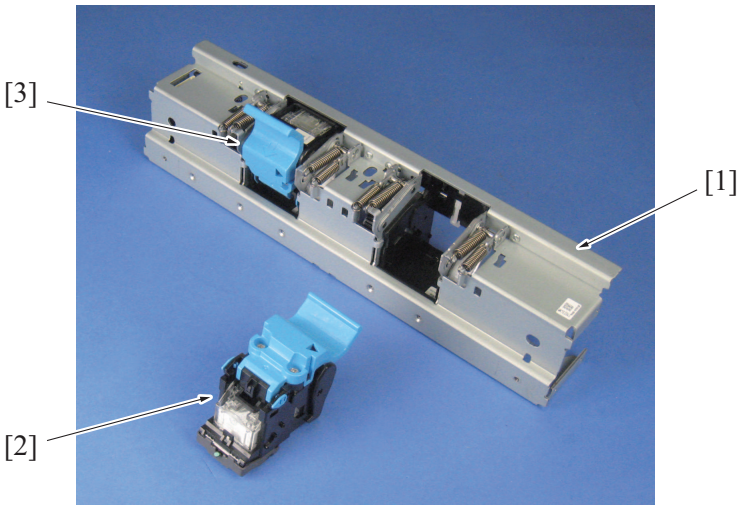
(1) Stapling operation

- The stapling operation is performed by the staple motor in the stapler.
- The drive gear pushes out the pressed portion of the paper toward the clincher to hold the paper, and then the pin will be pushed out.
- When the pin penetrates the paper batch, the pin will be bent to staple the paper batch at the clincher section.



[1]	Clincher	[2]	Drive gear
[3]	Stapler motor	[4]	Staple
[5]	Stapler	-	-

(2) Staple control



[1]	Staple unit	[2]	Staple cartridge (Front side): Removed
[3]	Staple cartridge (Rear side): Installed	-	-

(a) Stapling

- After completing the alignment operation of the alignment plate, the staple motor performs the stapling operation.
- The stapling operation is completed when the stapler home position sensor (rear) detects the home position and turn ON.

(b) Clogged staple detection

- When the stapler home position sensor (rear) does not turn ON after the specified period of time after it turned OFF during stapling, it is determined that the staple motor has the trouble, and stops the stapler motor.

(c) Staple cartridge detection

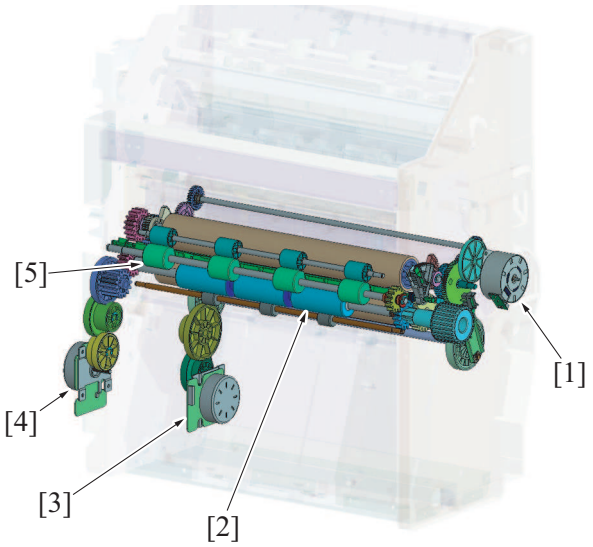
- The staple cartridge switch detects the presence of a cartridge or the incorrect settings of a staple cartridge.
- When no staple cartridge is installed or it is installed incorrectly, an error message appears on the machine control panel.

(d) Staple detection control

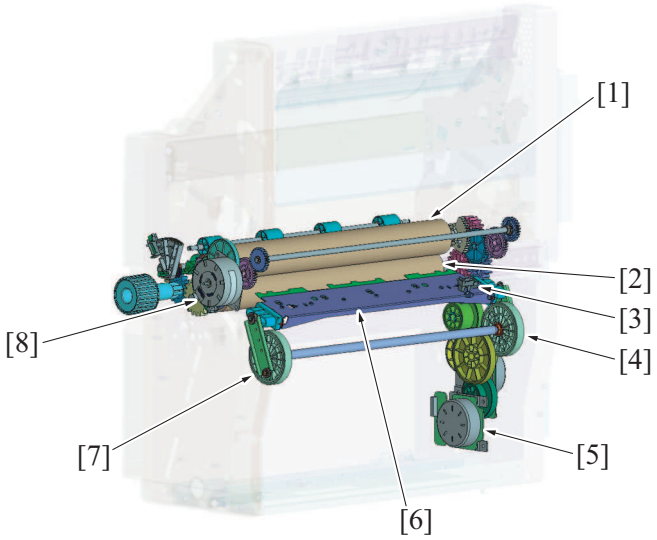
- When the staple goes empty, the staple empty switch turns ON and a message appears on the machine control panel.

11.5 Folding/Saddle stitching

11.5.1 Drive



[1]	Tri-folding guide motor (M6)	[2]	Tri-folding roller
[3]	Center fold knife motor (M9)	[4]	Center fold roller motor (M5)
[5]	Saddle section exit roller	-	-



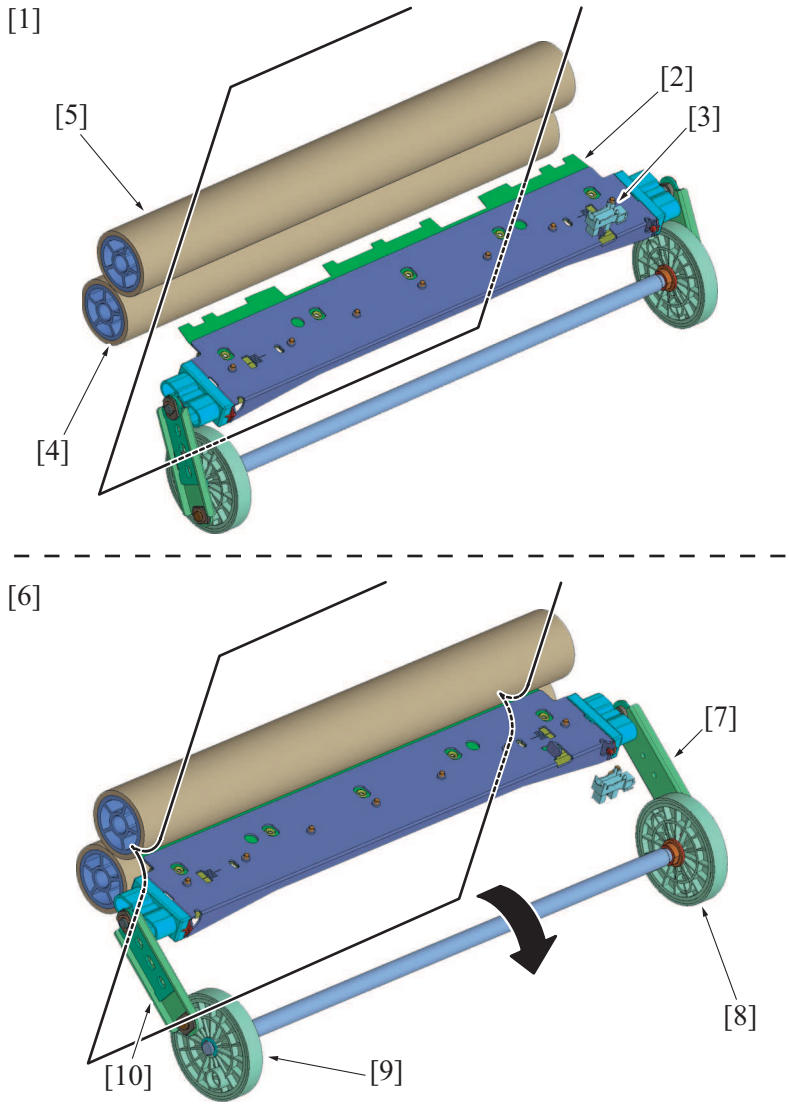
[1]	Center folding roller/1	[2]	Center folding roller/2
[3]	Center fold knife home sensor (PS8)	[4]	Fold drive gear/Rr
[5]	Center fold knife motor (M9)	[6]	Center folding knife assy
[7]	Fold drive gear/Fr	[8]	Tri-folding guide motor (M6)

11.5.2 Folding knife

- The center fold knife motor drives the folding knife.
- The folding knife is used in the folding/saddle stitching/tri-folding mode.
- In the tri-folding mode, it is used at the 1st folding.

(1) Folding knife operation

- The center fold knife motor rotates the crank shaft a half turn via the gear, and pushes the paper to the nip section with the folding knife.
- The folding rollers draw and fold the paper.
- The position of the stopper guide controls the folding position.



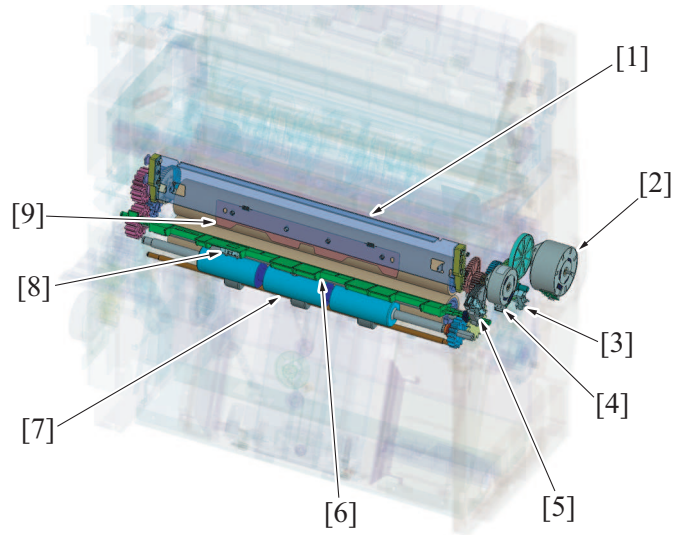
[1]	Before folding	[2]	Folding knife
[3]	Center fold knife home sensor (PS8)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Folding operation
[7]	Crank shaft/Rr	[8]	Fold knife assy drive gear/Rr
[9]	Fold knife assy drive gear/Fr	[10]	Crank shaft/Fr

(2) Folding knife control

- The center fold knife motor turns ON and sticks out the folding knife to the paper after a specified period of time since the stopper guide stops at the folding position.
- The center fold knife motor stops when the folding knife reciprocates after fold operation is completed and the center fold knife home sensor turns OFF.

11.6 Tri-folding

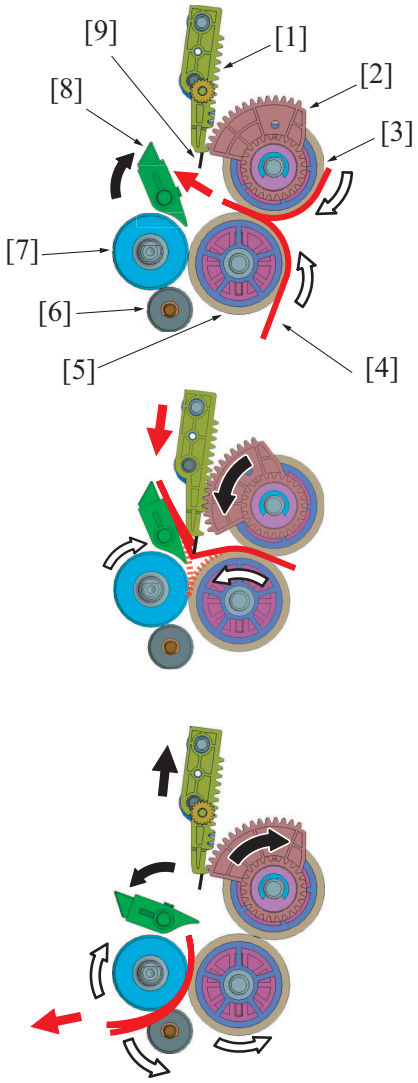
11.6.1 Drive



[1]	Tri-folding knife assy	[2]	Center fold guide motor (M8)
[3]	Guide home sensor (PS7)	[4]	Tri-fold guide motor (M6)
[5]	Tri-folding gate home sensor (PS11)	[6]	Center folding change gate
[7]	Tri-folding roller	[8]	Fold exit sensor (PS12)
[9]	Tri-folding knife	-	-

11.6.2 Tri-folding operation

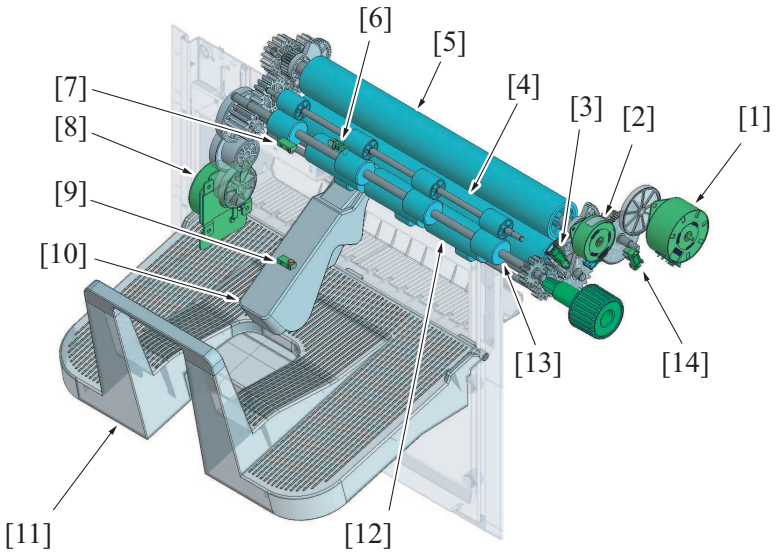
1. When the center fold guide motor drives, the tri-folding gate rotates. The leading edge of the paper to which the first fold was applied at the center folding section, will be transported to the tri-folding path.
2. When the tri-folding guide motor drives, the tri-folding knife assy drive gear rotates to move down the tri-folding knife assy. The paper to which the first fold is applied at the center folding section will be pushed out to the tri-folding roller.
3. The paper is pulled into the tri-folding roller to tri-fold the paper.
4. When tri-folding is finished, the tri-folding gate will return to the home position. The home position of the tri-folding gate is detected by the tri-folding gate home sensor.



[1]	Tri-folding knife assy	[2]	Tri-folding knife assy drive gear
[3]	Center folding roller/1	[4]	Paper
[5]	Center folding roller/2	[6]	Tri-folding roll
[7]	Tri-folding roller	[8]	Tri-folding gate
[9]	Tri-folding knife	-	-

11.7 Exit section

11.7.1 Drive



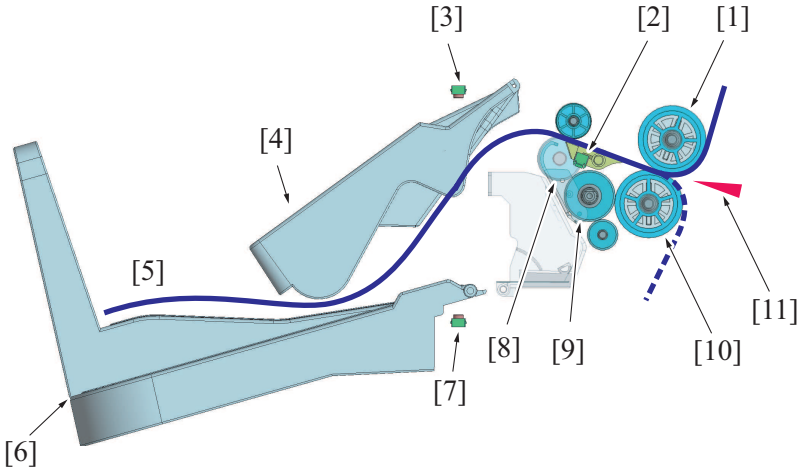
[1]	Center fold guide motor (M8)	[2]	Tri-fold guide motor (M6)
[3]	Tri-folding gate home sensor (PS11)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Fold exit sensor (PS12)
[7]	Booklet tray empty detection sensor/in (PS13)	[8]	Center fold roller motor (M5)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Paper press
[11]	Saddle tray	[12]	Tri-folding roller
[13]	Saddle section exit roller	[14]	Guide home sensor (PS7)

11.7.2 Paper exit

- Center folded, saddle stitched, or tri-folded paper is discharged to the saddle tray.
- The paper that is center folded and saddle folded is sent though the upper route, and the tri-folded paper is sent through the lower route to be discharged.
- The paper is discharged by driving the exit roller and the tri-fold roller. Both rollers are driven by the center fold roller motor.

(1) Paper exit for center fold / saddle stitch

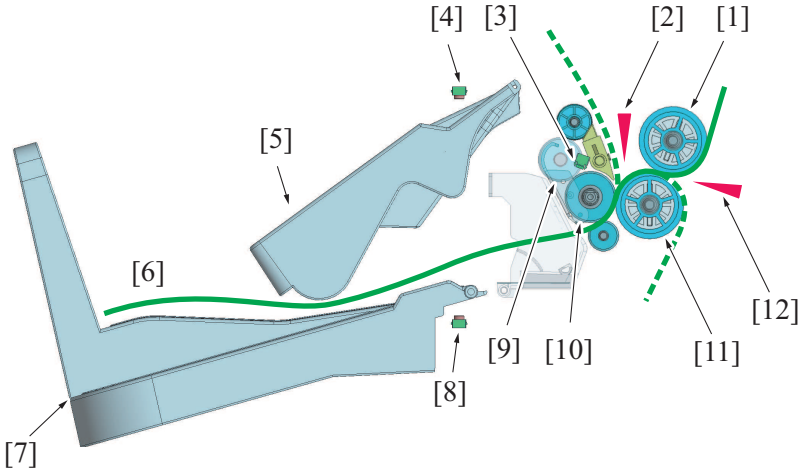
- The center fold roller motor is driven after the center fold or the saddle stitch, and discharges the paper to the saddle tray by the paper exit roller.



[1]	Center folding roller/1	[2]	Fold exit sensor (PS12)
[3]	Booklet tray empty detection sensor/in (PS13)	[4]	Paper press
[5]	Paper transport route	[6]	Saddle tray
[7]	Booklet tray empty detection sensor/out (PS14)	[8]	Saddle section exit roller
[9]	Tri-folding roller	[10]	Center folding roller/2
[11]	Folding knife	-	-

(2) Paper exit for tri-folding

- Since the paper is tri-folded by the tri-folding roller, the paper is transported through the lower route.



[1]	Center folding roller/1	[2]	Tri-folding knife
[3]	Fold exit sensor (PS12)	[4]	Booklet tray empty detection sensor/in (PS13)
[5]	Paper press	[6]	Paper transport route
[7]	Saddle tray	[8]	Booklet tray empty detection sensor/out (PS14)

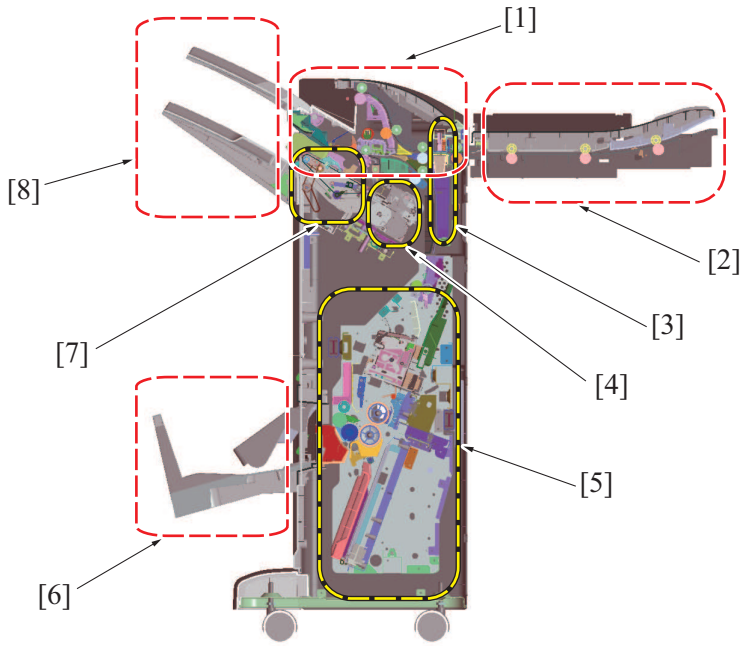
[9]	Saddle section exit roller	[10]	Tri-folding roller
[11]	Center folding roller/2	[12]	Folding knife

PK THEORY OF OPERATION FS-536/FS-536SD/PK-520/RU-513

1. CONFIGURATION

1.1 Section configuration

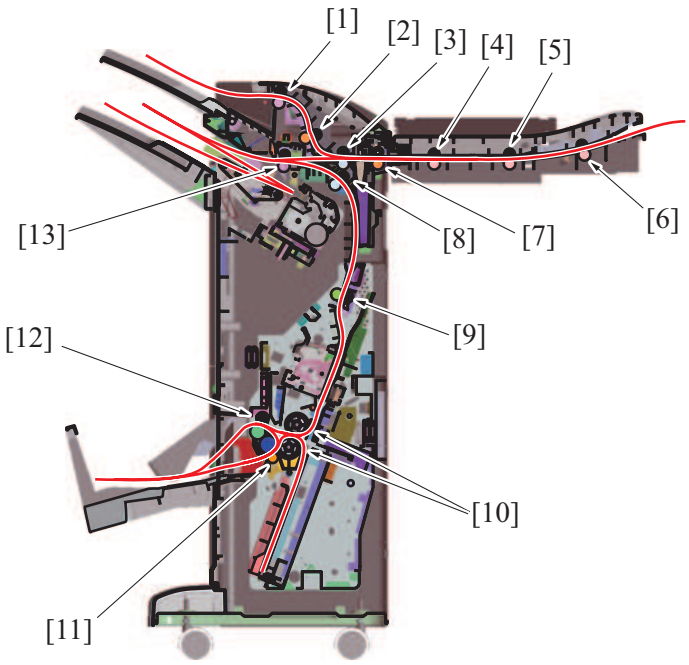
- FS-536 is composed of the horizontal transport section, transport section, alignment section, output tray section and stapler section.
- The FS-536SD is the model of a finisher that the saddle section is added to FS-536.
- Installation of the optional PK-520 enables you to add punch function.



[1]	Transport section	[2]	Horizontal transport section
[3]	Punch section (When PK-520 is installed)	[4]	Stapler section
[5]	Saddle section (FS-536SD only)	[6]	Saddle tray section (FS-536SD only)
[7]	Alignment section	[8]	Output tray section

2. PAPER PATH

2.1 Paper path (FS-536SD/PK-520)



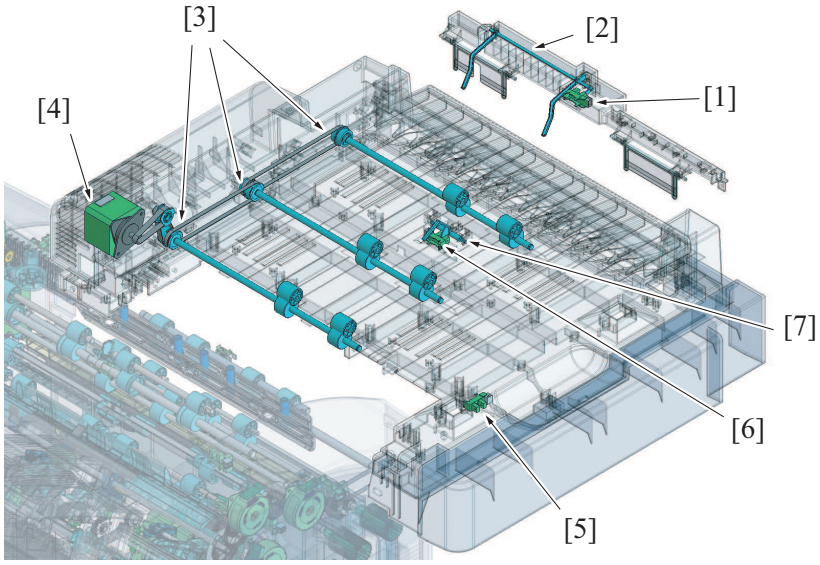
[1]	Sub tray exit roller, roll	[2]	Sub tray transport roller, roll
[3]	Transport roller, roll	[4]	RU transport roller 3, transport roll 3 (horizontal transport section) *
[5]	RU transport roller 2, transport roll 2 (horizontal transport section) *	[6]	RU transport roller 1, transport roll 1 (horizontal transport section) *
[7]	FNS entry roller, roll	[8]	Saddle section exit roller, roll
[9]	Saddle section paper feed roller, roll	[10]	Center folding roller
[11]	Tri-folding roller, roll	[12]	Sub tray exit roller, roll
[13]	Receiving roller, Receiving roll	-	-

- *: Option

3. RU-513

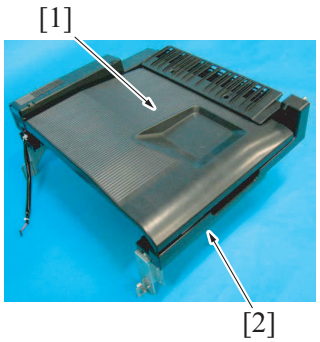
3.1 Configuration

- The RU section (horizontal transport section) transfers paper that is fed out from the MFP paper exit section to an optional finisher paper feed section.
- The RU door is installed at the upper part of the RU section. Access to the horizontal transport roller is enabled by opening the door upward. To be used for periodical cleaning of the roller and dealing with the paper misfeed at the RU section and other necessary operations.



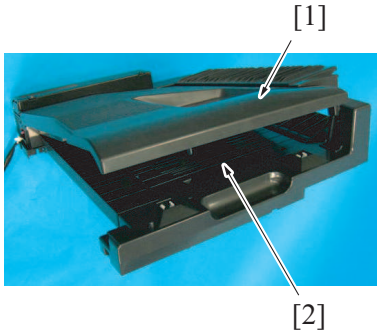
[1]	3rd exit tray full sensor (PS1): Exit section of MFP	[2]	3rd exit tray full sensor actuator: Exit section of MFP
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

3rd tray on the RU section



[1]	3rd tray	[2]	Relay unit RU-513

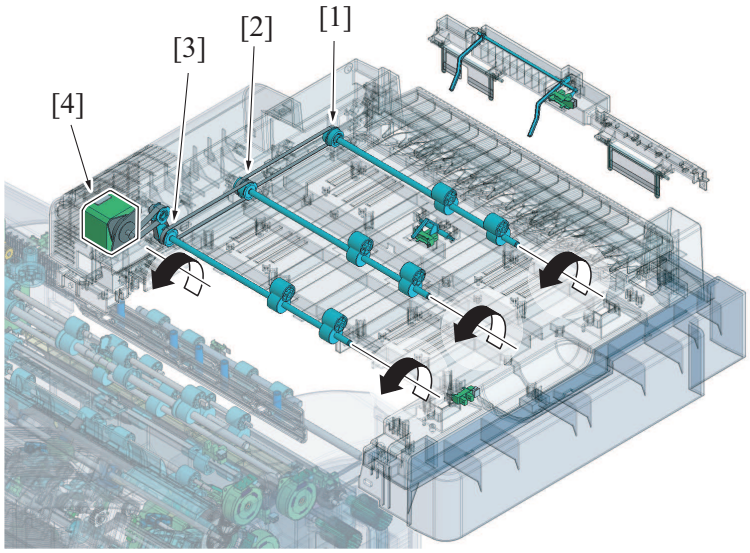
RU section door is opened



[1]	RU section door	[2]	Horizontal transport section

3.2 Drive

- The RU transport motor drives the RU section. It drives three RU section horizontal transport roller.
- The RU section horizontal transport roller is driven using the drive belt.



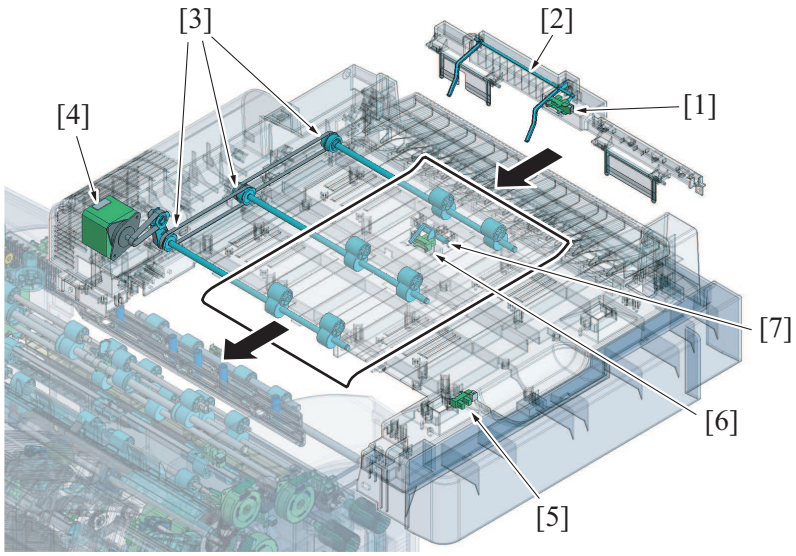
[1]	RU section horizontal transport roller1	[2]	RU section horizontal transport roller2
[3]	RU section horizontal transport roller3	[4]	RU transport motor (M1)

3.3 Operation

3.3.1 Paper transport control

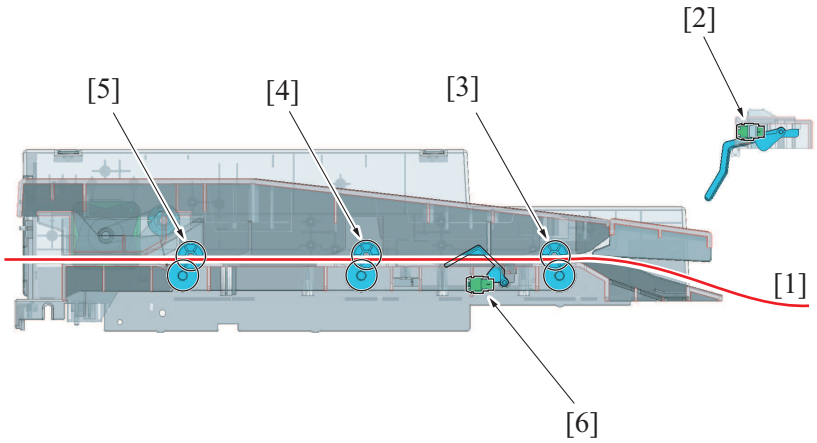
- It transports the paper that is discharged from the lower exit of the MFP paper exit section, to the RU section with the feed guide.
- It transports the paper to the FNS section, using three RU section horizontal transport rollers.
- The RU entrance sensor actuator is installed downstream of the paper path of the RU section horizontal transport roller1, and the RU entrance sensor detects the paper transportation status.

Perspective view



[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

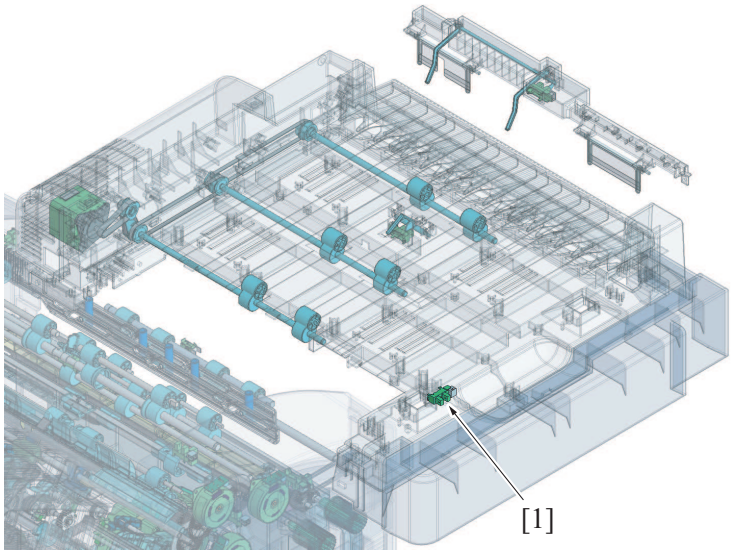
Front view



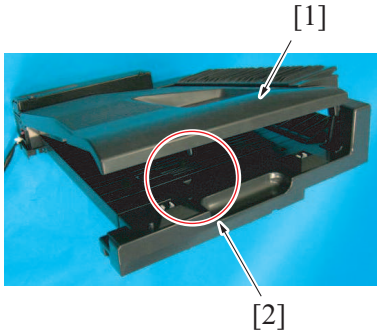
[1]	Paper	[2]	3rd exit tray full sensor (PS1)
[3]	RU section horizontal transport roller1	[4]	RU section horizontal transport roller2
[5]	RU section horizontal transport roller3	[6]	RU entrance sensor (PS2)

3.3.2 RU section door open/close detection mechanism

- The RU cover open/close detection sensor installed at the front left of the RU section, detects open/close of the RU door.
- Opening the RU door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



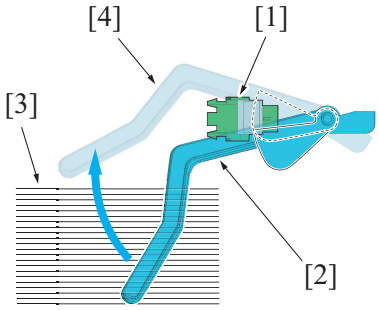
[1]	RU cover open/close detection sensor (PS3)	-	-



[1]	RU door	[2]	RU cover open/close detection sensor (PS3)

3.3.3 3rd exit tray full detection mechanism

- When a predetermined quantity of paper is discharged to the 3rd exit tray, the 3rd exit tray full sensor actuator will be pushed up by the discharged paper. When the actuator is pushed up to the predetermined position, the 3rd exit tray full sensor will be blocked by the actuator to detect the exit tray full.
- The 3rd tray full is detected, the warning screen will display on the control panel. All setting operations and jobs will be disabled when the warning message is displayed on the screen. The warning screen will be released by removing the paper on the 3rd exit tray.



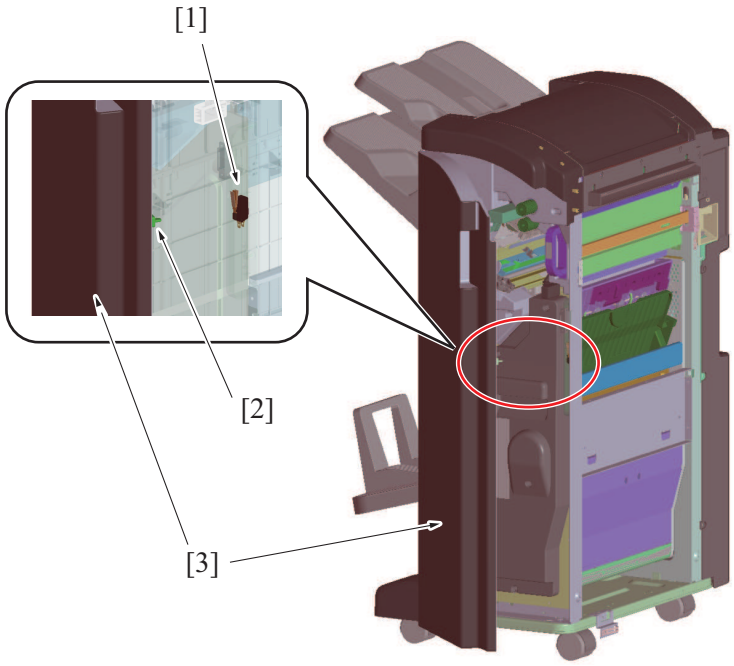
[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator (no paper)
[3]	Paper	[4]	3rd exit tray full sensor actuator (exit tray full)

4. FINISHER SECTION

4.1 Door open/close detection mechanism

4.1.1 Front door open/close detection mechanism

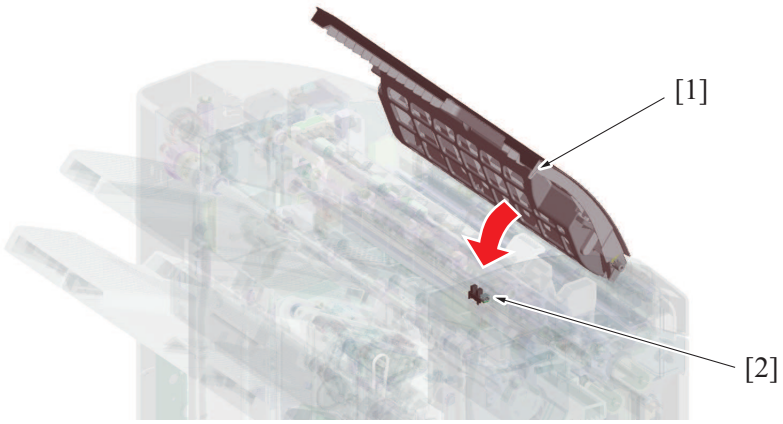
- The front door open detect switch installed at the front right of the FNS section detects open/close of the finisher's front door.
- Open the front door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Front door open detect switch (SW1)	[2]	Lever
[3]	Front door	-	-

4.1.2 Upper door open/close detection mechanism

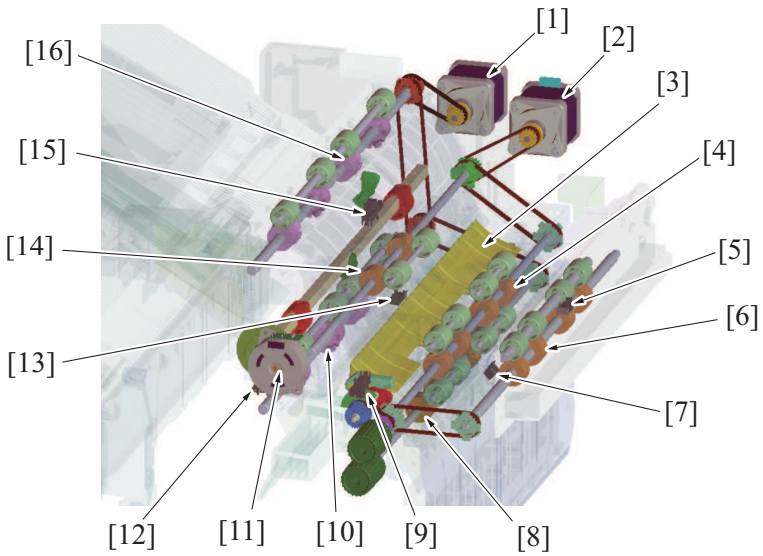
- The upper door open/close detection sensor is installed at the front left of the FNS section to detect open/close of the finisher upper door.
- Open the upper door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Upper door open/close detection lever	[2]	Upper door open/close detection sensor (PS32)

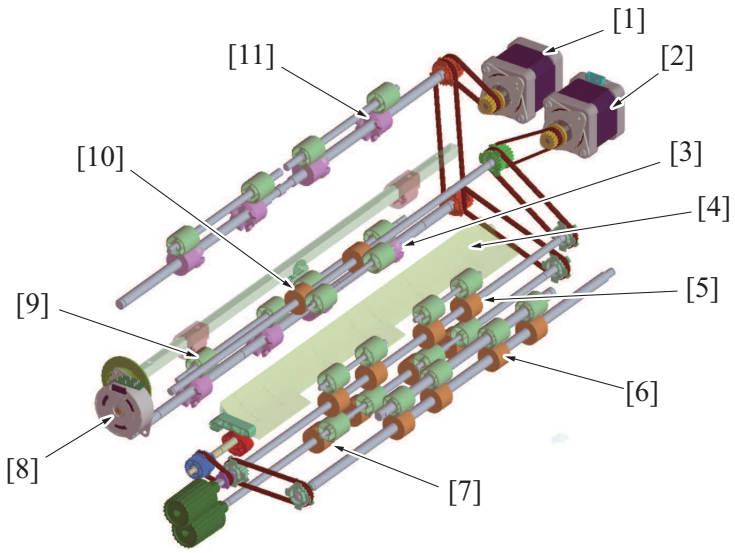
5. TRANSPORT SECTION

5.1 Configuration



[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Paper path switching gate	[4]	Transport roller
[5]	FNS entrance sensor (PS4)	[6]	FNS entrance roller
[7]	Saddle exit sensor (PS5)	[8]	Saddle section exit roller
[9]	Exchange folded paper output sensor (PS30)	[10]	Receiving roller
[11]	Receiving roller retraction motor (M4)	[12]	Receiving roller retraction sensor (PS11)
[13]	Main tray exit sensor (PS16)	[14]	Sub tray transport roller
[15]	Sub tray exit sensor (PS8)	[16]	Sub tray exit roller

5.2 Drive



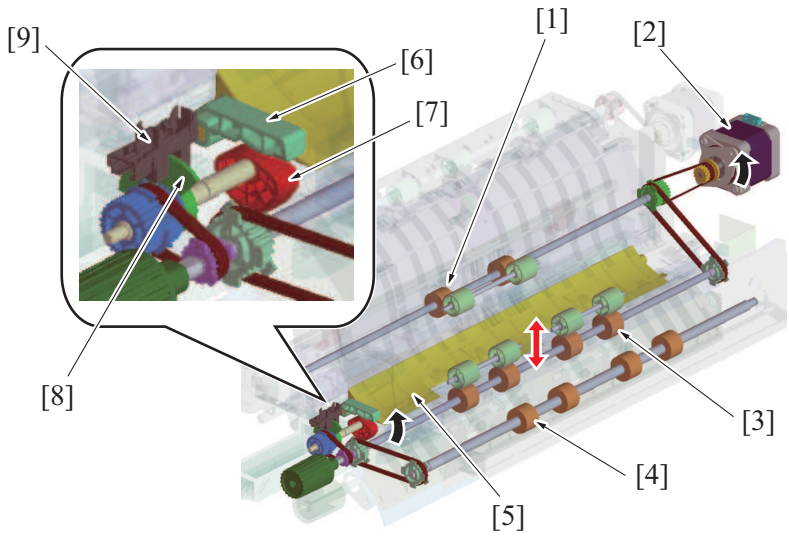
[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Receiving roller	[4]	Paper path switching gate
[5]	Transport roller	[6]	FNS entrance roller
[7]	Saddle section exit roller	[8]	Receiving roller retraction motor (M4)
[9]	Receiving roll	[10]	Sub tray transport roller
[11]	Sub tray exit roller	-	-

5.3 Operation

5.3.1 Paper path switching mechanism

- Paper path is switched by the up/down operations of the paper path switching gate to transport paper to each tray or the saddle section.

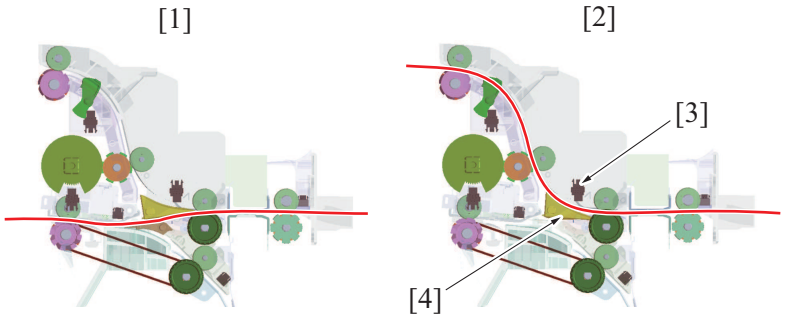
- The up/down operations of the paper path switching gate is driven by the FNS entry transport motor.
- The position of the paper path switching gate is detected by the exchange folded paper output sensor.



[1]	Sub tray transport roller	[2]	FNS entry transport motor (M2)
[3]	Transport roller	[4]	FNS entrance roller
[5]	Paper path switching gate	[6]	Lever
[7]	Cam	[8]	Detection plate
[9]	Exchange folded paper output sensor (PS30)	-	-

(1) Paper path switching gate up/down operation

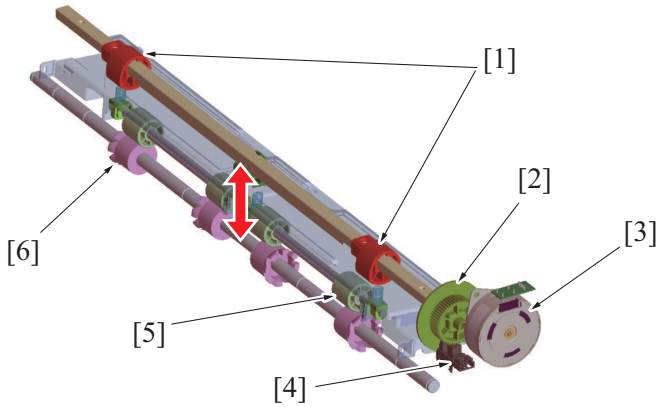
- Rotation of the cam raises or lowers the lever to change the position of the paper path switching gate.
- When the paper path switching gate is in the bottom position, paper is transported to the sub tray. When the gate is in the top position, paper is transported to the main tray.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the exchange folded paper output sensor. Thus, the position of the paper path switching gate can be determined.
- The paper path switching gate is determined to be in the bottom position when the exchange folded paper output sensor is unblocked. The paper path switching gate is determined to be in the top position when the sensor is blocked.



[1]	Paper exit to the main tray	[2]	Paper exit to the sub tray
[3]	Exchange folded paper output sensor (PS30)	[4]	Paper path switching gate

5.3.2 Receiving roller section up/down function

- The up/down movement of the receiving roll, switches the timing of transporting the paper to the alignment section.
- The up/down operations of the receiving roll are driven by the receiving roller retraction motor.
- The position of the receiving roll is detected by the receiving roller retraction sensor.



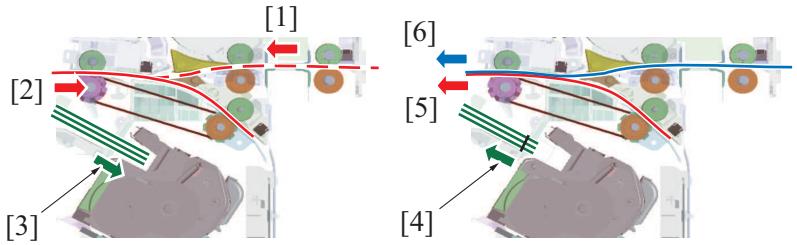
[1]	Cam	[2]	Detection plate
[3]	Receiving roller retraction motor (M4)	[4]	Receiving roller retraction sensor (PS11)
[5]	Receiving roll	[6]	Receiving roller

(1) Receiving roller pressure and release

- Rotation of the cam raises or lowers the receiving roll to pressure and release the receiving roller.
- When the receiving roll is pressed against the receiving roller, paper is transported to the alignment section by the receiving roller.
- When the receiving roll is released from the receiving roller, paper is in a standby state along the transport path.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the receiving roller retraction sensor. Thus, the position of the receiving roll can be determined.
- The receiving roll is determined to be pressing against the receiving roller when the receiving roller retraction sensor is unblocked. The receiving roll is determined to be in the release state when the sensor is blocked.

5.3.3 Buffer control

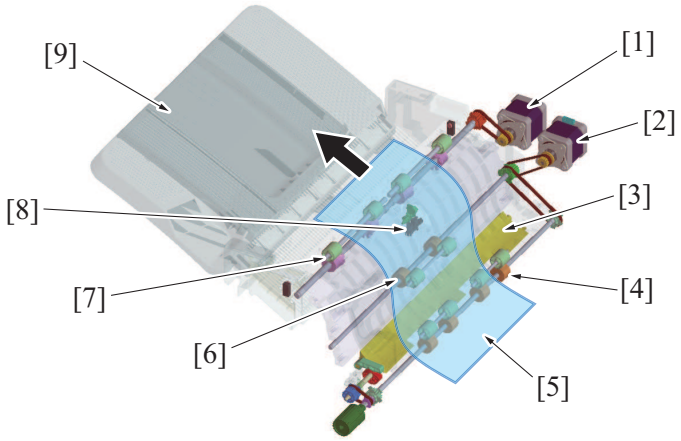
- The receiving roller section up/down mechanism is provided to achieve high productivity, by eliminating the time loss for the next sheet of paper during the offset and staple operations.
- This allows handling a print job without reducing the paper transport speed even under the condition where the preceding sets of sheets are being aligned and stapled.
- The first sheet of paper that is transported during the paper sheets alignment is switched back toward the saddle exit direction temporarily.
- After paper sheets are aligned and discharged, the first sheet of paper is transported together with the arrived second sheet to the alignment section.



[1]	First sheet	[2]	First sheet (switchback)
[3]	Sheets (transported to the alignment section)	[4]	Sheets after alignment
[5]	First sheet	[6]	Second sheet

5.3.4 Sub tray exit mechanism

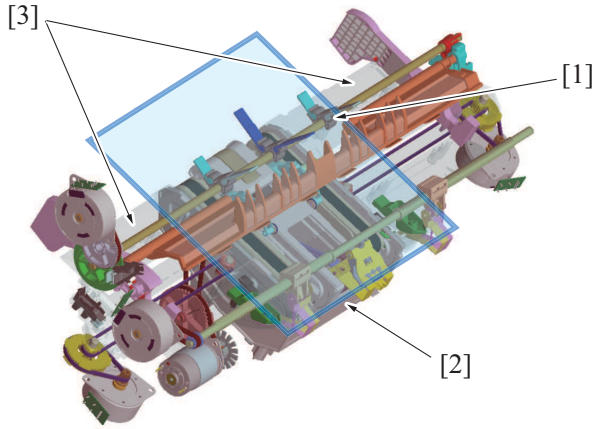
- The sub tray exit roller discharges paper from the horizontal transport section to the sub tray passing through the FNS entry roller, transport roller and sub tray transport roller.
- To transport paper to the sub tray, the paper path switching gate also operates.
- The sub tray exit roller is driven by the FNS discharge motor.



[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Paper path switching gate	[4]	Transport roller
[5]	Paper	[6]	Sub tray transport roller
[7]	Sub tray exit roller	[8]	Sub tray exit sensor (PS8)
[9]	Sub tray	-	-

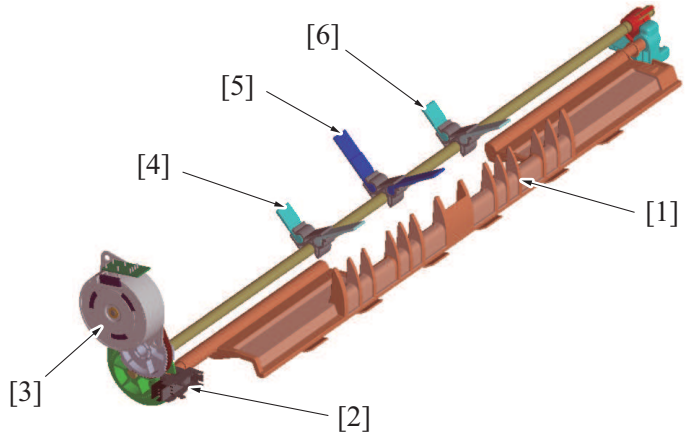
6. ALIGNMENT SECTION

6.1 Configuration



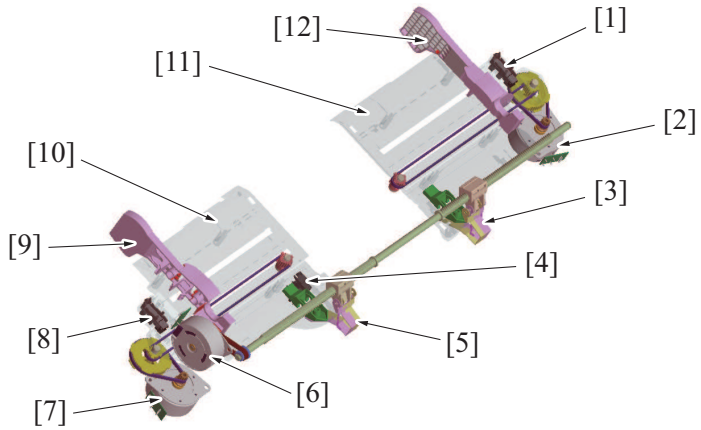
[1]	Upper paddle section	[2]	Exit section
[3]	Alignment tray section	-	-

6.1.1 Upper paddle section



[1]	Paper guide	[2]	Upper paddle home position detection sensor (PS14)
[3]	FNS paddle motor (M5)	[4]	Upper paddle (front)
[5]	Upper paddle (center)	[6]	Upper paddle (rear)

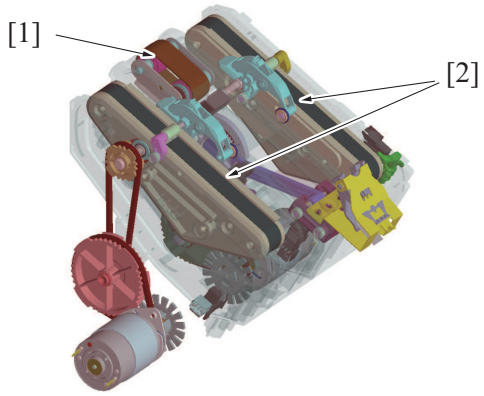
6.1.2 Alignment tray section



[1]	Alignment plate/R home sensor (PS13)	[2]	Alignment motor/rear (M8)
[3]	Trailing edge stopper /R	[4]	Trailing edge stopper home position detection sensor (PS20)
[5]	Trailing edge stopper/F	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/front (M7)	[8]	Alignment plate/F home sensor (PS12)

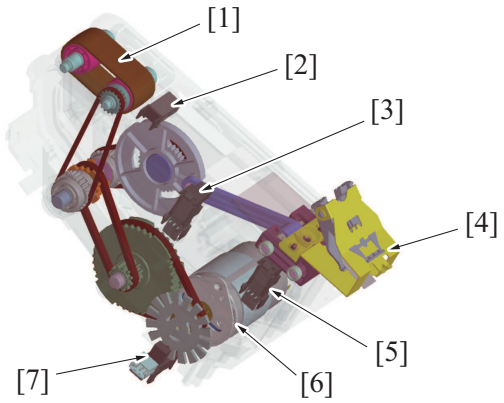
[9]	Alignment plate/F	[10]	Alignment tray (front)
[11]	Alignment tray (rear)	[12]	Alignment plate/R

6.1.3 Exit section



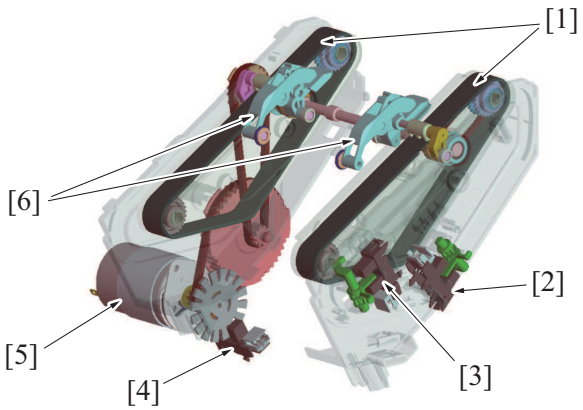
[1]	Lower paddle section	[2]	Gripper section

(1) Lower paddle section



[1]	Lower paddle	[2]	Staple stacker paper detection sensor (PS31)
[3]	Pre-eject away sensor (PS22)	[4]	Trailing edge stopper/C
[5]	Pre-eject home sensor (PS21)	[6]	Pre-eject drive motor (M9)
[7]	Pre-eject encoder sensor (PS15)	-	-

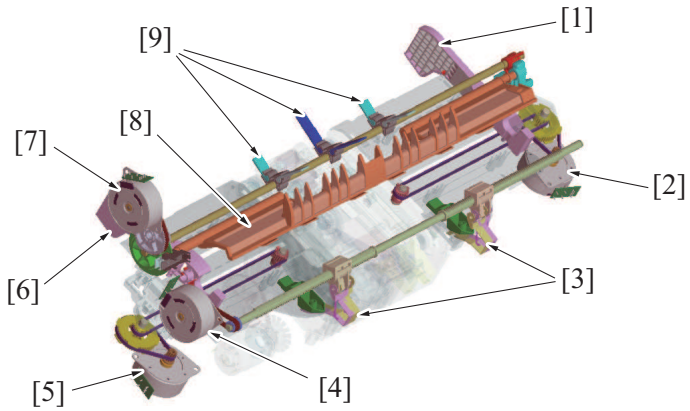
(2) Gripper section



[1]	Paper transport belt	[2]	Gripper home position sensor (PS18)
[3]	Gripper position detection sensor (PS19)	[4]	Gripper motor sensor (PS17)
[5]	Bundle eject motor (M10)	[6]	Gripper

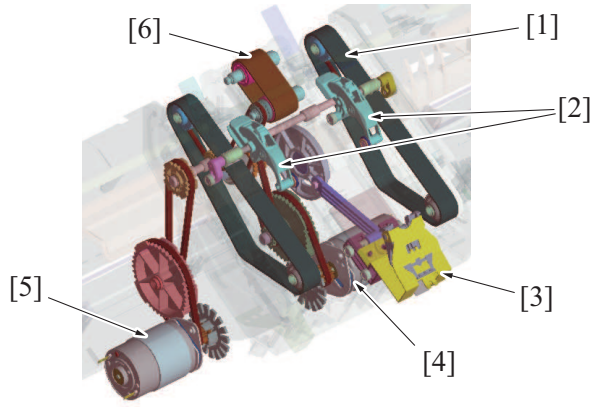
6.2 Drive

6.2.1 Upper paddle section/Alignment tray section



[1]	Alignment plate/R	[2]	Alignment motor/rear (M8)
[3]	Trailing edge stopper	[4]	Trailing edge stopper motor (M6)
[5]	Alignment motor/front (M7)	[6]	Alignment plate/F
[7]	FNS paddle motor (M5)	[8]	Paper guide
[9]	Upper paddle	-	-

6.2.2 Exit section

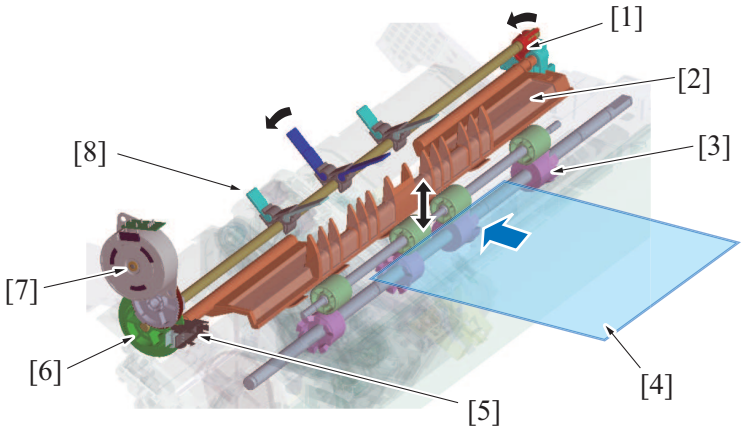


[1]	Paper transport belt	[2]	Gripper
[3]	Trailing edge stopper/C	[4]	Pre-eject drive motor (M9)
[5]	Bundle eject motor (M10)	[6]	Lower paddle

6.3 Operation

6.3.1 Paper transport control to alignment section

- When the FNS paddle motor rotates, the upper paddles (3 pieces) located on the upper paddle shaft, rotates to draw and drop the paper to the alignment tray.
- The upper paddle returns to standby at the home position (upper position) after one rotation.
- The cam located on the upper paddle shaft rotates to move the paper guide up and down.
- The lowering of the paper guide ensures that paper is transported to the alignment tray.

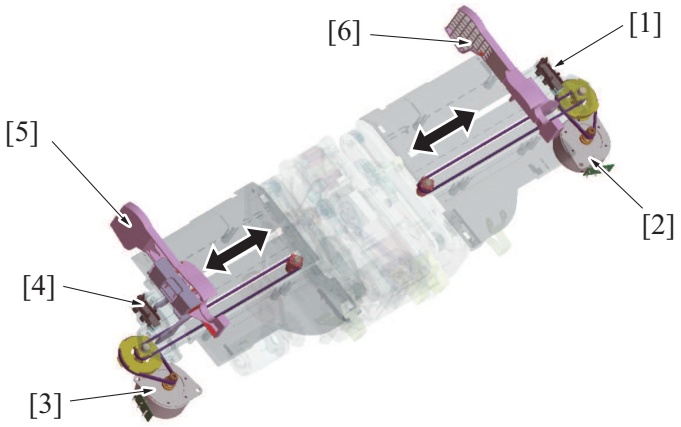


[1]	Cam	[2]	Paper guide
[3]	Receiving roller	[4]	Paper
[5]	Upper paddle home position detection sensor (PS14)	[6]	Detection plate
[7]	FNS paddle motor (M5)	[8]	Upper paddle

6.3.2 Paper alignment control

(1) Alignment plate

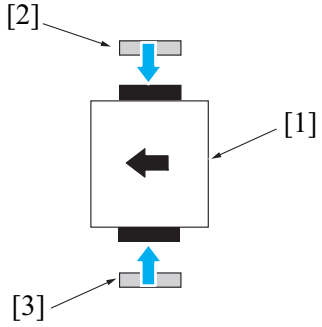
- The alignment plate/F and alignment plate/R align the paper in the width orientation and shift paper sheets.
- The alignment motor and drive belt drives the alignment plates.
- The alignment plates move forward and backward by the forward and reverse rotation of the alignment motor.
- Alignment plate/F and alignment plate//R are each equipped with a drive motor, which allows them to operate independently.



[1]	Alignment plate/R home sensor (PS13)	[2]	Alignment motor/rear (M8)
[3]	Alignment motor/front (M7)	[4]	Alignment plate/F home sensor (PS12)
[5]	Alignment plate /F: home position	[6]	Alignment plate /R: home position

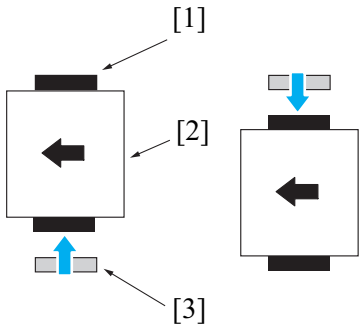
(a) Alignment operation

- The alignment motor/front rotates to move the alignment plate/F via the alignment plate/F drive belt.
- The alignment plate/F home sensor detects the home position of the alignment plate/F.
- The alignment motor/rear rotates to move the alignment plate/R via the alignment plate/R drive belt.
- The alignment plate/R home sensor detects the home position of the alignment plate/R.
- The sheets are placed between the alignment plates/F and /R corresponding to the paper width so that their both ends are aligned.



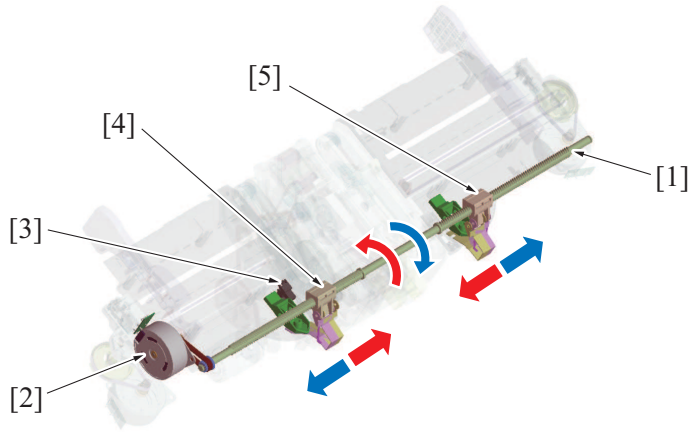
(b) Shift operation

- When offset is selected as finishing option, the alignment plates are moved to shift the sets of paper. Paper is discharged to the center of the main tray at normal printing and stapling.
- Depending on the width of paper, the alignment plate F (alignment plate R) pushes the sets of paper to the rear side (front side) from one side so that the sets of the paper are shifted.
- The sheets are shifted by alternatively repeating the above operation.



(2) Trailing edge stopper

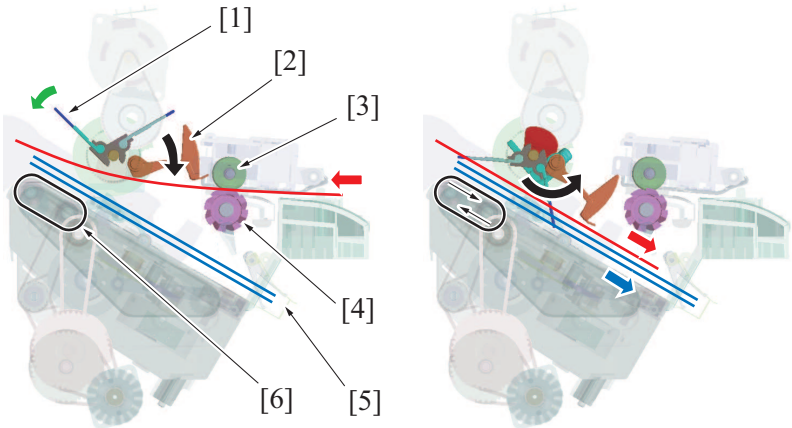
- The trailing edge stopper/F and trailing edge stopper/R align paper in the feed orientation.
- The trailing edge stopper motor drives the trailing edge stoppers.



[1]	Stopper moving shaft	[2]	Trailing edge stopper motor (M6)
[3]	Trailing edge stopper home position detection sensor (PS20)	[4]	Trailing edge stopper/F: home position
[5]	Trailing edge stopper/R: home position	-	-

(a) Alignment operation

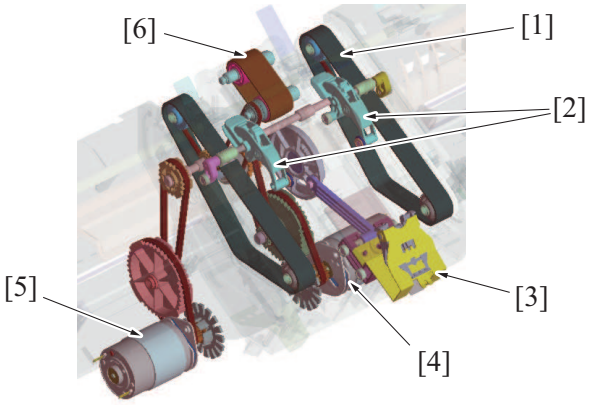
- The shaft for stopper movement has a different spiral between the front and rear sides.
- The trailing edge stopper/F to move forward and the trailing edge stopper/R to move backward when the trailing edge stopper motor rotates in the normal direction.
- Trailing edge stopper/F and the trailing edge stopper/R shift according to the paper width before starting a job, to hold the trailing edge of the paper.
- Paper is sandwiched between the upper paddle and lower paddle, and pressed against the trailing edge stoppers.
- The trailing edge stoppers hold the trailing edge of the paper, to align the trailing edge of paper in the feed orientation.
- For 2-point staple jobs, the trailing edge stoppers/F and /R are retracted to the position where they do not interfere with the stapler.
- After the job is completed, the trailing edge stopper motor reverses the rotation to return the trailing edge stopper to the home position.



[1]	Upper paddle	[2]	Paper guide
[3]	Receiving roll	[4]	Receiving roller
[5]	Trailing edge stopper	[6]	Lower paddle

6.3.3 Paper exit control

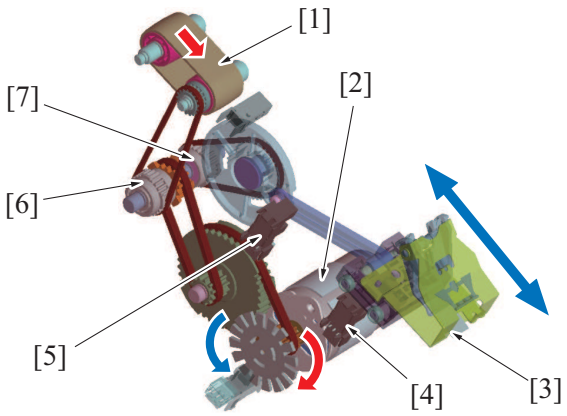
- When the pre-eject drive motor rotates counterclockwise, the bottom edge stopper/C pushes paper to the position at which it can be gripped by the gripper.
- The gripper grips the trailing edges of the sets of paper in the alignment tray and transports them to the paper exit position.
- The gripper releases the sets of paper to discharge them to the main tray. The gripper is moved to the home position and brought into a standby state.



[1]	Paper transport belt	[2]	Gripper
[3]	Trailing edge stopper/C	[4]	Pre-eject drive motor (M9)
[5]	Bundle eject motor (M10)	[6]	Lower paddle

(1) Lower paddle operation

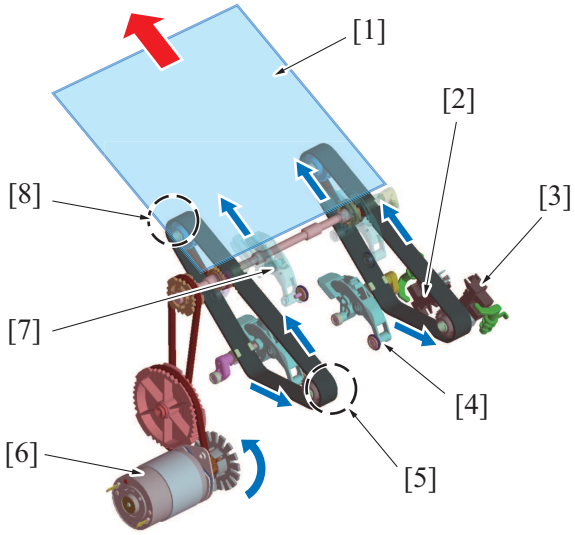
- When the pre-eject drive motor rotates clockwise, the lower paddle rotates to press the paper against the trailing edge stopper.
- When the pre-eject drive motor rotates counterclockwise, the trailing edge stopper moves from the home position to the paper exit position to discharge paper to the main tray.
- When the drive gear makes a turn, the stopper moves from the paper exit position to the home position and is brought into a standby state.



[1]	Lower paddle	[2]	Pre-eject drive motor (M9)
[3]	Trailing edge stopper/C	[4]	Pre-eject home sensor (PS21)
[5]	Pre-eject away sensor (PS22)	[6]	One-way clutch (for lower paddle driving)
[7]	One-way clutch (for trailing edge stopper/C driving)	-	-

(2) Gripper operation

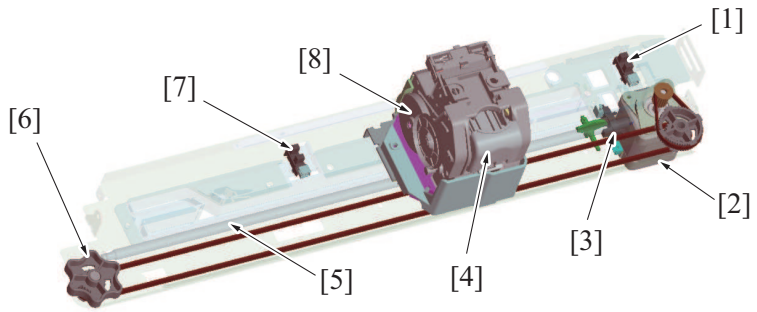
- The bundle eject motor rotates to turn the paper transport belt. This causes the gripper, fixed to the paper transport belt, to rotate.
- The gripper stays at the home position (inside the exit section) and rotates at the position [5] shown in the illustration to grip the trailing edge of paper. Paper is transported with the gripper griping the trailing edge of the paper. The gripper releases the paper when it rotates at the position [8] shown in the illustration. After the paper transport belt makes one turn, the gripper returns to the home position and is brought into the standby state.



[1]	Paper	[2]	Gripper home position sensor (PS18)
[3]	Gripper position detection sensor (PS19)	[4]	Gripper (home position)
[5]	Gripper position (gripping the paper)	[6]	Bundle eject motor (M10)
[7]	Gripper position (transporting the paper)	[8]	Gripper position (release the paper)

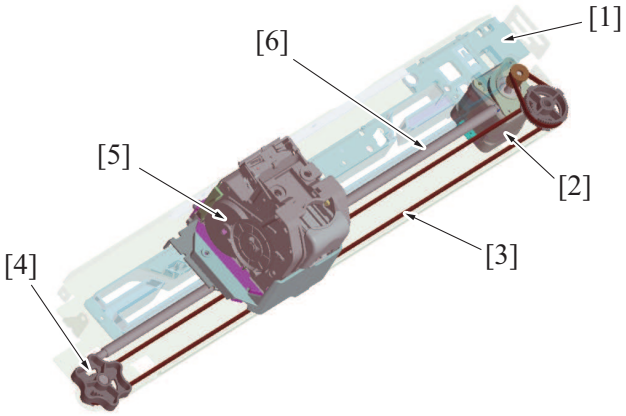
7. STAPLER SECTION

7.1 Configuration



[1]	Stapler home position sensor (rear) (PS23)	[2]	Side stapler movement motor (M13)
[3]	Wide flat limit sensor (PS36)	[4]	Staple cartridge
[5]	Shaft	[6]	Stapler move dial
[7]	Stapler position sensor (center) (PS24)	[8]	Stapler unit

7.2 Drive



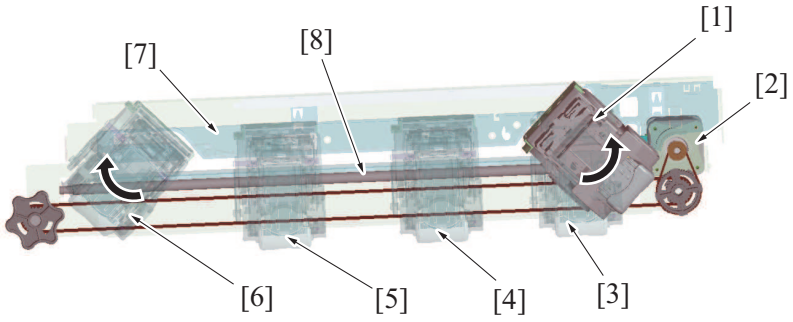
[1]	Slide guide plate	[2]	Side stapler movement motor (M13)
[3]	Drive belt	[4]	Stapler move dial
[5]	Stapler unit	[6]	Shaft

7.3 Operation

7.3.1 Stapler movement control

(1) Stapler Movement

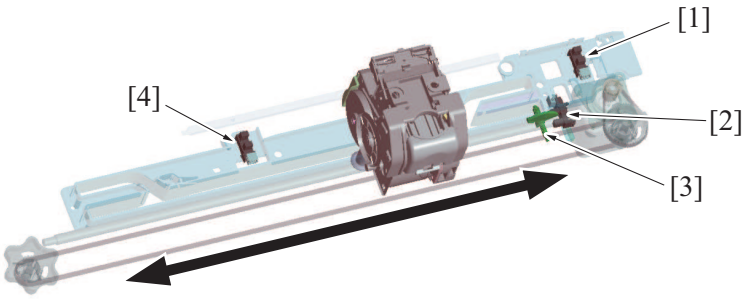
- When the side stapler movement motor rotates, the belt is driven. So, the stapler holder that is attached to the belt moves back and forth along the shaft.
- When the staple unit moves to stapler home position or staple cartridge replacement position, the slide guide plate shape causes the staple unit to rotate.



[1]	Stapler unit (home position)	[2]	Side stapler movement motor (M13)
[3]	Stapler unit (corner staple (parallel) position)	[4]	Stapler unit (2-staple position)
[5]	Stapler unit (2-staple position)	[6]	Stapler unit (staple cartridge replacement position)
[7]	Slide guide plate	[8]	Shaft

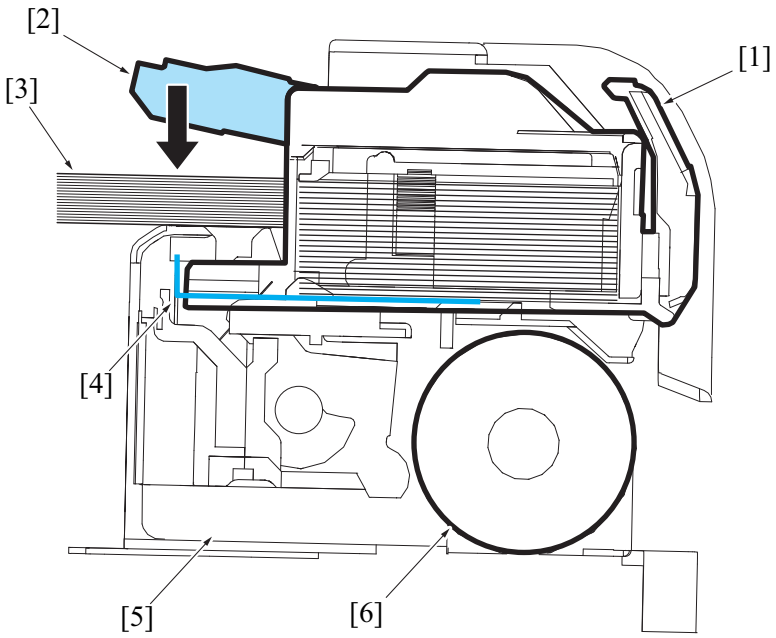
(2) Stapler position detection

- The stapler home position sensor (rear) detects the home position of the stapler.
- The stapler staple position is detected depending on the motor rotation amount that is based on the stapler home position sensor (rear) and stapler position sensor (center).
- The wide flat limit sensor detects the corner staple (parallel) position of the stapler.
- The staple cartridge replacement position is detected depending on the amount of side stapler movement motor rotation that is based on the stapler position sensor (center).



[1]	Stapler home position sensor (rear) (PS23)	[2]	Wide flat limit sensor (PS36)
[3]	Actuator	[4]	Stapler position sensor (center) (PS24)

7.3.2 Staple control



[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor

(1) Stapling operation

- The stapling operation is driven by the stapler motor.
- The clincher staple arm is lowered by the stapler motor. The clincher staple arm presses the sheets.
- Afterwards, a staple is pushed up the staple arm from the staple side. The staple is pressed through the sheets and bent from the clincher staple arm to fasten the sheets together.
- The staple operation completes when the staple arm returns to the home position.

(2) Clogged staple detection

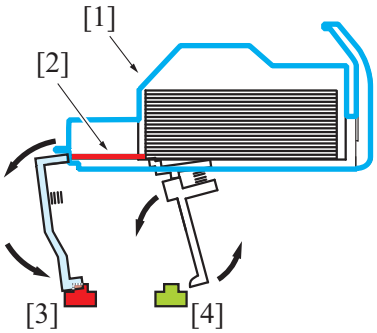
- The staple arm position is detected by the stapler home sensor located in the stapler.
- The stapler home sensor is off during the staple operation.
- A staple jam is determined when the stapler home sensor does not turn on again after a specified amount of time elapses since it turned off.

7.3.3 Staple empty detection control

(1) Staple empty detection

- The stapler includes the self-priming sensor and staple empty sensor to detect the status of the staple cartridge and staples.

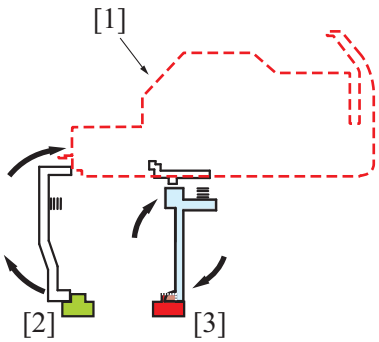
- If the trailing edge of the last staple sheet in the cartridge passes the actuator of the staple empty sensor, the staple empty sensor is blocked and machine determines that the cartridge is empty.
- Even when staple empty is detected, printing is not disabled. Paper is delivered without being stapled.
- If staple empty occurs, the stapler stays at the staple cartridge replacement position.



[1]	Staple cartridge	[2]	Staple sheet
[3]	Self-priming sensor	[4]	Staple empty sensor

(2) Cartridge installation detection

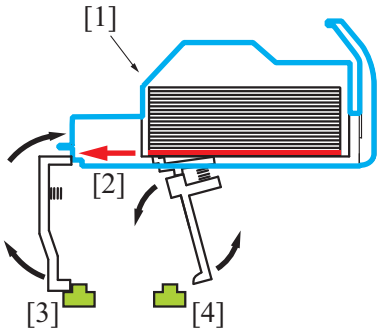
- When a cartridge is not installed, the staple empty sensor is blocked and the self-priming sensor is unblocked.
- The control panel displays to warn of the staple empty message.



[1]	Staple cartridge (not mounted)	[2]	Self-priming sensor (unblocked)
[3]	Staple empty sensor (blocked)	-	-

(3) Staple sheet setting errors

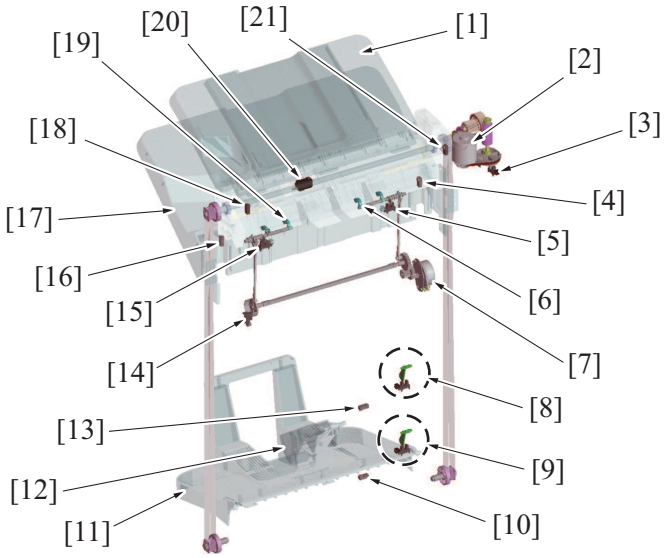
- When a staple sheet is placed, the staple empty sensor is unblocked, and the empty-staple status clears.
- When the staple empty sensor is detecting (unblocked), but the self-priming sensor (unblocked) cannot detect the edge of the staple sheet, the clinch operation is performed.
- If the self-priming sensor cannot detect the leading edge of the staple sheet after clinch operations, machine determines that the staple sheet is not properly fed and the control panel displays the staple empty message.



[1]	Staple cartridge (loaded with staple sheets)	[2]	Staple sheet is fed by clinch operation
[3]	Self-priming sensor (unblocked)	[4]	Staple empty sensor (unblocked)

8. OUTPUT TRAY SECTION

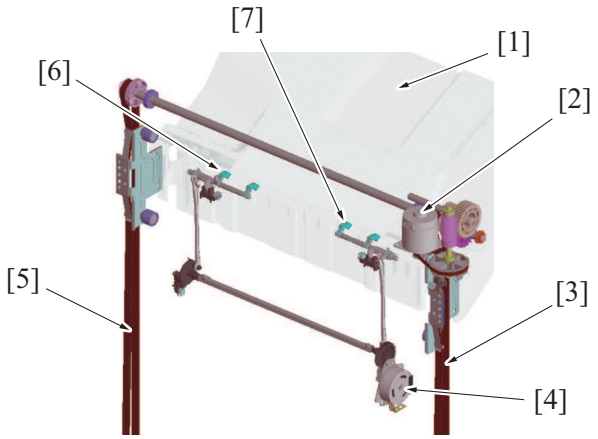
8.1 Configuration



[1]	Sub tray	[2]	Main tray up/down motor (M11)
[3]	Stacker motor sensor (PS25)	[4]	Main tray upper sensor/out (PS6) (Not used)
[5]	Main tray upper position sensor/R (PS26)	[6]	Paper detection lever/R
[7]	Paper receiving control motor (M12)	[8]	Main tray full detection sensor (PS29) *1 *3
[9]	Main tray full detection sensor (PS29) *2	[10]	Booklet tray empty detection sensor/out (PS14) *3
[11]	Saddle tray *3	[12]	Paper press *3
[13]	Booklet tray empty detection sensor/in (PS13) *3	[14]	Paper delivery control sensor (PS28)
[15]	Main tray upper position sensor/F (PS27)	[16]	Main tray upper sensor/in (PS7) (Not used)
[17]	Main tray	[18]	Sub tray full detection sensor/in (PS10)
[19]	Paper detection lever/F	[20]	Main tray upper position detect switch (SW2)
[21]	Sub tray full detection sensor/out (PS9)	-	-

- *1: Installation position for the FS-536SD sensor
- *2: Installation position for the FS-536 sensor
- *3: FS-536SD only

8.2 Drive

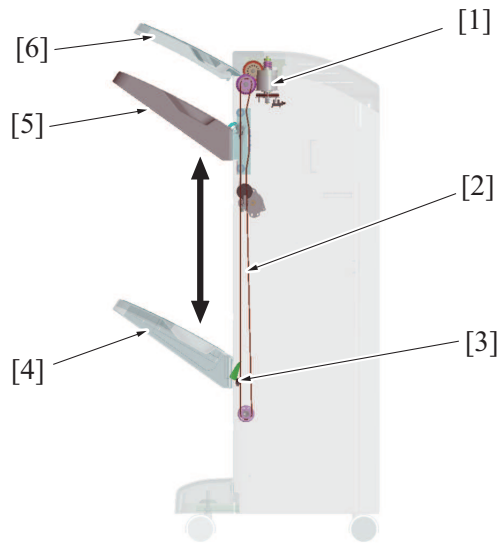


[1]	Main tray	[2]	Main tray up/down motor (M11)
[3]	Main tray drive belt/R	[4]	Paper receiving control motor (M12)
[5]	Main tray drive belt/F	[6]	Paper detection lever/F
[7]	Paper detection lever/R	-	-

8.3 Operation

8.3.1 Main tray up/down mechanism

- Rotation of the main tray up/down motor drives the main tray drive belt to lift and lower the main tray.



[1]	Main tray up/down motor (M11)	[2]	Main tray drive belt
[3]	Main tray full detection sensor (PS29)	[4]	Main tray (main tray full position)
[5]	Main tray (home position)	[6]	Sub tray

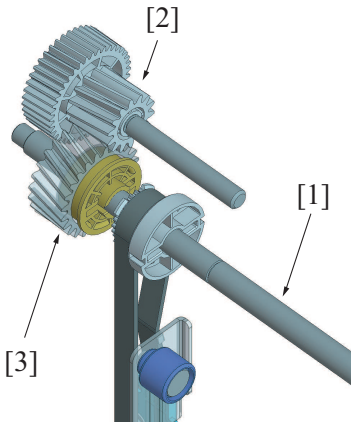
(1) Mechanism for protecting main tray drive section

CAUTION

- When the drive connection in the torque limiter is released, the main tray moves down under its own weight.
- To avoid finisher breakage and your injury, before releasing the drive connection in the torque limiter, be sure to support the main tray with your hand.

- The drive connection section of the main tray up/down drive mechanism has a torque limiter to prevent breakage.
- There may be an obstacle below the main tray during its downward movement. If the tray touches the obstacle and the force required to stop the lowering operation exceeds the specified value, the teeth of the drive gear rotates in the reverse direction and the driving force cannot be transmitted to the main tray. The torque limiter is used to prevent this situation from causing the breakage of the main tray drive mechanism and the main tray up/down motor.
- The main tray can be moved only upward with your hands. By manually pushing it upward with the force exceeding the specified value, the main tray can be raised. In contrast, as the torque limiter is not provided for the downward movement, the main tray cannot be lowered by pushing it down. If the tray is forcibly pushed downward, the main tray drive mechanism can be damaged.
- If the main tray needs to be manually lowered for maintenance and repair, the tray can be lowered by releasing the drive connection in the torque limiter.

Front perspective view

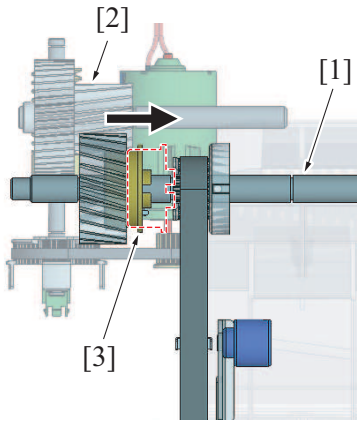


[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear

[3]	Torque limiter	-	-

Method for releasing the drive connection

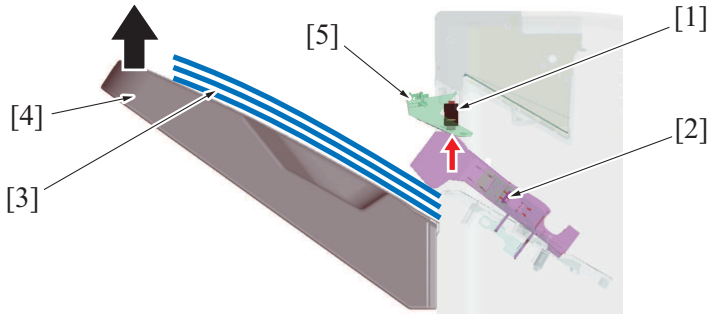
1. Remove the rear cover.
2. Support the main tray with your hand so that it does not fall down.
3. Slide the area of the torque limiter, located on the main tray driving shaft, as shown to the front side of the main body. The connection of the drive gears is released and the main tray is lowered.
4. Side view



[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear
[3]	Torque limiter	-	-

8.3.2 Main tray upper detection mechanism

- Upper limit detection mechanism is provided to prevent main tray up/down mechanism malfunction and damage due to lifting the main tray above the specified position.
- When the top surface of paper pushes up the alignment plate during main tray rising, the main tray upper position detect switch cover is pressed. So, the main tray upper position detect switch is pressed.
- It detects that the main tray has reached the upper limit position when the main tray upper position detect switch is pressed.
- When the main tray reaches the upper limit position, main tray up/down motor stops rotating to stop lifting the main tray.



[1]	Main tray upper position detect switch (SW2)	[2]	Alignment plate
[3]	Paper	[4]	Main tray
[5]	Main tray upper switch cover	-	-

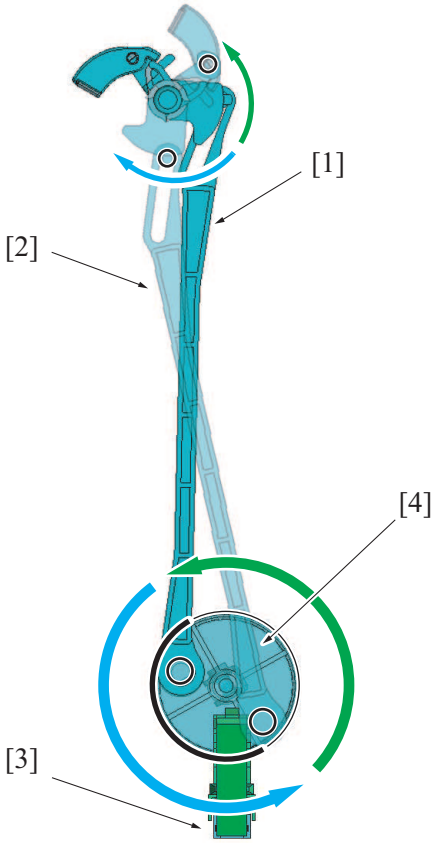
8.3.3 Main tray paper level detection control

- To eliminate irregularity of the discharged paper, distance between the top surface of the discharged paper and the exit port is controlled to be consistent.
- The main tray upper position sensor detects the level of the discharged paper in the main tray.
- The top surface of the discharged paper is controlled to be at specified position by raising/lowering the main tray depending on the detected paper level.
- The paper level is detected every time that the paper is discharged to check the paper height.

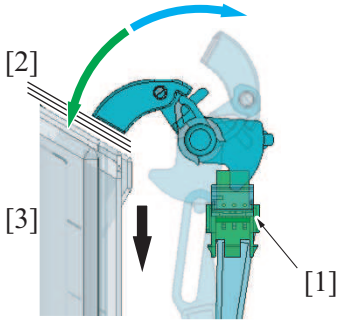
(1) Main tray upper position sensor control

- The paper level detect lever is installed on the main tray and operates with the paper receiving control motor and paper level detect lever drive gear.
- The leading of the paper level detect lever will rise when the paper level detect lever drive gear is rotated half turn. If the paper level detect lever drive gear rotates another half turn, the paper level detect lever will be lowered. This operation will hold down the top surface at the trailing edge of the paper in the main tray.
- The paper delivery control sensor detects the position of the paper level detect lever drive gear. The paper receiving control motor stops when the paper level detect lever drive gear is rotated one turn.
- The main tray upper position sensor detects the position of the leading of the paper level detect lever.
- The position of the main tray upper position sensor changes depending on the paper level detect lever position. Position of the paper level detect lever changes depending on the height of the output tray.
- When the main tray upper position sensor is blocked, the main tray top surface of the paper sheets is determined as exceeding the specified height.

- The main tray up/down motor is rotated and the main tray is lowered until the main tray upper position sensor is unblocked.



[1]	Paper detection lever (home position)	[2]	Paper detection lever (upper position)
[3]	Paper delivery control sensor (PS28)	[4]	Paper detection lever drive gear

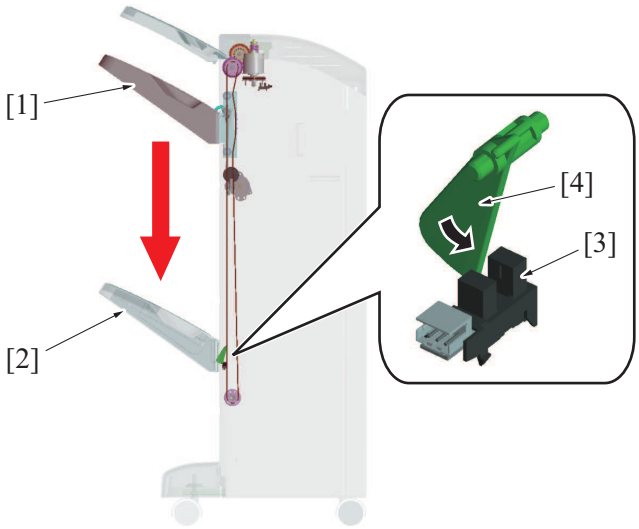


[1]	Main tray upper position sensor/F (PS27) Main tray upper position sensor/R (PS26)	[2]	Paper
[3]	Main tray	-	-

8.3.4 Tray full detection mechanism

(1) Main tray

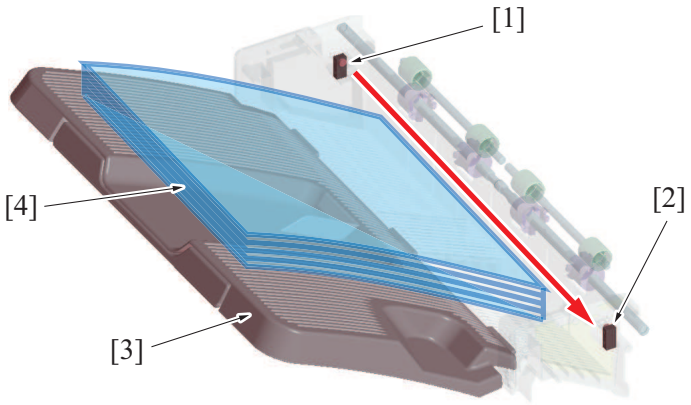
- The main tray is lowered to maintain the paper top surface to specified position when the paper is discharged to the main tray.
- Once the main tray is lowered to the specified position, the actuator is activated to block the main tray full detection sensor.
- When the main tray full detection sensor is blocked, main tray is determined as full and the warning screen is displayed.
- When the main tray full is detected, all configurations and jobs that use the main tray cannot be performed.
- By removing the paper from the main tray, the paper detection lever is lowered. This causes machine to determine that the paper is removed and the “main tray full” message disappears.



[1]	Main tray (home position)	[2]	Main tray (main tray full position)
[3]	Main tray full detection sensor (PS29)	[4]	Actuator

(2) Sub tray

- When paper is discharged into the sub tray, the stacked paper blocks the sub tray full detection sensor. This blocked state is interpreted as a detection of a full output tray.
- When the sub tray full is detected, the warning message appears on the control panel.
- In this state, any saddle unit configurations and jobs that use the saddle unit cannot be performed.



[1]	Sub tray full detection sensor/out (PS9)	[2]	Sub tray full detection sensor/in (PS10)
[3]	Sub tray	[4]	Paper

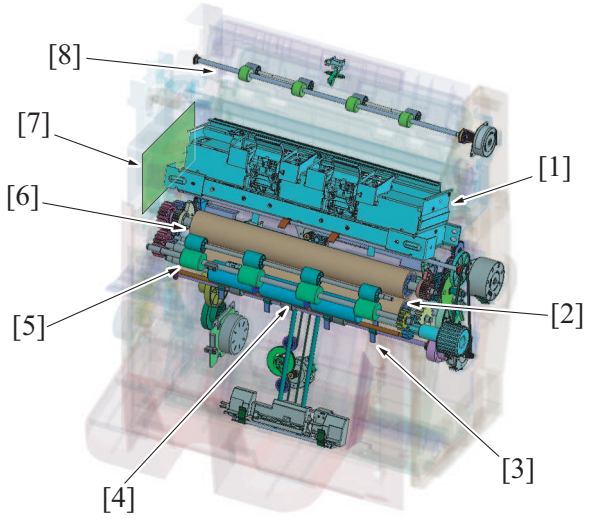
9. SADDLE SECTION (FS-536SD)

9.1 Configuration

NOTE

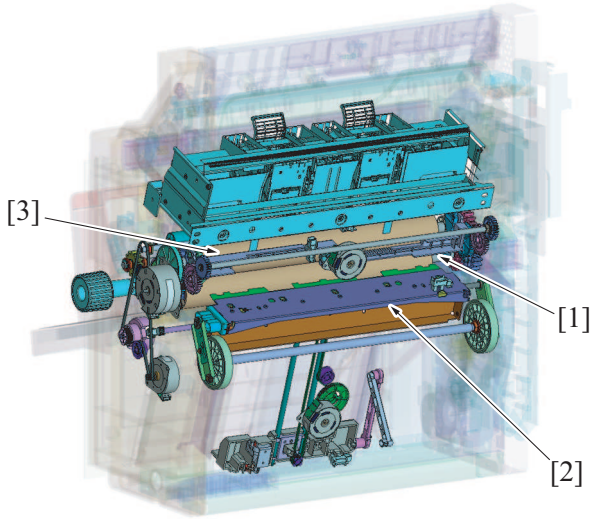
- **FS-536SD only**

Front left side perspective view



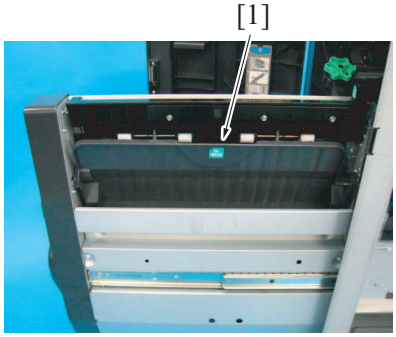
[1]	Staple unit	[2]	Center folding roller/2
[3]	Center fold section lower paddle	[4]	Tri-folding roller
[5]	Saddle section exit roller	[6]	Center fold roller/1
[7]	SD drive board (SDDB)	[8]	Saddle section paper feed roller

Front right side perspective view



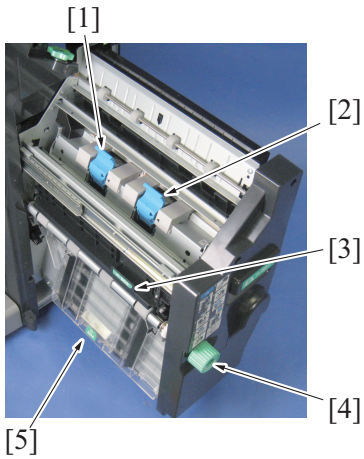
[1]	Center staple alignment plate drive gear/Rr	[2]	Center fold knife
[3]	Center staple alignment plate drive gear/Fr	-	-

Right side view



[1]	Jam removal cover (transport section)	-	-

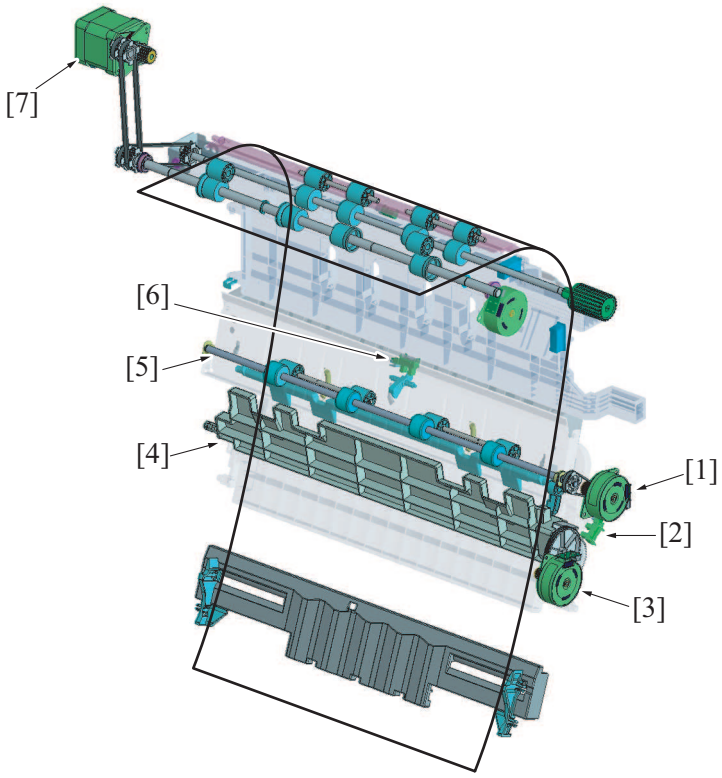
Front left side perspective view



[1]	Staple cartridge (rear side)	[2]	Staple cartridge (front side)
[3]	Jam removal cover (exit section)	[4]	Jam removal dial (folding section)
[5]	Jam removal cover (alignment section)	-	-

9.2 Transport section

9.2.1 Drive



[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover
[5]	SD transport roller	[6]	SD entrance sensor (PS1)
[7]	FNS discharge motor (M3)	-	-

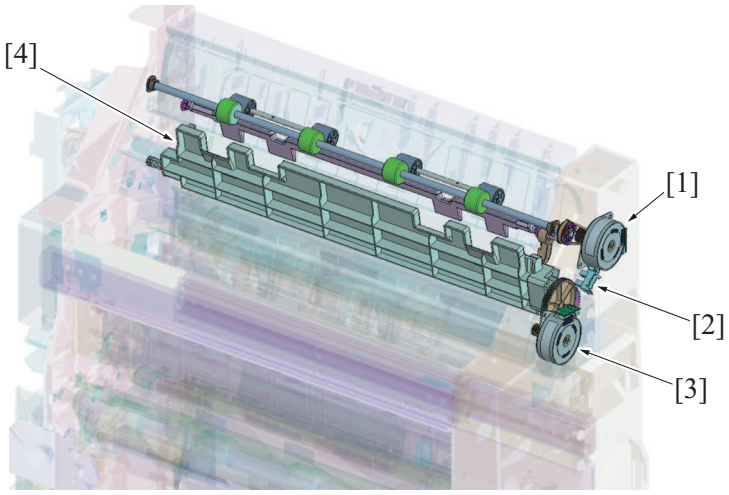
9.2.2 Paper transport

- The FNS discharge motor rotates reversely to transport the paper from the finisher transport section into the saddle unit.
- The paper then is transported to the alignment section by SD transport roller.
- The SD transport roller rotates when the SD transport motor is driven.

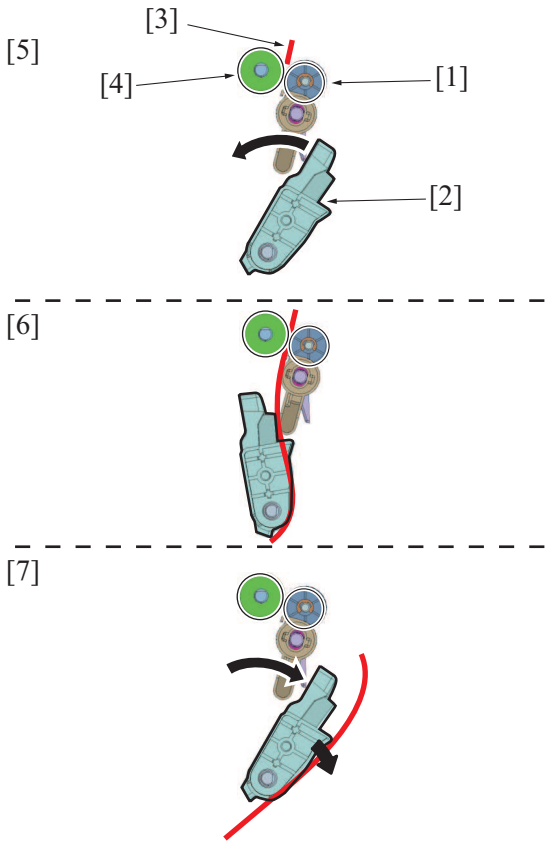
9.2.3 Curl cover

- The paper is transported to the alignment section one–by-one. A paper which is curled may cause paper misfeed at the entrance of the saddle stitcher.

- In order to prevent this paper misfeed, the curl cover is installed so that each paper is transported to the alignment section without fail.
- The curl cover is operated by the paper discharge control motor. Paper receiving opens/closes the feeding port inside the saddle unit entrance when the paper discharge control motor rotates in forward/reverse direction.



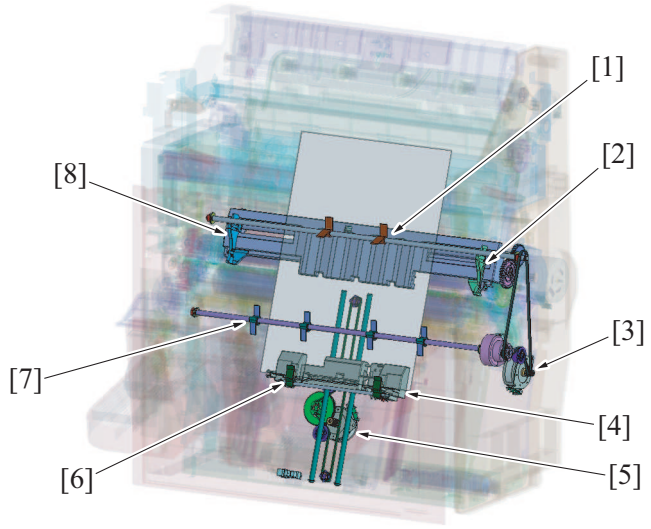
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover



[1]	SD transport roll	[2]	Curl cover
[3]	Paper	[4]	SD transport roller
[5]	Paper transportation from within the finisher	[6]	Curl cover operation
[7]	Next paper standby (moves curl cover to the home position)	-	-

9.3 Alignment section

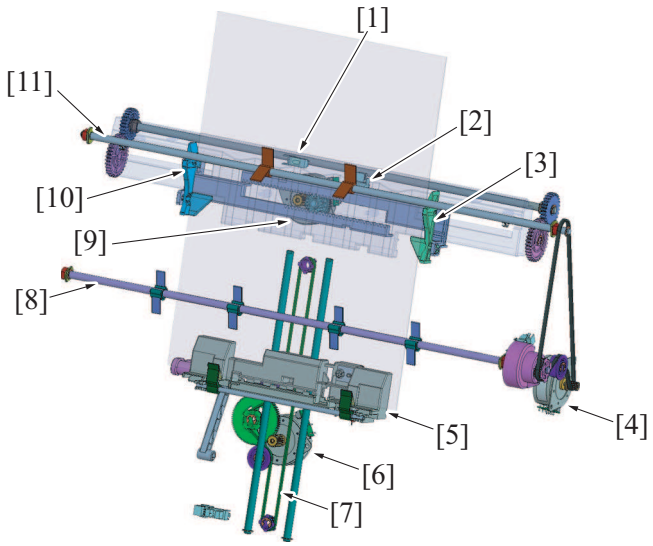
9.3.1 Drive



[1]	Center folding section upper paddle	[2]	Alignment plate/F
[3]	SD paddle motor (M7)	[4]	Stopper guide
[5]	Stopper drive motor (M4)	[6]	Paper grip
[7]	Center folding section lower paddle	[8]	Alignment plate/R

9.3.2 Alignment

- It aligns the paper transported to the alignment section.
- The paper CD alignment is conducted by alignment plate/F and alignment plate/R. The alignment plate shifts by forward/reverse rotation of the alignment motor to align the paper edge.
- The paper FD alignment is conducted by the stopper guide, center folding section upper paddle and center folding section lower paddle.
- The stopper guide moves up when the stopper drive motor rotates in forward/reverse direction to stop at the position which suits the length of the paper transported. The leading edge of the paper stops by the stopper guide to align the leading edge.
- When the paper is transported, the stopper drive motor rotates in forward/reverse direction to operate the stopper guide drive belt, and moves the stopper guide up/down.
- The center folding section upper paddle and the center folding section lower paddle are installed in order to receive the transported paper to the alignment section without fail.
- The paddle is driven by the SD paddle motor.



[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Alignment home sensor (PS4)
[3]	Alignment plate/F	[4]	SD paddle motor (M7)
[5]	Stopper guide	[6]	Stopper drive motor (M4)
[7]	Stopper guide drive belt	[8]	Center folding section lower paddle
[9]	Alignment motor (M3)	[10]	Alignment plate/R
[11]	Center folding section upper paddle	-	-

(1) Alignment operation

- When the saddle exit sensor of the finisher detects the leading edge of the paper, the alignment motor starts rotating in the direction to close the alignment plate, and the alignment plate/F and the alignment plate/R stop at the position where it is slightly wider than the paper width.
- When the specified period of time has passed after the SD entrance sensor detects the trailing edge of the paper, the alignment motor rotates in forward/reverse direction to do oscillation of the alignment plate to align paper.
- The oscillation of the alignment plate is conducted each time a sheet of paper is transported, and the alignment plate is shifted to the standby position after the alignment operation is finished.
- The home position of the alignment plate is detected by the alignment home sensor.

(2) Stopper guide operation

- The stopper guide is moved up according to the paper size.
- The stopper guide moves up and stops at the specified position after the leading edge of the paper passes the main tray exit sensor.

(3) Paddle operation

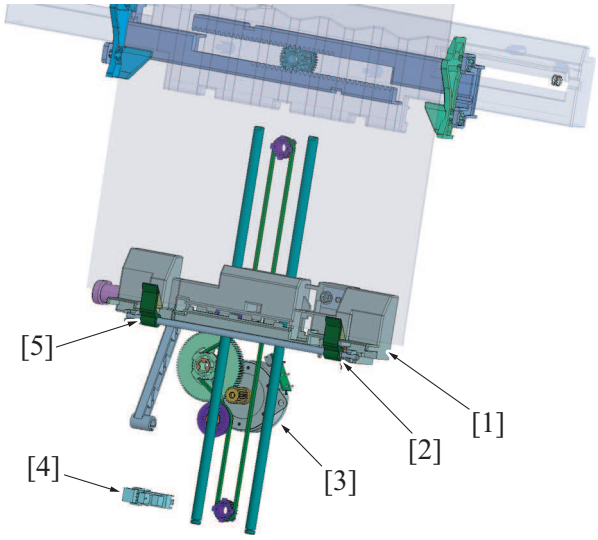
- The up/down paddle is driven by the SD paddle motor. The up/down paddle is driven when the specified period of time has passed after the leading edge of the paper passed the saddle exit sensor of the finisher.
- The up/down paddle stops after the paper trailing edge passes the finisher's main tray exit sensor and the paddle rotates for the specified number of times.

9.3.3 Stopper guide

- At the stopper guide, paper is aligned in the FD direction. Paper conveyed to the aligning section is conveyed to the specified position.
- The exit grip holds the paper when shifting it to the specified position and when stapling papers.
- The alignment section, staple position and other positions (center folding, saddle folding, tri-folding) have their own up/down stop positions. They are controlled by the pulse number of the stopper drive motor.

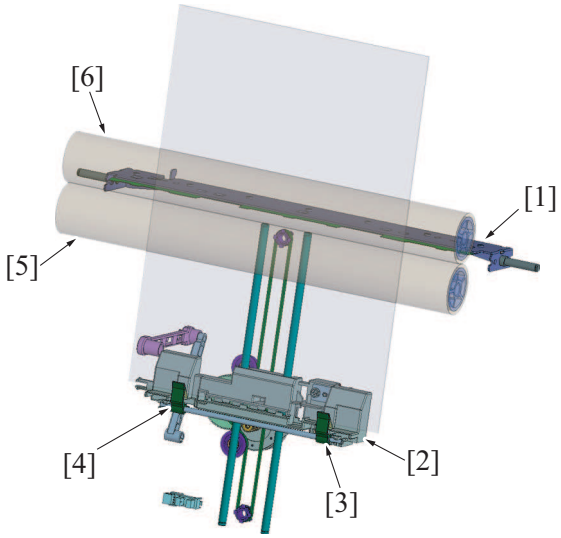
(1) Stopper operation

- The stopper drive motor moves the stopper guide up and down in accordance with the paper size. The stopper home sensor detects the home position.



[1]	Stopper guide	[2]	Exit grip/Fr
[3]	Stopper drive motor (M4)	[4]	Stopper home sensor (PS6)
[5]	Exit grip/Rr	-	-

(2) Stopper control



[1]	Center folding knife assy	[2]	Stopper guide
[3]	Exit grip/Fr	[4]	Exit grip/Rr
[5]	Center folding roller/2	[6]	Center folding roller/1

(a) Folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the folding position.

(b) Saddle stitching mode

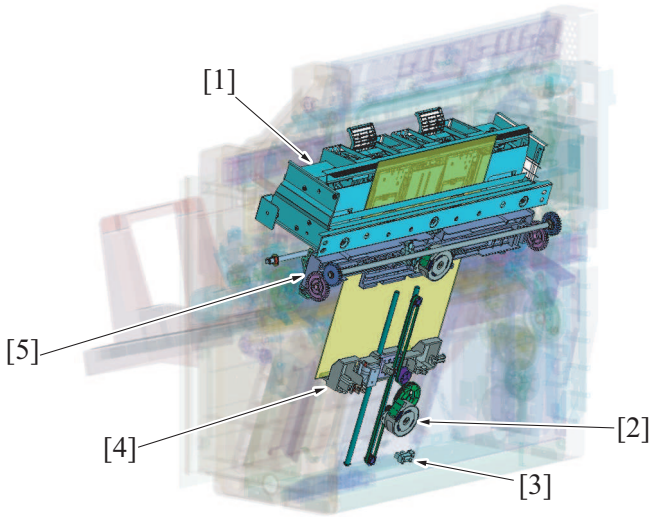
- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the saddle stitching position.
- After a specified period of time since stapling operation was completed, the alignment motor opens the alignment plates and the stopper drive motor starts rotating to move the stopper guide further down and lower the paper to the folding position.

(c) Tri-folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the 1st folding position in the tri-folding.

9.4 Stapler

9.4.1 Drive



[1]	Stapler unit	[2]	Stopper drive motor (M4)

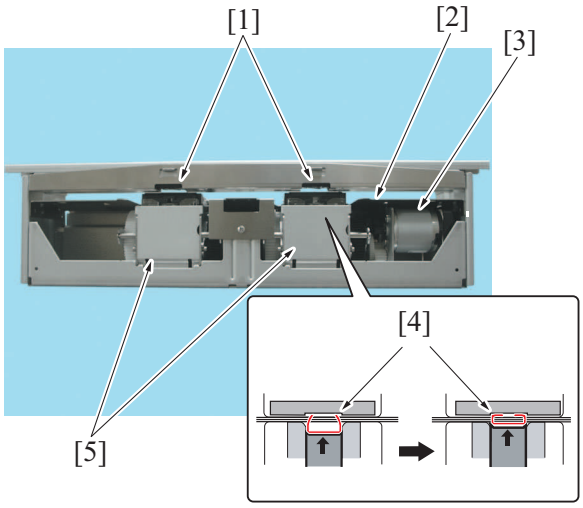
[3]	Stopper home sensor (PS6)	[4]	Stopper guide
[5]	Alignment tray	-	-

9.4.2 Operation

- The stapling operation is performed by the stapler motor.

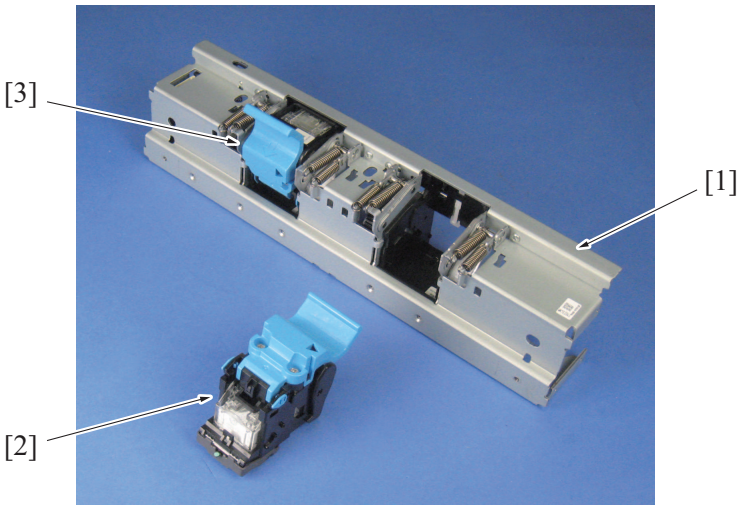
(1) Stapling operation

- The stapling operation is performed by the staple motor in the stapler.
- The drive gear pushes out the pressed portion of the paper toward the clincher to hold the paper, and then the pin will be pushed out.
- When the pin penetrates the paper batch, the pin will be bent to staple the paper batch at the clincher section.



[1]	Clincher	[2]	Drive gear
[3]	Stapler motor	[4]	Staple
[5]	Stapler	-	-

(2) Staple control



[1]	Staple unit	[2]	Staple cartridge (Front side): Removed
[3]	Staple cartridge (Rear side): Installed	-	-

(a) Stapling

- After completing the alignment operation of the alignment plate, the staple motor performs the stapling operation.
- The stapling operation is completed when the stapler home position sensor (rear) detects the home position and turn ON.

(b) Clogged staple detection

- When the stapler home position sensor (rear) does not turn ON after the specified period of time after it turned OFF during stapling, it is determined that the staple motor has the trouble, and stops the stapler motor.

(c) Staple cartridge detection

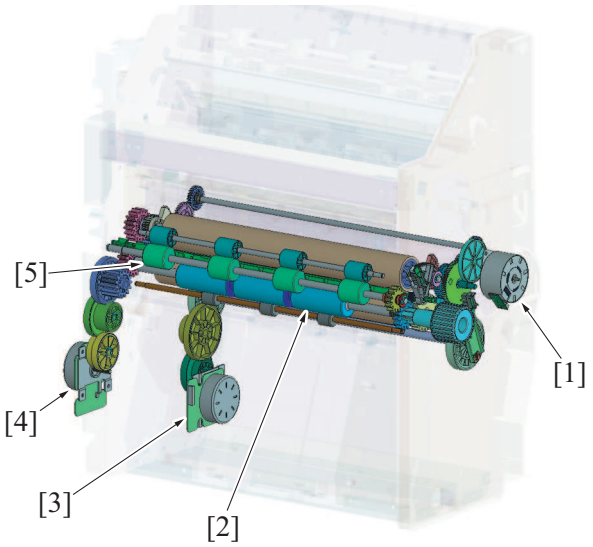
- The staple cartridge switch detects the presence of a cartridge or the incorrect settings of a staple cartridge.
- When no staple cartridge is installed or it is installed incorrectly, an error message appears on the machine control panel.

(d) Staple detection control

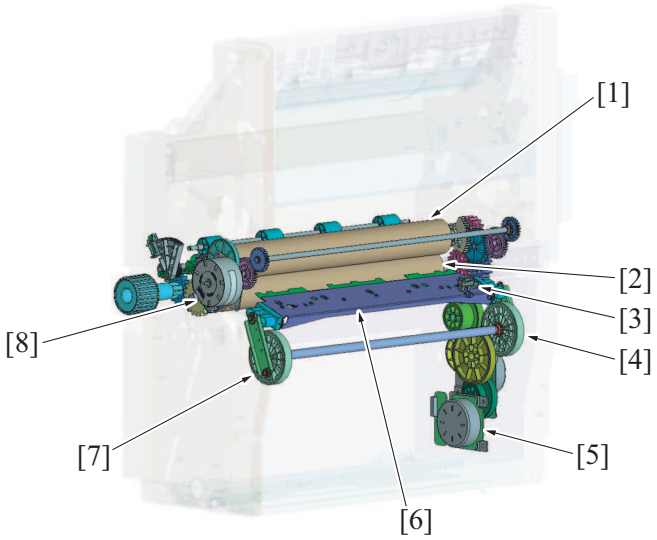
- When the staple goes empty, the staple empty switch turns ON and a message appears on the machine control panel.

9.5 Folding/Saddle stitching

9.5.1 Drive



[1]	Tri-folding guide motor (M6)	[2]	Tri-folding roller
[3]	Center fold knife motor (M9)	[4]	Center fold roller motor (M5)
[5]	Saddle section exit roller	-	-



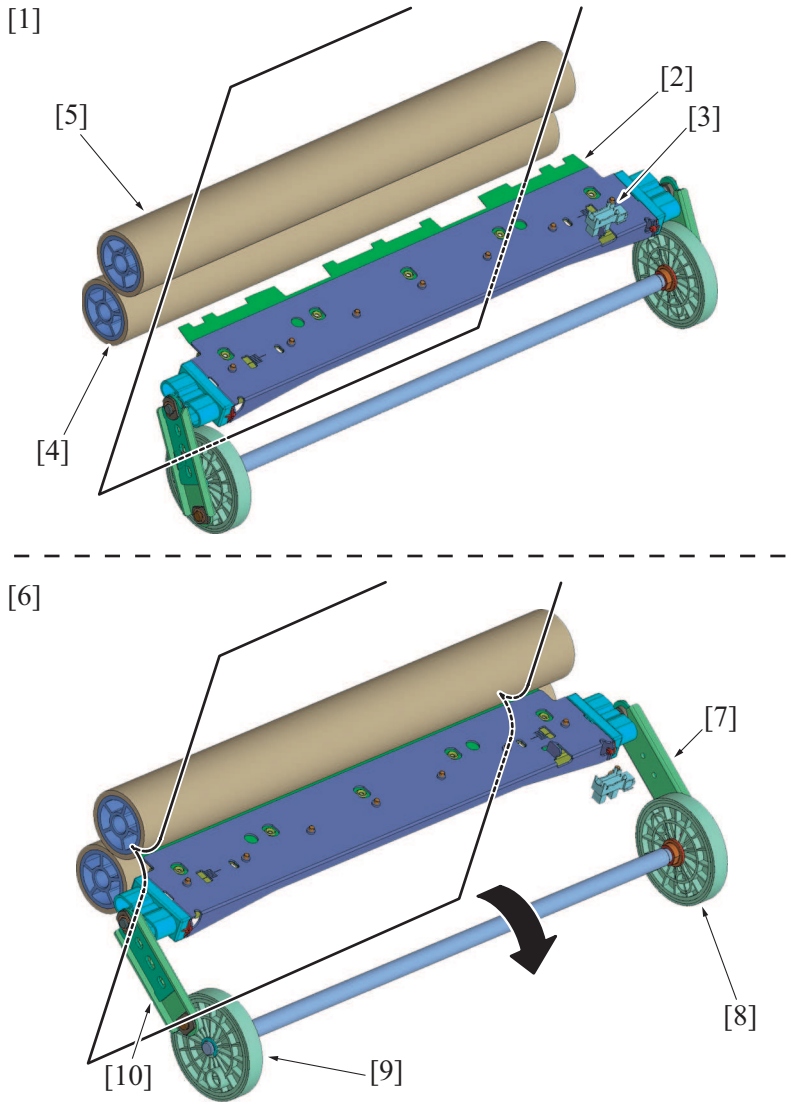
[1]	Center folding roller/1	[2]	Center folding roller/2
[3]	Center fold knife home sensor (PS8)	[4]	Fold drive gear/Rr
[5]	Center fold knife motor (M9)	[6]	Center folding knife assy
[7]	Fold drive gear/Fr	[8]	Tri-folding guide motor (M6)

9.5.2 Folding knife

- The center fold knife motor drives the folding knife.
- The folding knife is used in the folding/saddle stitching/tri-folding mode.
- In the tri-folding mode, it is used at the 1st folding.

(1) Folding knife operation

- The center fold knife motor rotates the crank shaft a half turn via the gear, and pushes the paper to the nip section with the folding knife.
- The folding rollers draw and fold the paper.
- The position of the stopper guide controls the folding position.



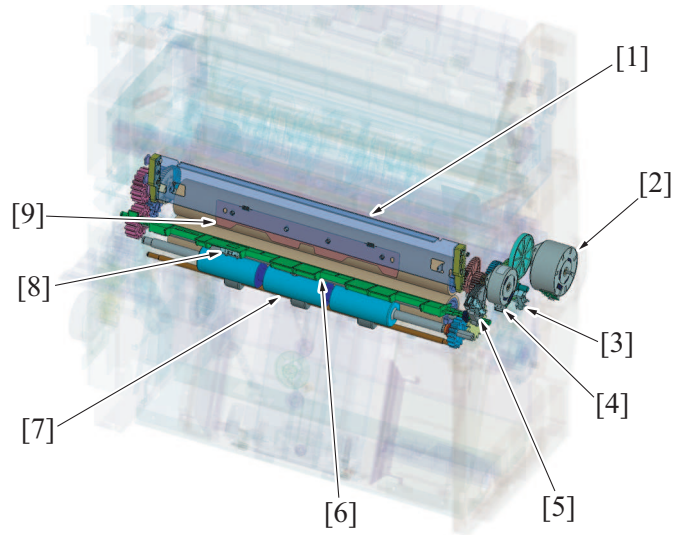
[1]	Before folding	[2]	Folding knife
[3]	Center fold knife home sensor (PS8)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Folding operation
[7]	Crank shaft/Rr	[8]	Fold knife assy drive gear/Rr
[9]	Fold knife assy drive gear/Fr	[10]	Crank shaft/Fr

(2) Folding knife control

- The center fold knife motor turns ON and sticks out the folding knife to the paper after a specified period of time since the stopper guide stops at the folding position.
- The center fold knife motor stops when the folding knife reciprocates after fold operation is completed and the center fold knife home sensor turns OFF.

9.6 Tri-folding

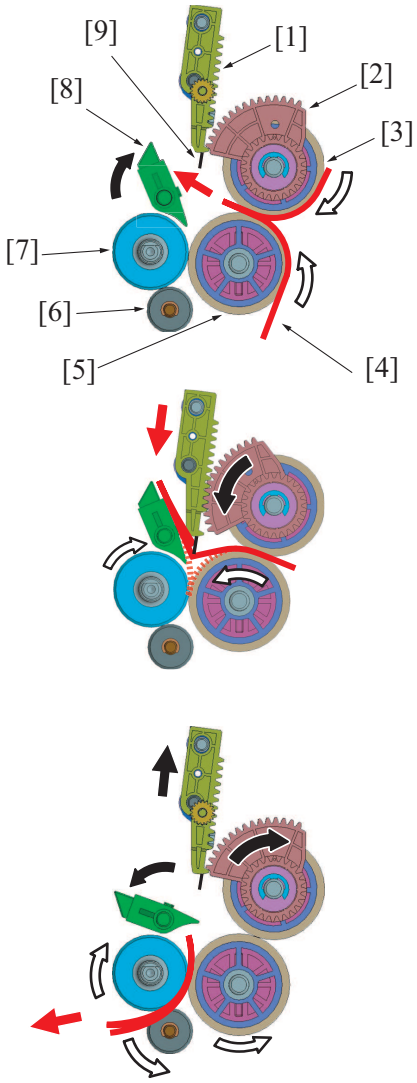
9.6.1 Drive



[1]	Tri-folding knife assy	[2]	Center fold guide motor (M8)
[3]	Guide home sensor (PS7)	[4]	Tri-fold guide motor (M6)
[5]	Tri-folding gate home sensor (PS11)	[6]	Center folding change gate
[7]	Tri-folding roller	[8]	Fold exit sensor (PS12)
[9]	Tri-folding knife	-	-

9.6.2 Tri-folding operation

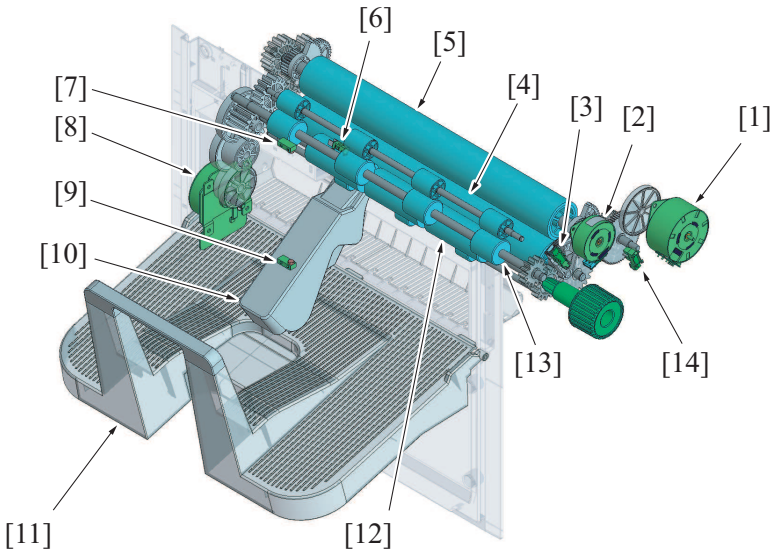
1. When the center fold guide motor drives, the tri-folding gate rotates. The leading edge of the paper to which the first fold was applied at the center folding section, will be transported to the tri-folding path.
2. When the tri-folding guide motor drives, the tri-folding knife assy drive gear rotates to move down the tri-folding knife assy. The paper to which the first fold is applied at the center folding section will be pushed out to the tri-folding roller.
3. The paper is pulled into the tri-folding roller to tri-fold the paper.
4. When tri-folding is finished, the tri-folding gate will return to the home position. The home position of the tri-folding gate is detected by the tri-folding gate home sensor.



[1]	Tri-folding knife assy	[2]	Tri-folding knife assy drive gear
[3]	Center folding roller/1	[4]	Paper
[5]	Center folding roller/2	[6]	Tri-folding roll
[7]	Tri-folding roller	[8]	Tri-folding gate
[9]	Tri-folding knife	-	-

9.7 Exit section

9.7.1 Drive



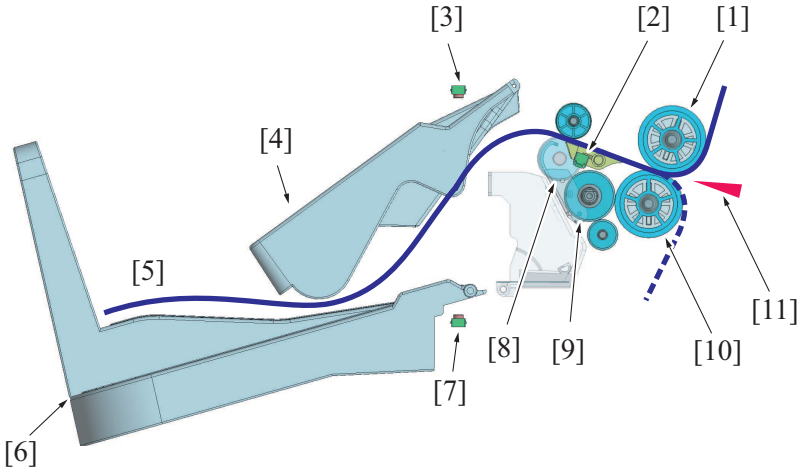
[1]	Center fold guide motor (M8)	[2]	Tri-fold guide motor (M6)
[3]	Tri-folding gate home sensor (PS11)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Fold exit sensor (PS12)
[7]	Booklet tray empty detection sensor/in (PS13)	[8]	Center fold roller motor (M5)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Paper press
[11]	Saddle tray	[12]	Tri-folding roller
[13]	Saddle section exit roller	[14]	Guide home sensor (PS7)

9.7.2 Paper exit

- Center folded, saddle stitched, or tri-folded paper is discharged to the saddle tray.
- The paper that is center folded and saddle folded is sent though the upper route, and the tri-folded paper is sent through the lower route to be discharged.
- The paper is discharged by driving the exit roller and the tri-fold roller. Both rollers are driven by the center fold roller motor.

(1) Paper exit for center fold / saddle stitch

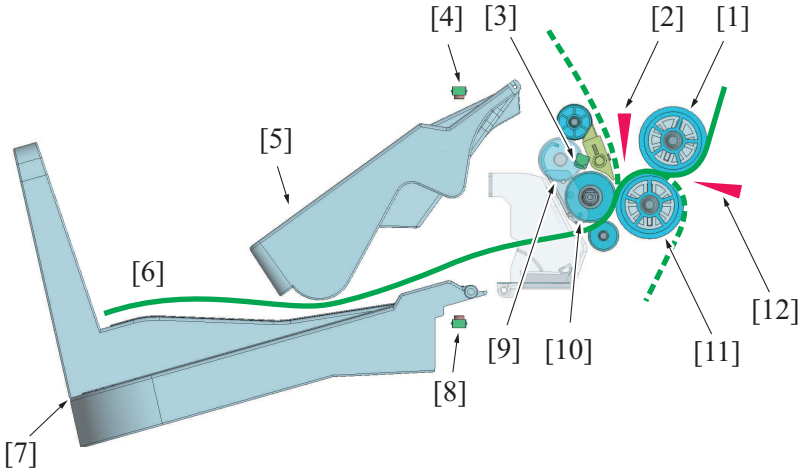
- The center fold roller motor is driven after the center fold or the saddle stitch, and discharges the paper to the saddle tray by the paper exit roller.



[1]	Center folding roller/1	[2]	Fold exit sensor (PS12)
[3]	Booklet tray empty detection sensor/in (PS13)	[4]	Paper press
[5]	Paper transport route	[6]	Saddle tray
[7]	Booklet tray empty detection sensor/out (PS14)	[8]	Saddle section exit roller
[9]	Tri-folding roller	[10]	Center folding roller/2
[11]	Folding knife	-	-

(2) Paper exit for tri-folding

- Since the paper is tri-folded by the tri-folding roller, the paper is transported through the lower route.

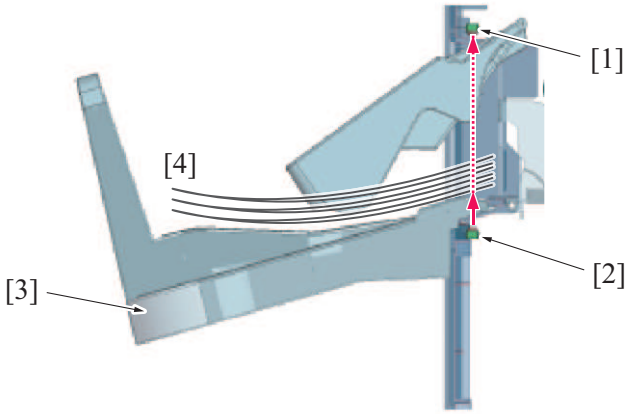


[1]	Center folding roller/1	[2]	Tri-folding knife
[3]	Fold exit sensor (PS12)	[4]	Booklet tray empty detection sensor/in (PS13)
[5]	Paper press	[6]	Paper transport route
[7]	Saddle tray	[8]	Booklet tray empty detection sensor/out (PS14)

[9]	Saddle section exit roller	[10]	Tri-folding roller
[11]	Center folding roller/2	[12]	Folding knife

9.7.3 Tray full detection mechanism

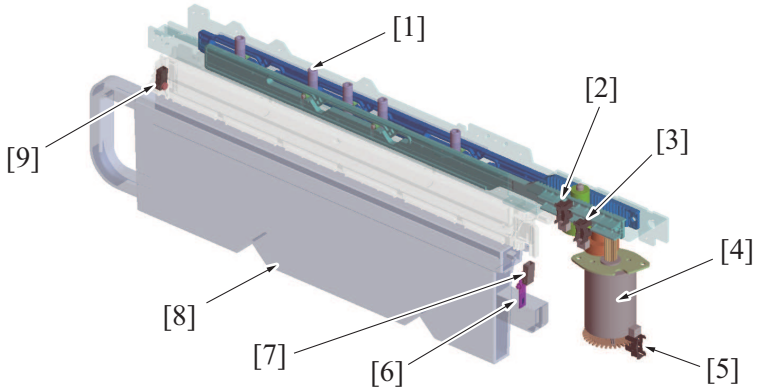
- When paper sheets are discharged to the saddle tray, the light from the saddle tray no paper detection sensor is blocked. When the stacked sheets are removed, the sensor light is unblocked.
- When a predetermined amount of paper is discharged into the saddle tray, the stacked paper blocks the saddle tray no paper detection sensor. The blocked state is determined as a detection of a full saddle tray.
  NOTE
  - **For a tri-fold job, if paper is present in the saddle tray when the job is started, the saddle tray full is detected. (A tray full detection is made even when only one group of sheets remains.)**
- When the saddle tray full is detected, the warning message appears on the control panel.
- In this state, any saddle unit related configurations and jobs that use the saddle unit cannot be performed.



[1]	Booklet tray empty detection sensor/in (PS13)	[2]	Booklet tray empty detection sensor/out (PS14)
[3]	Saddle tray	[4]	Paper

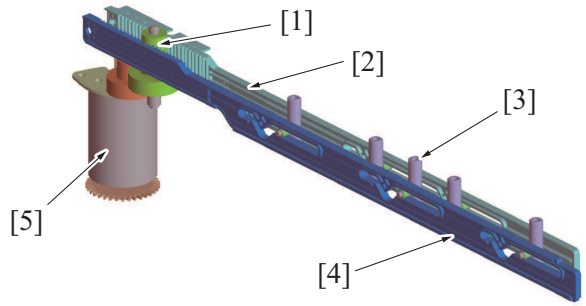
10. PK-520

10.1 Configuration



[1]	Puncher	[2]	Punch home sensor (PS1)
[3]	Punch position sensor (PS2)	[4]	Punch drive motor (M1)
[5]	Punch motor sensor (PS3)	[6]	Actuator
[7]	Punch dust full sensor/in (PS5)	[8]	Punch dust box
[9]	Punch dust full sensor/out (PS4)	-	-

10.2 Drive

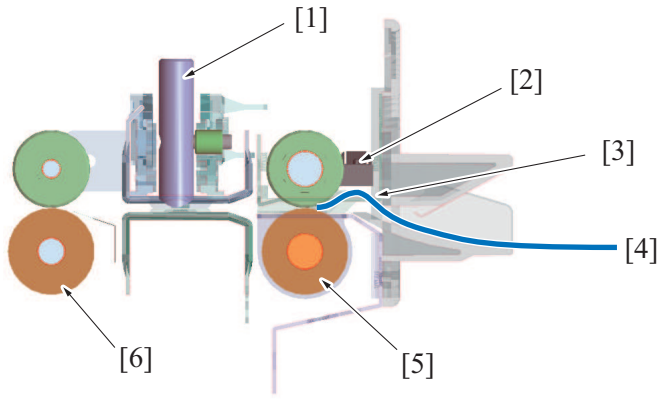


[1]	Puncher drive gear	[2]	Puncher frame 1
[3]	Puncher	[4]	Puncher frame 2
[5]	Punch drive motor (M1)	-	-

10.3 Operation

10.3.1 Skew correction control

- Skew in paper is corrected to reduce skew in punch holes when the punch operation is performed.
- A loop at the end of paper is created before the FNS entry roller during transporting paper, by which the paper skew is corrected.



[1]	Puncher	[2]	FNS entrance sensor (PS4) (finisher section)
[3]	Creating loop	[4]	Paper

[5]	FNS entry roller (finisher section)	[6]	Transport roller (finisher section)

(1) Skew correction process

1. The FNS entrance sensor detects that paper has reached the FNS entry roller.
2. The stopped FNS entry roller presses the paper, by which a loop is created at the end of paper.
3. Rotation of the FNS entry roller and transport roller starts when a predetermined amount of time elapses after the FNS entrance sensor detects paper. The paper that has been corrected for skew is then transported.
4. The holes are punched by the puncher.

(2) Punch Regist Loop Size Adjustment function

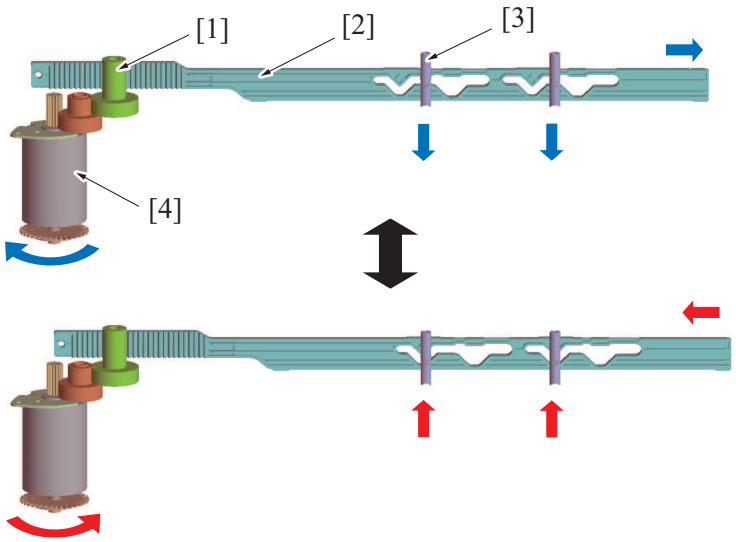
- Punch resists values that are accessed in Service Mode can be adjusted to adjust the punch holes if the punch holes are tilted.
- Punch resists values (resist loop value) are changed when the timing at which the FNS entry roller starts rotating is changed.

10.3.2 Punch control

- At the punch section, the holes are punched at the trailing edge of the paper transported from the horizontal transport section when the paper is fed into the finisher section. Punching is conducted paper by paper.
- The punch drive motor drives to move the puncher up and down, thus to make punch holes in the paper.
- Punch dust generated by punching is received in the punch dust box.
- The punch kits for 2/3 holes or 2/4 holes areas have the configuration to switch the number of punch holes.

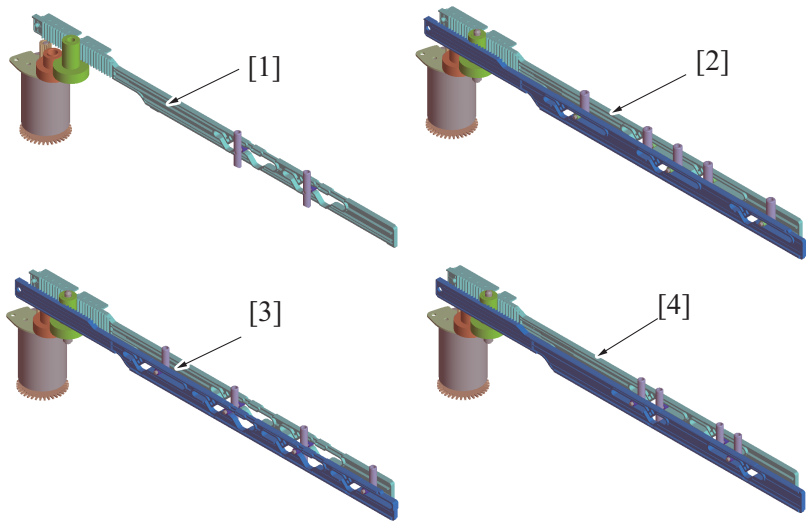
(1) Punching operation

- The paper is transported to the finisher section by the RU transport motor driving the RU section horizontal transport roller/3.
- The paper which skew is removed is transported to the punch section by the FNS entrance roller, and then stop the specified position.
- The drive source for the punch section is the punch drive motor.
- The puncher frame is driven in forward/reverse direction by rotating the punch drive motor in forward/reverse direction.
- When the puncher frame moves in forward or reverse, the puncher moves vertically in accordance with the shape of the puncher frame cam to punch the holes in paper.
- The transport roller in the finisher section transports the punched paper from the punch section to the finisher transport section.



[1]	Puncher drive gear	[2]	Puncher frame
[3]	Puncher	[4]	Punch drive motor (M1)

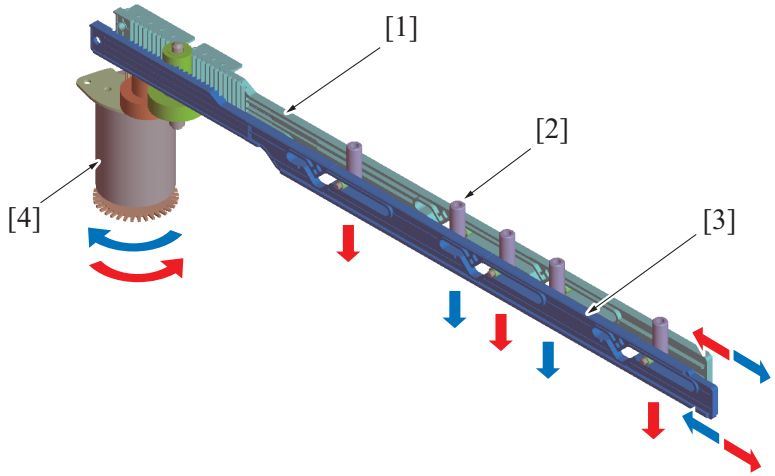
(2) Punch kit type



[1]	2 holes punch kit	[2]	2 holes/3 holes punch kit (Switchable the hole number)
[3]	2 holes/4 holes punch kit (Switchable the hole number)	[4]	4 holes punch kit

(3) Changing the number of punch holes

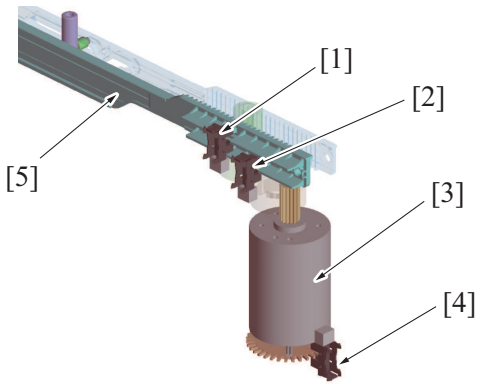
- Puncher frame 1 and the puncher frame 2 have cams with different shapes.
- When the puncher drive gear rotates clockwise, the puncher frame 1 shifts to the front side, and the puncher frame 2 shifts to the back side.
- When the puncher drive gear rotates counter-clockwise, the puncher frame 1 shifts to the back side, and the puncher frame 2 shifts to the front side.
- The puncher connected to the puncher frame then moves up/down with the cam.
- Switching the forward and reverse direction of the punch drive motor switches the number of punch holes.



[1]	Puncher frame 1	[2]	Puncher
[3]	Puncher frame 2	[4]	Punch drive motor (M1)

10.3.3 Puncher up/down status detection configuration

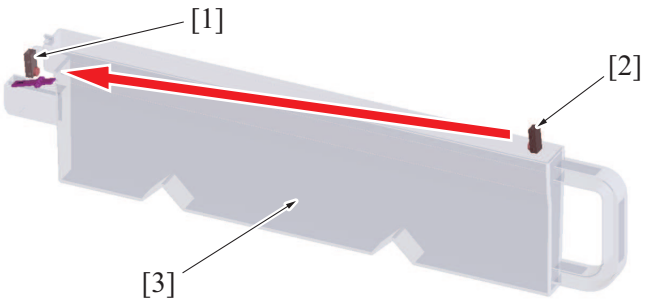
- The puncher frame 1 has two light-blocking plates to detect the position of the puncher frame.
- The punch drive motor has a round light-blocking plate and the puncher motor sensor on the same shaft to detect the rotation value (pulse) of the punch drive motor.
- The up/down status of the puncher is detected by the coordination input from the puncher position sensor, punch home sensor, and the punch motor sensor.



[1]	Punch home sensor (PS1)	[2]	Punch position sensor (PS2)
[3]	Punch drive motor (M1)	[4]	Punch motor sensor (PS3)
[5]	Puncher frame 1	-	-

10.3.4 Punch dust box full detection mechanism

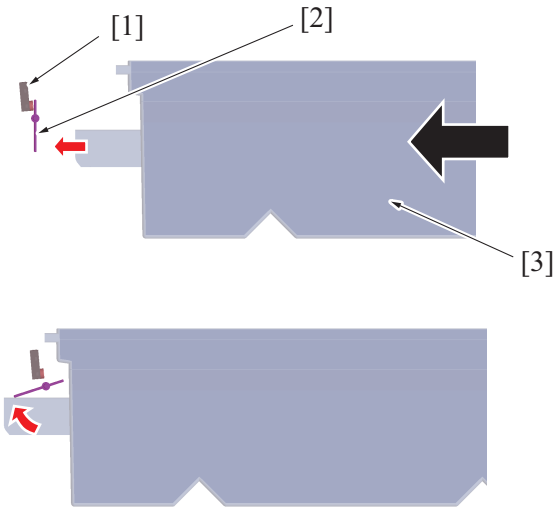
- The punch unit has the sensor to detect the punch dust full at the front side (emission) and the back side (receiving). The sensor detects the status of the punch dust.
- A state that the punch dust box is full is determined when enough punch dust accumulates in the punch dust box to block the sensor light.
- A message is displayed on the control panel to indicate a "punch dust full" condition when a punch dust box full is detected.



[1]	Punch dust full sensor/in (PS5)	[2]	Punch dust full sensor/out (PS4)
[3]	Punch dust box	-	-

10.3.5 Punch dust box installation detection mechanism

- The actuator blocks the sensor light on the punch dust full sensor/in side when the punch dust box is not installed.
- The "Punch dust box full" warning appears on the control panel when the punch function is configured while the punch dust box is not installed.
- With the punch dust box being installed, the actuator is pressed and moved to a position where the sensor light is not blocked.
- This operation is used to determine the installation state of the punch dust box.



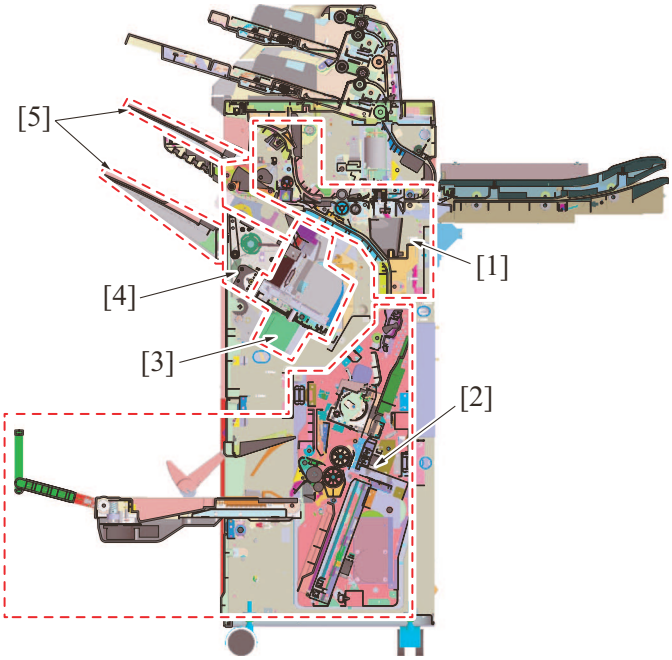
[1]	Punch dust full sensor/in (PS5)	[2]	Actuator

[3]	Punch dust box	-	-

PL THEORY OF OPERATION FS-537/FS-537SD/RU-513/PK-523/JS-602/PI-507/ZU-609

1. Section configuration

- For the FS-537 model, the horizontal transport section, transport section, alignment section, output tray (main tray/sub tray), and stapler section are all integrated.
- The FS-537SD is the model of a finisher that the saddle section is added to FS-537.

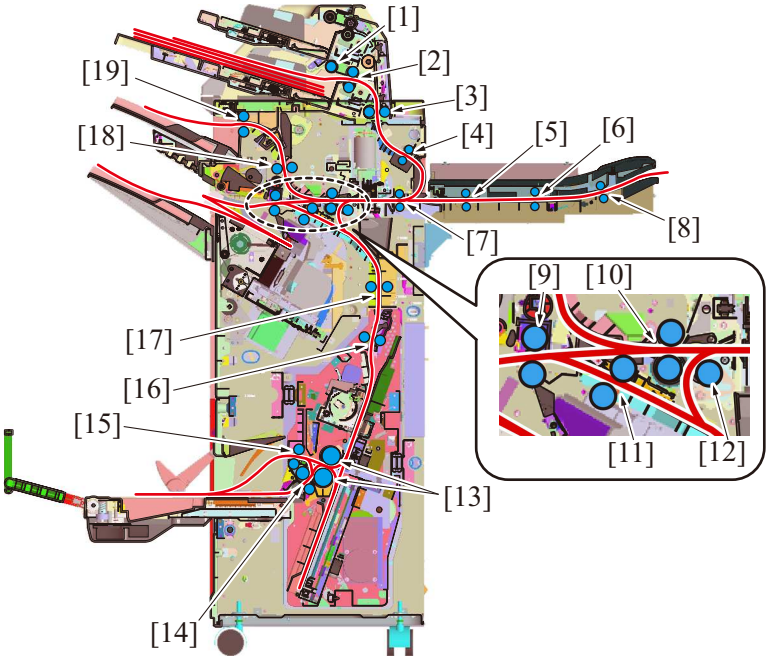


[1]	Transport section	[2]	Saddle section
[3]	Stapler section	[4]	Alignment section
[5]	Exit tray	-	-

2. PAPER PATH

2.1 Paper path (FS-537SD/PK-523/ZU-609/PI-507)

FS-537SD/PK-523/ZU-609/PI-507 is installed

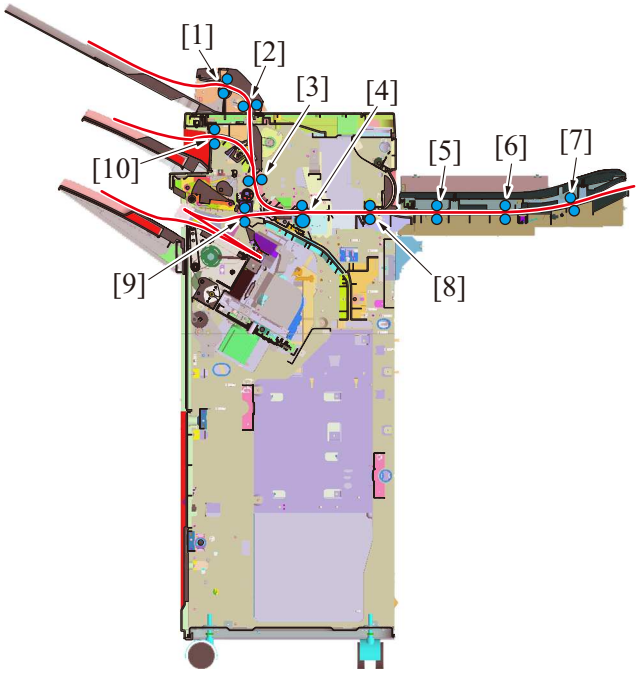


[1]	Pick-up roller/Lw (post inserter) *	[2]	Paper feed roller/Lw, separation roller/Lw (post inserter) *
[3]	Transport roller, transport roll (post inserter) *	[4]	PI transport roller, PI transport roll
[5]	RU transport roller 3, transport roll 3 (relay unit) *	[6]	RU transport roller 2, transport roll 2 (relay unit) *
[7]	FNS entry roller, roll	[8]	RU transport roller 1, transport roll 1 (relay unit) *
[9]	Receiving roller, Receiving roll	[10]	Transport roller 1/transport roller 2
[11]	Saddle section exit roller 1, roll	[12]	Z-fold roller (Z folding unit)
[13]	Center folding roller	[14]	Tri-folding roller, roll
[15]	Saddle tray exit roller, roll	[16]	Saddle section paper feed roller, roll
[17]	Saddle section exit roller 2, roll	[18]	Sub tray transport roller, roll
[19]	Sub tray exit roller, roll	-	-

- * : Option

2.2 Paper path (FS-537/JS-602)

FS-537/JS-602 is installed



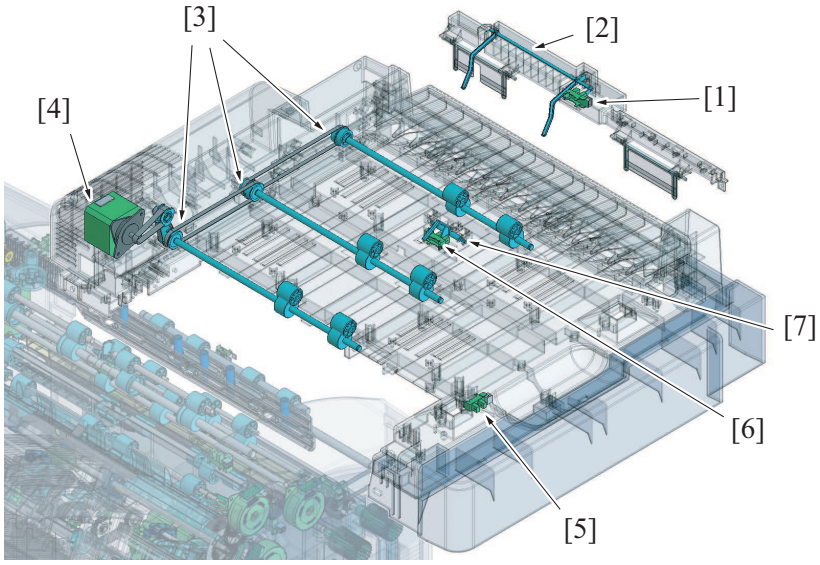
[1]	Job separator exit roller, roll (job separator) *	[2]	Job separator transport roller, roll (job separator) *
[3]	Sub tray transport roller, roll	[4]	Transport roller 1/transport roller 2
[5]	RU transport roller 3, transport roll 3 (relay unit) *	[6]	RU transport roller 2, transport roll 2 (relay unit) *
[7]	RU transport roller 1, transport roll 1 (relay unit) *	[8]	FNS entry roller, roll
[9]	Receiving roller, Receiving roll	[10]	Sub tray exit roller, roll

- * : Option

3. RU-513

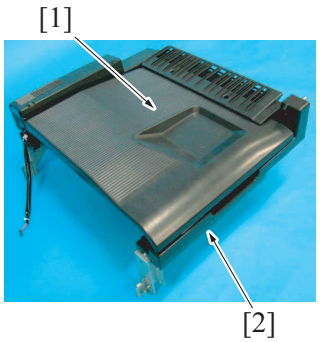
3.1 Configuration

- The RU section (horizontal transport section) transfers paper that is fed out from the MFP paper exit section to an optional finisher paper feed section.
- The RU door is installed at the upper part of the RU section. Access to the horizontal transport roller is enabled by opening the door upward. To be used for periodical cleaning of the roller and dealing with the paper misfeed at the RU section and other necessary operations.



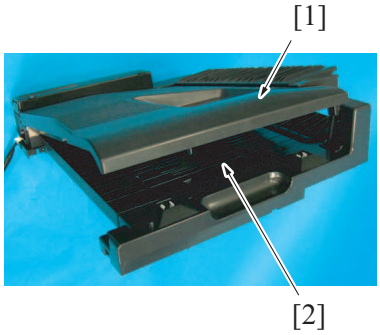
[1]	3rd exit tray full sensor (PS1): Exit section of MFP	[2]	3rd exit tray full sensor actuator: Exit section of MFP
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

3rd tray on the RU section



[1]	3rd tray	[2]	Relay unit RU-513

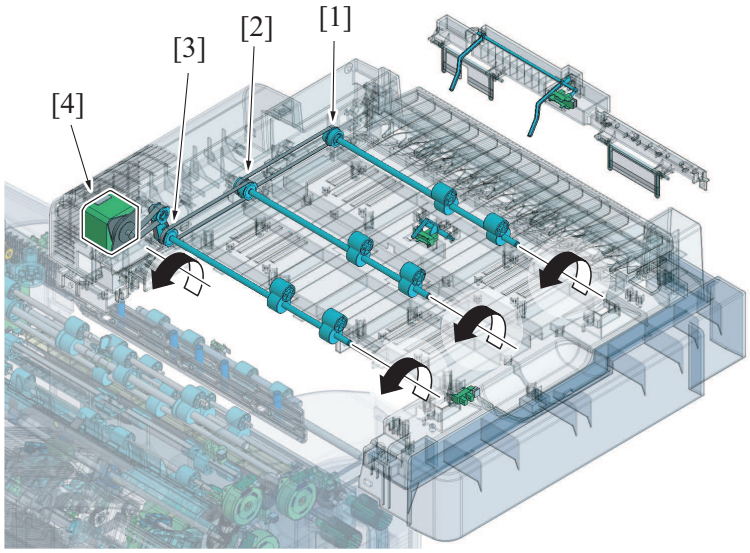
RU section door is opened



[1]	RU section door	[2]	Horizontal transport section

3.2 Drive

- The RU transport motor drives the RU section. It drives three RU section horizontal transport roller.
- The RU section horizontal transport roller is driven using the drive belt.



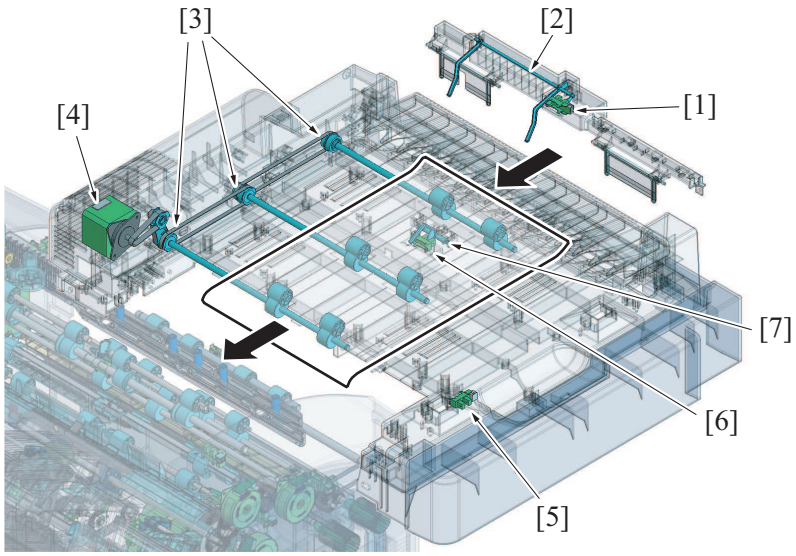
[1]	RU section horizontal transport roller/1	[2]	RU section horizontal transport roller/2
[3]	RU section horizontal transport roller/3	[4]	RU transport motor (M1)

3.3 Operation

3.3.1 Paper transport control

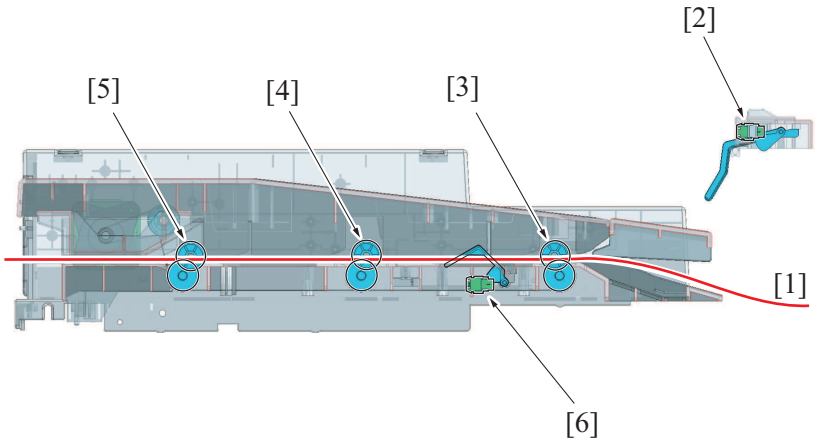
- It transports the paper that is discharged from the lower exit of the MFP paper exit section, to the RU section with the feed guide.
- It transports the paper to the FNS section, using three RU section horizontal transport rollers.
- The RU entrance sensor actuator is installed downstream of the paper path of the RU section horizontal transport roller/1, and the RU entrance sensor detects the paper transportation status.

Perspective view



[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator
[3]	RU section horizontal transport roller	[4]	RU transport motor (M1)
[5]	RU cover open/close detection sensor (PS3)	[6]	RU entrance sensor (PS2)
[7]	RU entrance sensor actuator	-	-

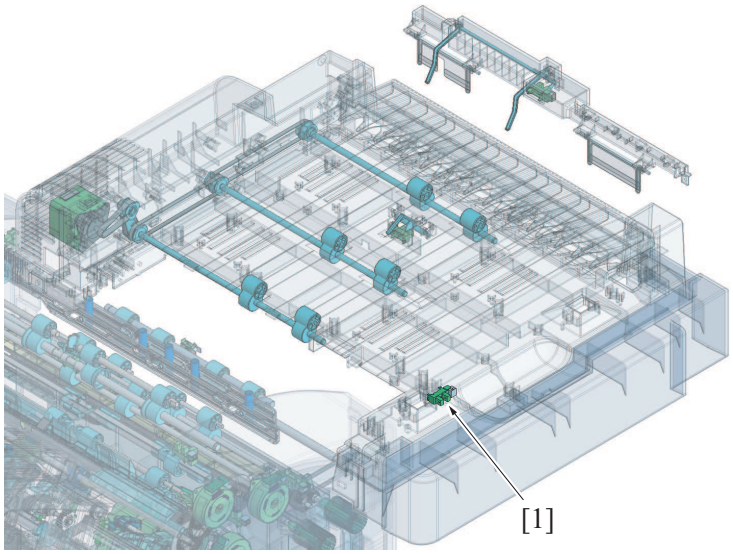
Front view



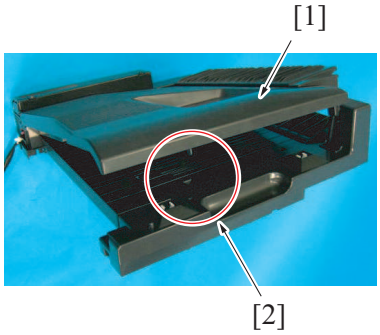
[1]	Paper	[2]	3rd exit tray full sensor (PS1)
[3]	RU section horizontal transport roller/1	[4]	RU section horizontal transport roller/2
[5]	RU section horizontal transport roller/3	[6]	RU entrance sensor (PS2)

3.3.2 RU section door open/close detection mechanism

- The RU cover open/close detection sensor installed at the front left of the RU section, detects open/close of the RU door.
- Opening the RU door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



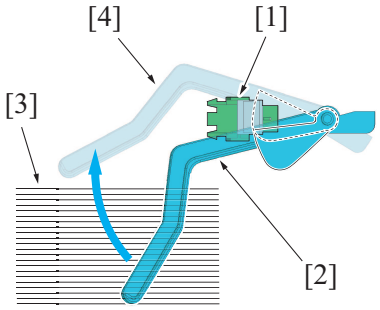
[1]	RU cover open/close detection sensor (PS3)	-	-



[1]	RU door	[2]	RU cover open/close detection sensor (PS3)

3.3.3 3rd exit tray full detection mechanism

- When a predetermined quantity of paper is discharged to the 3rd exit tray, the 3rd exit tray full sensor actuator will be pushed up by the discharged paper. When the actuator is pushed up to the predetermined position, the 3rd exit tray full sensor will be blocked by the actuator to detect the exit tray full.
- The 3rd tray full is detected, the warning screen will display on the control panel. All setting operations and jobs will be disabled when the warning message is displayed on the screen. The warning screen will be released by removing the paper on the 3rd exit tray.



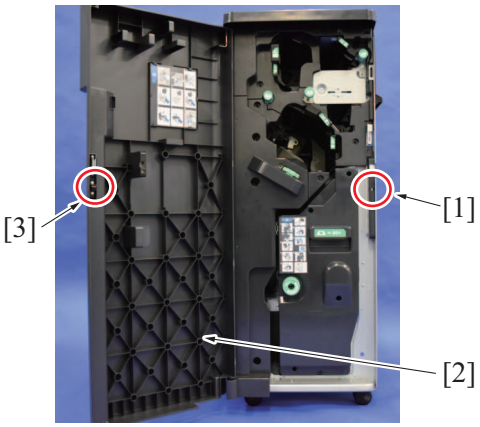
[1]	3rd exit tray full sensor (PS1)	[2]	3rd exit tray full sensor actuator (no paper)
[3]	Paper	[4]	3rd exit tray full sensor actuator (exit tray full)

4. FINISHER SECTION

4.1 Door open/close detection mechanism

4.1.1 Front door open/close detection mechanism

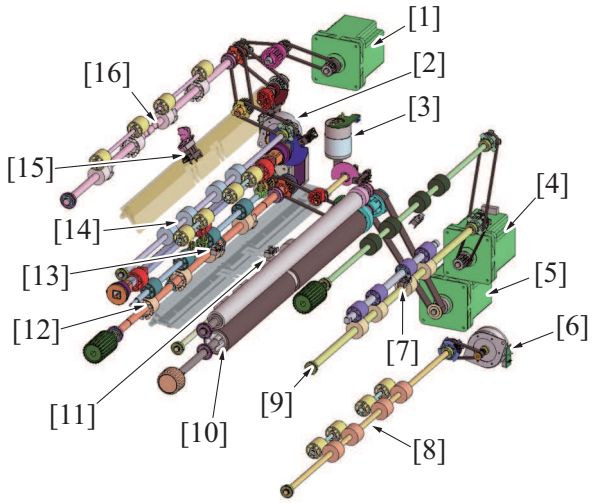
- The front door open detect switch installed at the front right of the FNS section detects open/close of the finisher's front door.
- Open the front door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Front door open detect switch (SW1)	[2]	Front door
[3]	Front door open/close detection lever	-	-

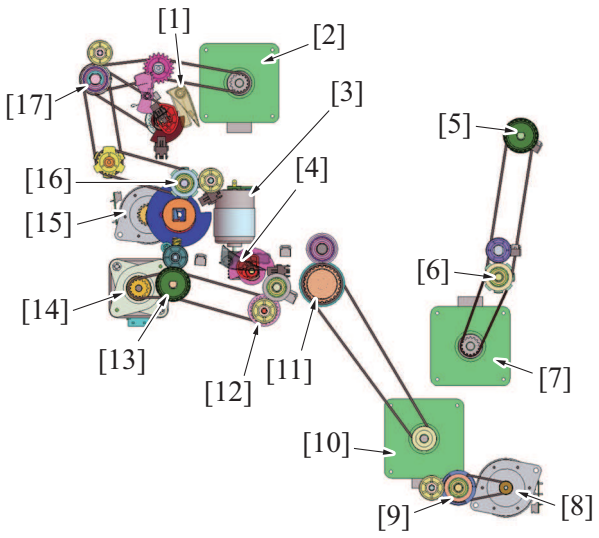
5. TRANSPORT SECTION

5.1 Configuration



[1]	Sub tray discharge motor (M18)	[2]	Receiving roller retraction motor (M10)
[3]	Route change gate motor (M4)	[4]	FNS entry transport motor (M20)
[5]	ZU discharge motor (M21)	[6]	SD discharge motor (M16)
[7]	FNS entrance sensor (PS34)	[8]	Saddle section exit roller 2
[9]	FNS entrance roller	[10]	Transport roller 2
[11]	FNS middle sensor (PS36)	[12]	Receiving roller
[13]	Main tray exit sensor (PS37)	[14]	Saddle section exit roller 1
[15]	Sub tray exit sensor (PS24)	[16]	Sub tray exit roller

5.2 Drive

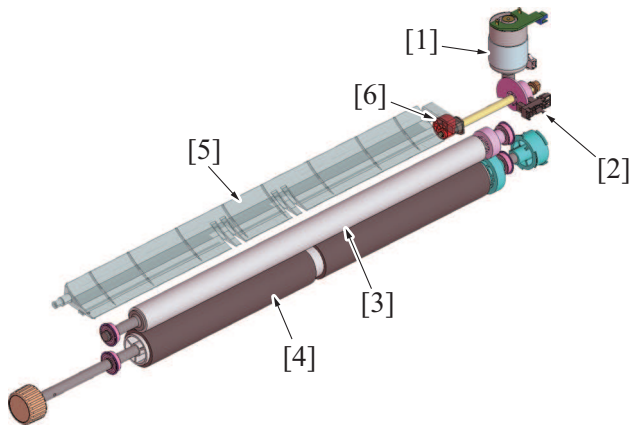


[1]	Sub tray/JS route change gate	[2]	Sub tray discharge motor (M18)
[3]	Route change gate motor (M4)	[4]	Route change gate
[5]	PI transport roller	[6]	FNS entrance roller
[7]	FNS entry transport motor (M20)	[8]	SD discharge motor (M16)
[9]	Saddle section exit roller 2	[10]	ZU discharge motor (M21)
[11]	Transport roller 2	[12]	Saddle section exit roller 1
[13]	Receiving roller	[14]	FNS discharge motor (M17)
[15]	Receiving roller retraction motor (M10)	[16]	Sub tray transport roller
[17]	Sub tray exit roller	-	-

5.3 Operation

5.3.1 Route change gate

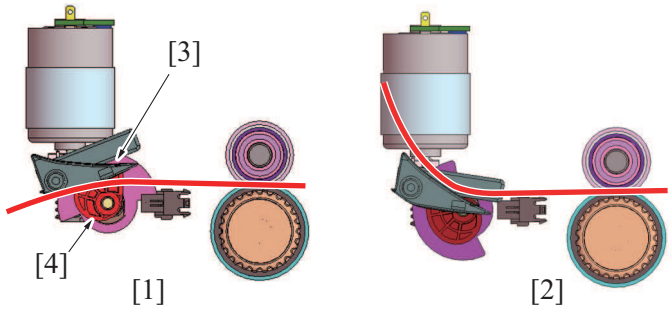
- The route change gate switches the paper transport path between the main tray and the sub tray.
- The route change gate motor drives to move the route change gate vertically to switch between the paper paths.
- The route change gate home sensor detects the vertical position of the route change gate.



[1]	Route change gate motor (M4)	[2]	Route change gate home sensor (PS21)
[3]	Transport roller 1	[4]	Transport roller 2
[5]	Route change gate	[6]	Cam

(1) Route change gate operation

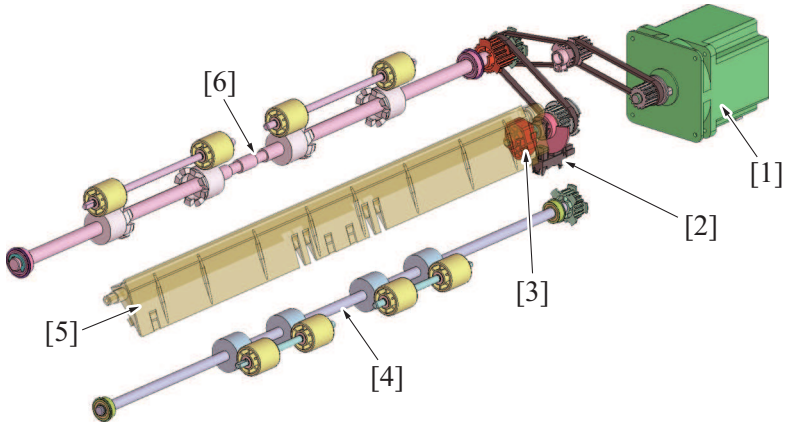
- The cam rotates when the route change gate motor is driving.
- Rotation of the cam moves the route change gate vertically to switch the paper path between the main tray and sub tray.



[1]	Main tray output	[2]	Sub tray output
[3]	Route change gate	[4]	Cam

5.3.2 Sub tray/JS route change gate

- The sub tray/JS route change gate switches the path for transporting paper to either the sub tray or the optional job separator (JS-602).
- The sub tray discharge motor drives to move the sub tray/JS route change gate horizontally to switch between the paper paths.
- The sub tray/JS route change gate home sensor detects the horizontal position of the sub tray/JS route change gate.

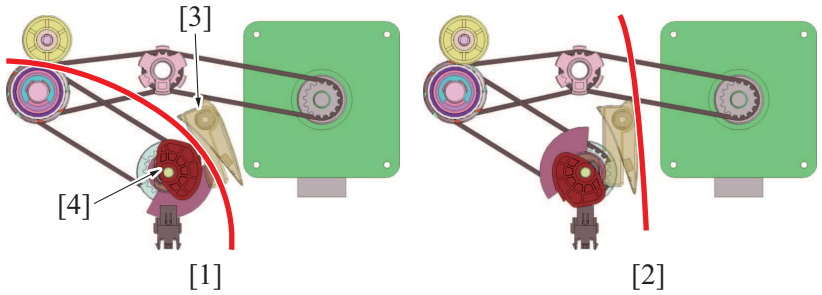


[1]	Sub tray discharge motor (M18)	[2]	Sub tray/JS route change gate home sensor (PS23)
[3]	Cam	[4]	Sub tray transport roller

[5]	Sub tray/JS route change gate	[6]	Sub tray section exit roller

(1) Sub tray/JS route change gate operation

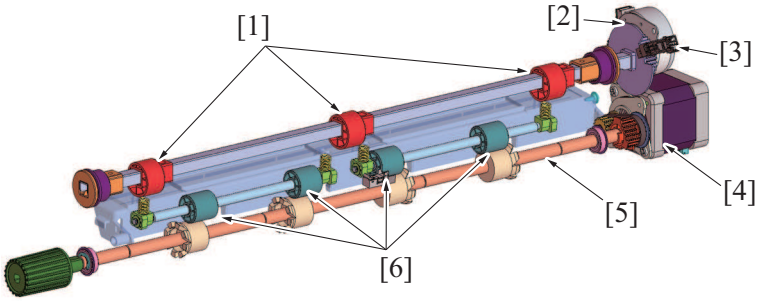
- The cam rotates when the sub tray discharge motor is driving.
- The cam rotates to move the sub tray/JS route change gate horizontally to switch the paper paths between the sub tray and the job separator.
- The sub tray discharge motor drives the sub tray section exit roller. The forward and reverse rotation of the sub tray discharge motor switches between discharging to the sub tray and driving the sub tray/JS route changing gate.



[1]	Sub tray output	[2]	Job separator output
[3]	Sub tray/JS route change gate	[4]	Cam

5.3.3 Receiving roller section up/down function

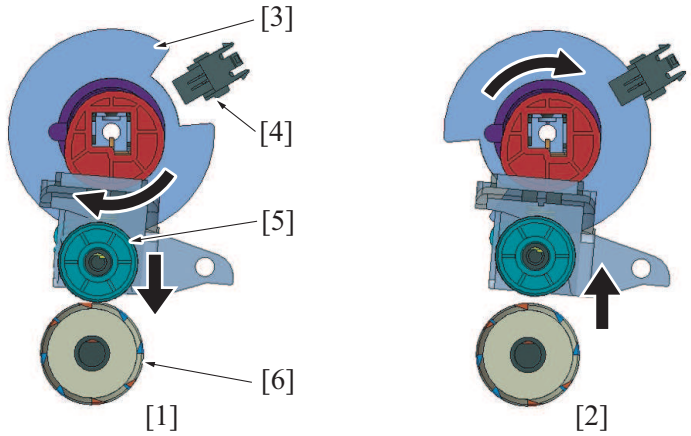
- The up/down movement of the receiving cam switches the timing of transporting the paper to the alignment section.
- The up/down operations of the receiving cam are driven by the receiving roller retraction motor.
- The position of the receiving cam is detected by the receiving roller retraction sensor.
- The cam rotates to raise or lower the receiving roll to pressure and release the receiving roller.



[1]	Receiving com	[2]	Receiving roller retraction motor (M10)
[3]	Receiving roller retraction sensor (PS22)	[4]	FNS discharge motor (M17)
[5]	Receiving roller	[6]	Receiving roll

(1) Receiving roller pressure and release

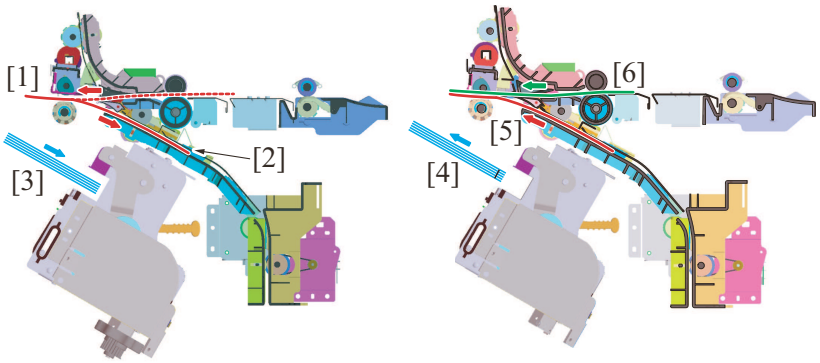
- When the receiving roll is pressed against the receiving roller, paper is transported to the alignment section by the receiving roller.
- When the receiving roll is released from the receiving roller, paper is in a standby state along the transport path.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the receiving roller retraction sensor. Thus, the position of the receiving roll can be determined.
- The receiving roll is determined to be pressing against the receiving roller when the receiving roller retraction sensor is unblocked. The receiving roll is determined to be in the release state when the sensor is blocked.



[1]	Receiving roller pressure	[2]	Receiving roller release
[3]	Cam (detection plate)	[4]	Receiving roller retraction sensor (PS22)
[5]	Receiving roll	[6]	Receiving roller

5.3.4 Buffer control

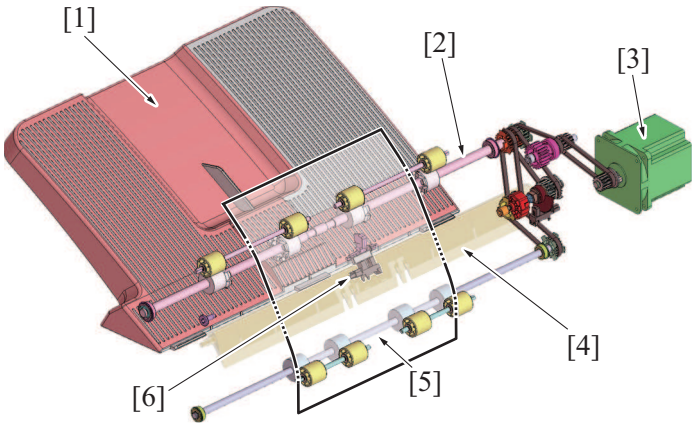
- The receiving roller section up/down mechanism is provided to achieve high productivity, by eliminating the time loss for the next sheet of paper during the offset and staple operations.
- This allows handling a print job without reducing the paper transport speed even under the condition where the preceding sets of sheets are being aligned and stapled.
- The first sheet of paper that is transported during the paper sheets alignment is switched back toward the saddle exit direction temporarily.
- After paper sheets are aligned and discharged, the first sheet of paper is transported together with the arrived second sheet to the alignment section.



[1]	First sheet	[2]	First sheet (switchback)
[3]	Sheets (transported to the alignment section)	[4]	Aligned paper sheets
[5]	First sheet	[6]	Second sheet

5.3.5 Sub tray output

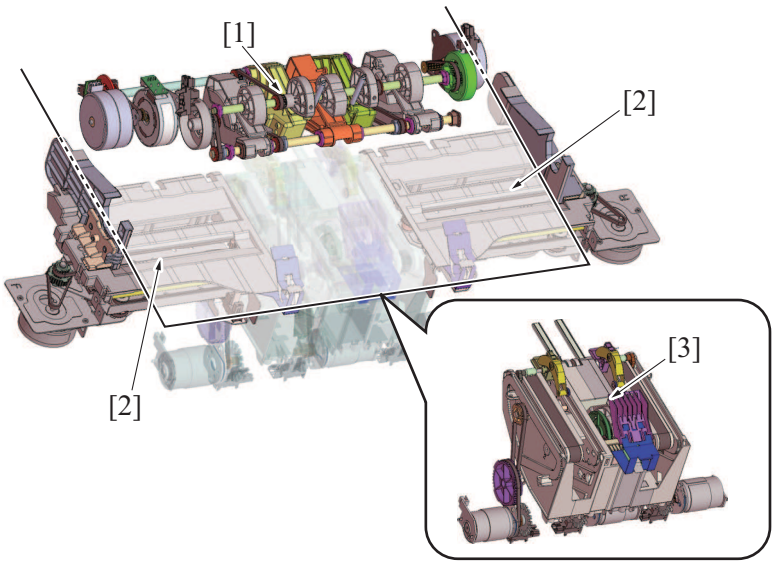
- The sub tray by the sub tray section exit roller and sub tray transport roller drive to discharge paper that is transported with the sub tray/JS route changing gate to the sub tray.
- The sub tray discharge motor drives the sub tray section roller and sub tray transport roller.



[1]	Sub tray	[2]	Sub tray exit roller
[3]	Sub tray discharge motor (M18)	[4]	Sub tray/JS route change gate
[5]	Sub tray transport roller	[6]	Sub tray exit sensor (PS24)

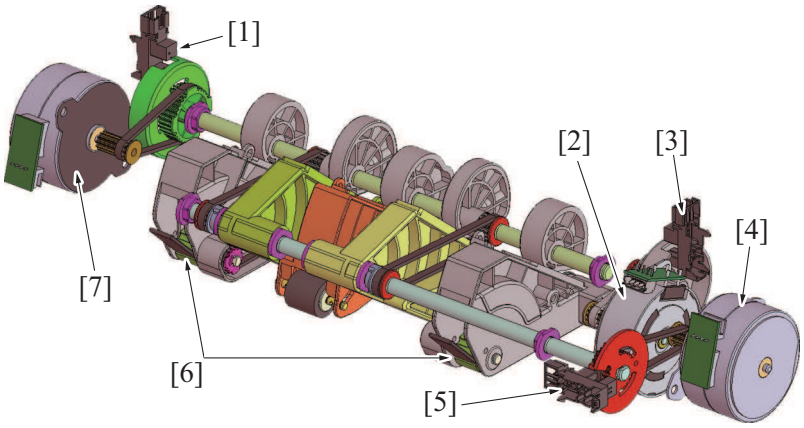
6. ALIGNMENT SECTION

6.1 Configuration



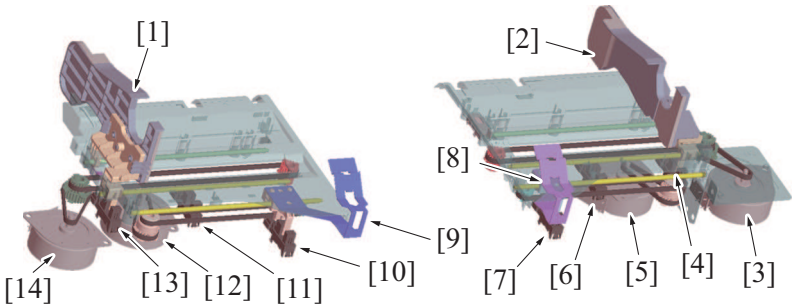
[1]	Upper paddle section	[2]	Alignment plate
[3]	Exit section	-	-

6.1.1 Upper paddle section



[1]	Paddle up/down home sensor (PS27)	[2]	FNS paddle motor (M9)
[3]	Paddle home sensor (PS25)	[4]	Arm drive motor (M8)
[5]	Arm home position sensor (PS26)	[6]	Upper paddle
[7]	Paddle up/down motor (M7)	-	-

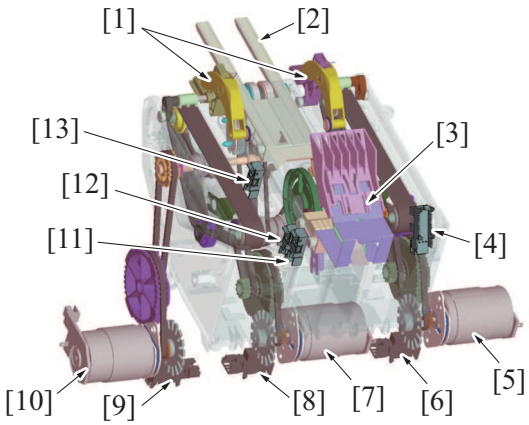
6.1.2 Alignment plate



[1]	Alignment plate/F	[2]	Alignment plate/R
[3]	Alignment motor/rear (M13)	[4]	Alignment plate/R home sensor (PS6)
[5]	Trail edge stopper motor/R (M11)	[6]	Alignment plate/R position sensor (center) (PS5)
[7]	Trail edge stopper sensor/R (PS7)	[8]	Trailing edge stopper /R

[9]	Trailing edge stopper /F	[10]	Trail edge stopper sensor/F (PS10)
[11]	Alignment plate/F position sensor (center) (PS8)	[12]	Trail edge stopper motor/F (M12)
[13]	Alignment plate/F home sensor (PS9)	[14]	Alignment motor/front (M14)

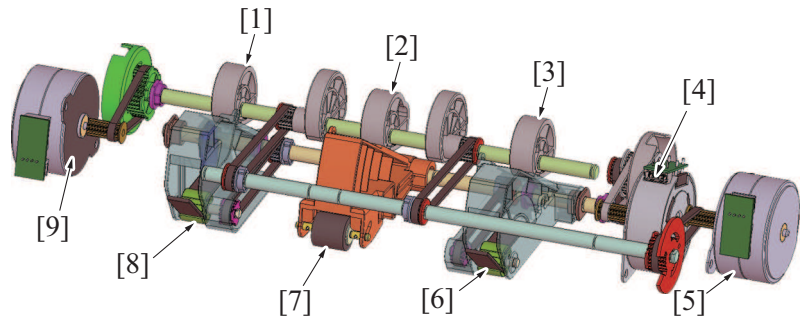
6.1.3 Exit section



[1]	Gripper	[2]	Stack support plate
[3]	Trailing edge stopper/C	[4]	Gripper home position sensor (PS3)
[5]	Pre-eject drive motor (M2)	[6]	Pre-eject encoder sensor (PS2)
[7]	Stacker plate drive motor (M3)	[8]	Stacker plate encoder sensor (PS4)
[9]	Gripper motor sensor (PS1)	[10]	Bundle eject motor (M1)
[11]	Trail edge stopper home sensor (PS31)	[12]	Stacker plate home sensor (PS30)
[13]	Stacker plate position sensor (PS29)	-	-

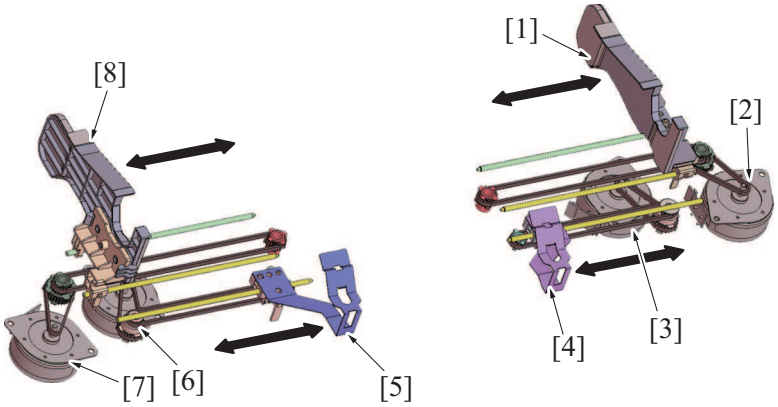
6.2 Drive

6.2.1 Upper paddle



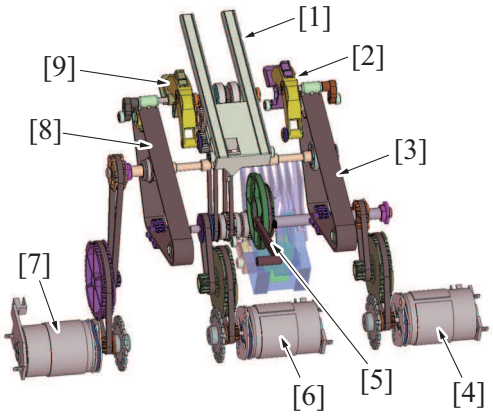
[1]	Paddle press cam	[2]	Paper press cam
[3]	Paddle press cam	[4]	FNS paddle motor (M9)
[5]	Arm drive motor (M8)	[6]	Upper paddle
[7]	Paper press roll	[8]	Upper paddle
[9]	Paddle up/down motor (M7)	-	-

6.2.2 Alignment plate



[1]	Alignment plate/R	[2]	Alignment motor/rear (M13)
[3]	Trail edge stopper motor/R (M11)	[4]	Trailing edge stopper /R
[5]	Trailing edge stopper/F	[6]	Trail edge stopper motor/F (M12)
[7]	Alignment motor/front (M14)	[8]	Alignment plate/F

6.2.3 Exit section



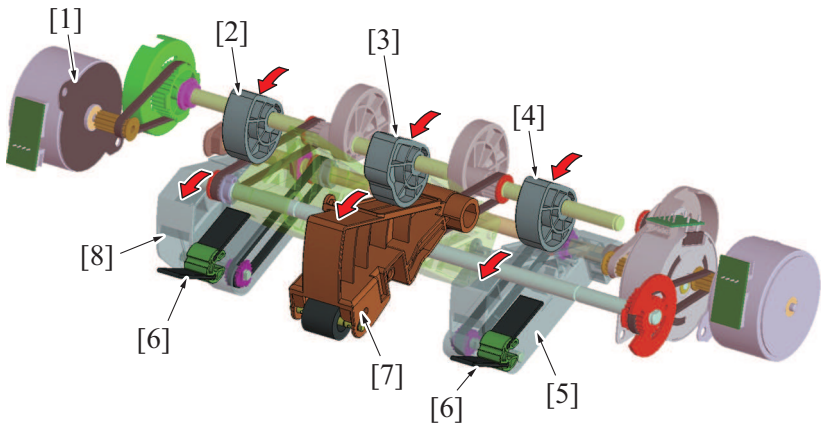
[1]	Stack support plate	[2]	Gripper
[3]	Gripper drive belt	[4]	Pre-eject drive motor (M2)
[5]	Trailing edge stopper/C drive arm	[6]	Stacker plate drive motor (M3)
[7]	Bundle eject motor (M1)	[8]	Gripper drive belt
[9]	Gripper	-	-

6.3 Operation

6.3.1 Upper paddle

(1) Upper paddle control

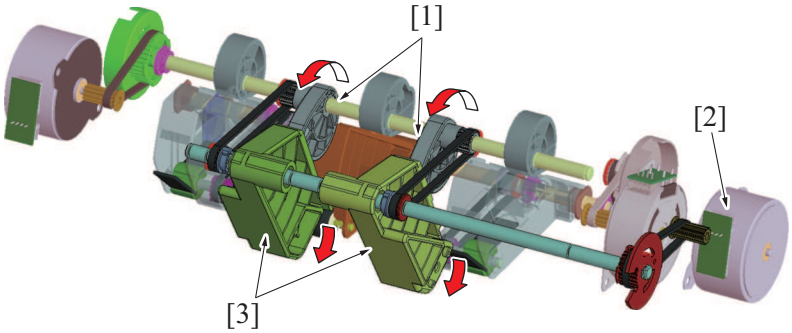
- Paper that has been transported from the finisher is transported to the alignment section.
- Transported paper is temporarily stored in the alignment section due to gravity-induced dropping. However, the paper press guide and upper paddle are driven to reliably transport paper to the alignment section.
- Paddle up/down motor drive rotates the paper press cam and paddle press cam to lower the paper press guide and the upper paddle assy.
- After the upper paddle assy is lowered, the FNS paddle motor is driven to rotate the upper paddle.
- The vertical motion is repeated for each sheet of paper to transport paper to the alignment section.



[1]	Paddle up/down motor (M7)	[2]	Paddle press cam
[3]	Paper press cam	[4]	Paddle press cam
[5]	Upper paddle assy	[6]	Upper paddle
[7]	Paper press guide	[8]	Upper paddle assy

(2) Trailing edge paper press control

- A trailing edge paper press guide is also provided in addition to the paper press guide and the upper paddle assy.
- This component is used to reliably lower the trailing edge of transported paper to the alignment section.
- The arm drive motor drives to rotate the belt and the trailing edge paper press cam.
- Cam rotation lowers the trailing edge paper press guide.

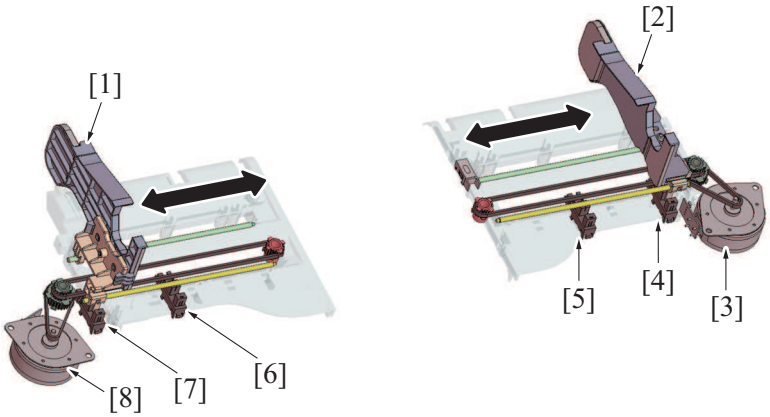


[1]	Trailing edge paper press cam	[2]	Arm drive motor (M8)
[3]	Trailing edge paper press guide	-	-

6.3.2 Alignment plate

(1) Alignment plate

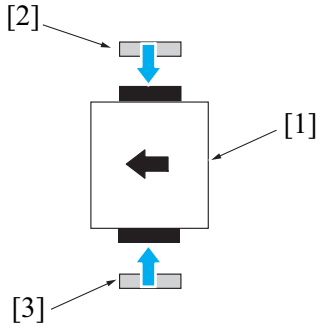
- The alignment plate/F and alignment plate/R align the paper in the width orientation and shift paper sheets.
- The alignment motor and drive belt drives the alignment plates.
- The alignment plates operate by the forward and reverse rotation of the alignment motor.
- Alignment plate/F and alignment plate/R are each equipped with a drive motor, which allows them to operate independently.



[1]	Alignment plate/F	[2]	Alignment plate/R
[3]	Alignment motor/rear (M13)	[4]	Alignment plate/R home sensor (PS6)
[5]	Alignment plate/R position sensor (center) (PS5)	[6]	Alignment plate/F position sensor (center) (PS8)
[7]	Alignment plate/F home sensor (PS9)	[8]	Alignment motor/front (M14)

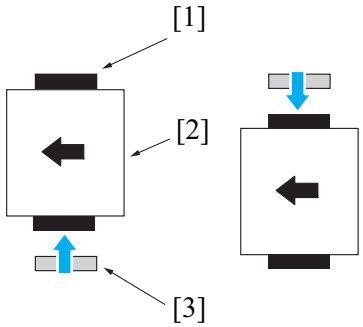
(a) Alignment operation

- The alignment motor/front rotates to move the alignment plate/F via the alignment plate/F drive belt.
- The alignment plate/F home sensor detects the home position of the alignment plate/F.
- The alignment motor/rear rotates to move the alignment plate/R via the alignment plate/R drive belt.
- The alignment plate/R home sensor detects the home position of the alignment plate/R.
- The sheets are placed between the alignment plates/F and /R corresponding to the paper width so that their both ends are aligned.



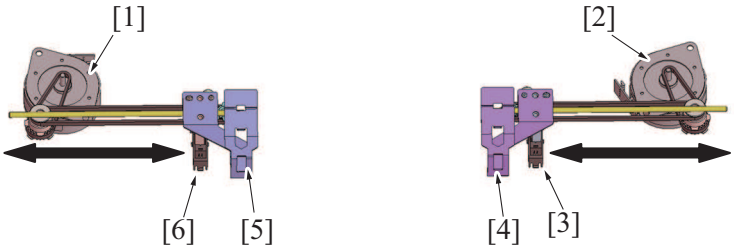
(b) Shift operation

- When offset is selected as finishing option, the alignment plates are moved to shift the sets of paper. Paper is discharged to the center of the main tray at normal printing and stapling.
- Depending on the width of paper, the alignment plate/F (alignment plate/R) pushes the sets of paper to the rear side (front side) from one side so that the sets of the paper are shifted.
- The sheets are shifted by alternatively repeating the above operation.



(2) Trailing edge stopper

- The trailing edge stopper/F and trailing edge stopper/R align paper in the feed orientation.
- The trailing edge stopper motor drives the trailing edge stoppers.
- Trailing edge stopper/F and the trailing edge stopper/R shift according to the paper width before starting a job, to hold the trailing edge of the paper.
- For 2-point staple jobs, the trailing edge stoppers/F and /R are retracted to the position where they do not interfere with the stapler.
- After the job is completed, the trailing edge stopper motor reverses the rotation to return the trailing edge stopper to the home position.

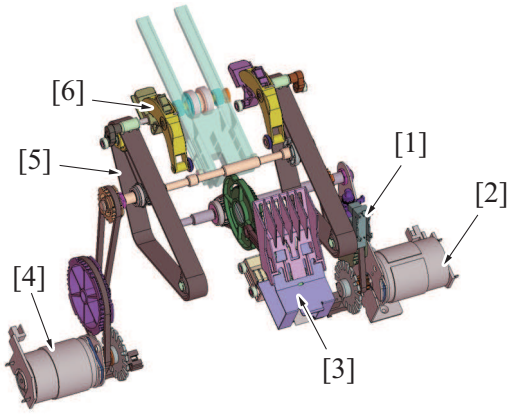


[1]	Trail edge stopper motor/F (M12)	[2]	Trail edge stopper motor/R (M11)
[3]	Trail edge stopper sensor/R (PS7)	[4]	Trailing edge stopper /R
[5]	Trailing edge stopper/F	[6]	Trail edge stopper sensor/F (PS10)

6.3.3 Exit section

- The trailing edge stopper/C and gripper discharge paper that is processed with the alignment plates, to the output tray.
- The gripper grips the trailing edges of the paper sheets in the alignment tray and transports them to the paper exit position.

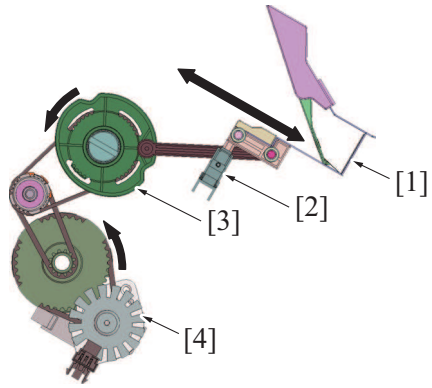
- The gripper releases the sets of paper to discharge them to the main tray. The gripper is moved to the home position and brought into a standby state.
- At the same time, the trailing edge stopper/C presses the trailing edge of paper in the alignment tray.



[1]	Gripper home position sensor (PS3)	[2]	Pre-eject drive motor (M2)
[3]	Trailing edge stopper/C	[4]	Bundle eject motor (M1)
[5]	Paper transport belt	[6]	Gripper

(1) Trailing edge stopper/C operation

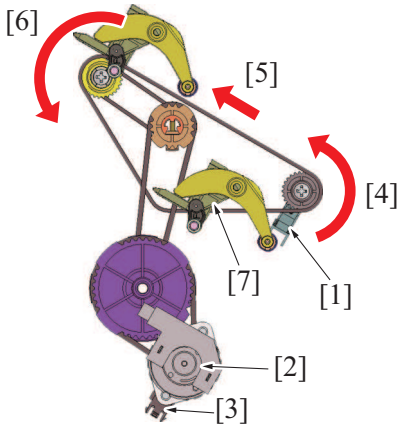
- When the pre-eject drive motor rotates, the trailing edge stopper moves from the home position to the paper exit position to discharge paper to the main tray.
- When the drive gear makes a turn, the stopper moves from the paper exit position to the home position and is brought into a standby state.
- The trailing edge home position detection sensor detects the home position.



[1]	Trailing edge stopper/C	[2]	Trail edge stopper home sensor (PS31)
[3]	Drive gear	[4]	Pre-eject drive motor (M2)

(2) Gripper operation

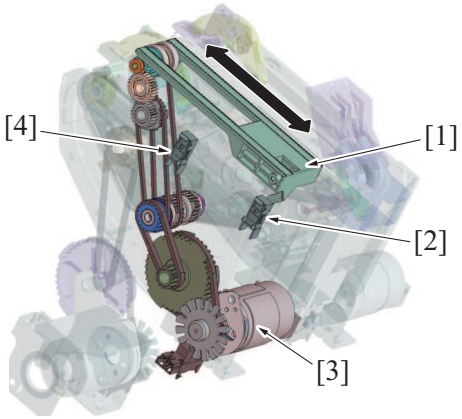
- The bundle eject motor rotates to turn the paper transport belt. It rotates the gripper that has been fixed to the paper transport belt.
- The gripper home position sensor detects the home position of the gripper.
- The gripper stays at the home position. It rotates at the position [4] shown in the illustration to grip the trailing edge of paper and transport the paper while keeping the state [5]. The gripper rotates at the position [6] in the illustration to release the paper. When the paper transport belt makes a turn, the gripper returns to the home position [7] and is brought into a standby state.



[1]	Gripper home position sensor (PS3)	[2]	Bundle eject motor (M1)
[3]	Gripper motor sensor (PS1)	[4]	Gripper position (gripping the paper)
[5]	Gripper position (transporting the paper)	[6]	Gripper position (release the paper)
[7]	Gripper home position	-	-

6.3.4 Stack support plate control

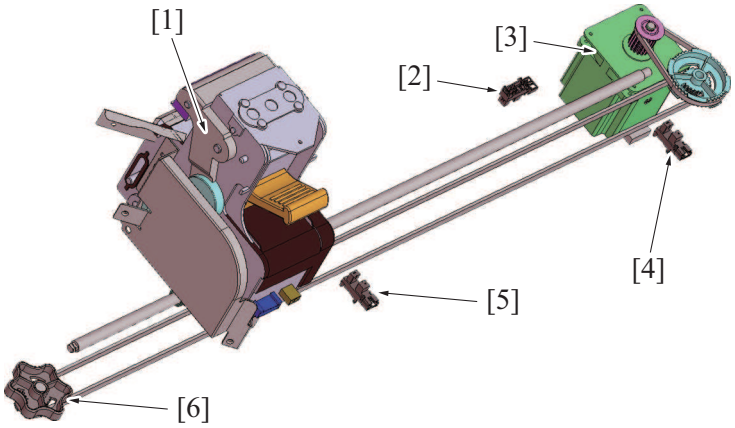
- When the paper is transported to the alignment section, the paper may go off the alignment tray depending on the paper size or the printing direction which may cause the paper to be misaligned.
- In order to prevent the paper from being off the alignment tray, the stack support plate is installed.
- The stacker plate drive motor drives to protract the stacker plate via a gear.
- When the specified period of time has passed after the process above is finished, the stacker plate drive motor is driven to retract the stack support plate.
- The stacker plate home sensor detects the home position of the stacker support plate. The stacker plate position sensor detects the upper limit position of the stacker support plate.



[1]	Stack support plate	[2]	Stacker plate home sensor (PS30)
[3]	Stacker plate drive motor (M3)	[4]	Stacker plate position sensor (PS29)

7. STAPLER SECTION

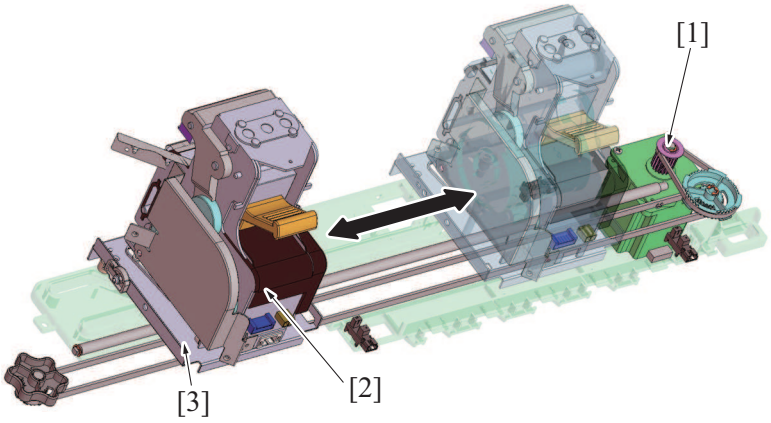
7.1 Configuration



[1]	Stapler unit	[2]	Stapler home position sensor (corner) (PS18)
[3]	Stapler movement motor (M19)	[4]	Stapler home position sensor (rear) (PS19)
[5]	Stapler position sensor (center) (PS20)	[6]	Stapler move dial

7.2 Drive

- Rotation of the stapler movement motor drives the belt, and moves the stapler holder that is attached to the belt back and forth along the shaft.
- The staple unit moves to the stapler home position, the staple cartridge replacement, or the corner staple position.

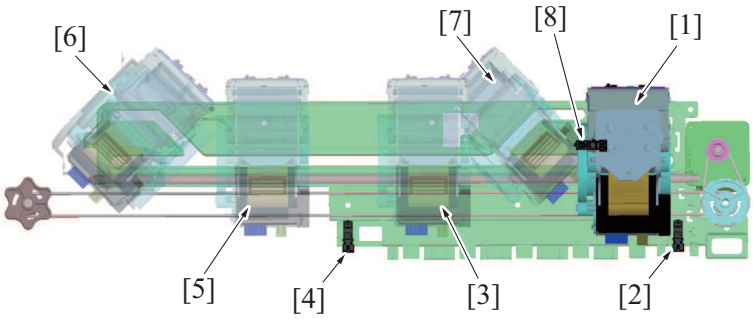


[1]	Stapler movement motor (M19)	[2]	Stapler unit
[3]	Stapler holder	-	-

7.3 Operation

7.3.1 Stapler position detection

- The home position of the stapler is detected by the stapler home position sensor (rear).
- The stapler's staple position is detected by the amount of motor rotation provided by the stapler home position sensor (rear) and stapler position sensor (center).
- The staple cartridge replacement position is detected depending on the amount of stapler movement motor rotation that is based on the stapler position sensor (center).

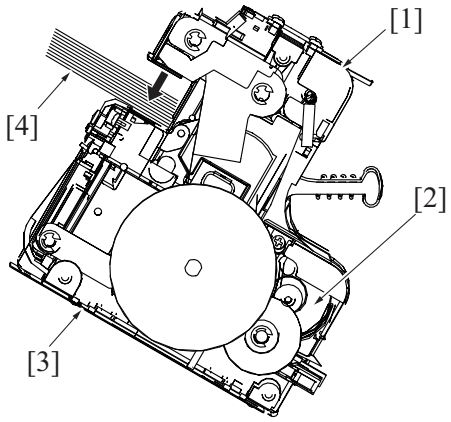


[1]	Stapler unit (home position)	[2]	Stapler home position sensor (rear) (PS19)

[3]	Stapler unit (2-staple position)	[4]	Stapler position sensor (center) (PS20)
[5]	Stapler unit (2-staple position)	[6]	Stapler unit (staple cartridge replacement position)
[7]	Stapler unit (diagonal binding position)	[8]	Stapler home position sensor (corner) (PS18)

7.3.2 Staple control

- The stapling operation is performed by the stapler motor.
- In the stapling operation, the stapler motor drives the clincher side to press the paper. Then, the staple is pushed out from the stapler side and bent at the clincher side.



[1]	Stapler (clincher side)	[2]	Stapler motor (M5)
[3]	Stapler (stapler side)	[4]	Paper

(1) Stapling operation

- After completing the alignment operation of the alignment plate, the stapler motor performs the stapling operation.
- The stapling operation is completed when the stapler position sensor in the stapler detects the home position and turn ON.

(2) Clogged staple detection

- During stapling operation, staple clogging is determined if the stapler position sensor does not turn ON after a specified period of time since it turns OFF. Thus, the stapler motor stops.

(3) Cartridge detection

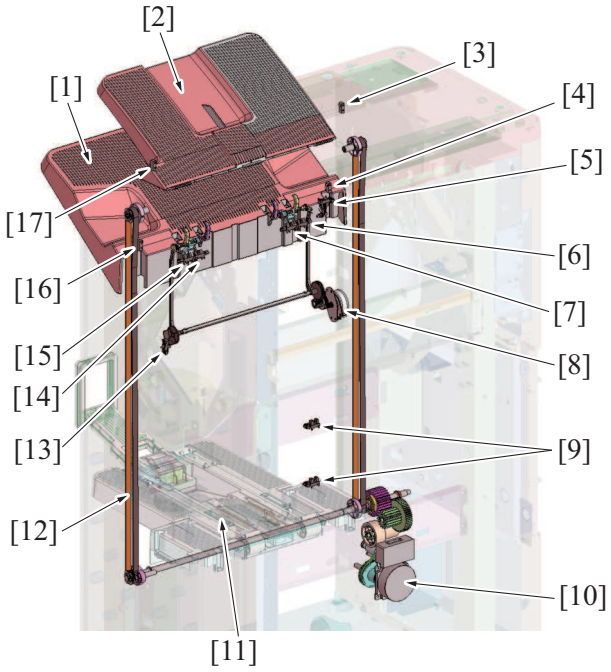
- The staple empty detect sensor in the staple detects the presence of a cartridge or the incorrect setting of a cartridge.
- When no cartridge is set or it is set incorrectly, the main body displays the error message on its display panel.

(4) Staple detection control

- When the staples run out, the self-priming sensor turns ON and the main body displays the error message on its display panel.

8. OUTPUT TRAY SECTION

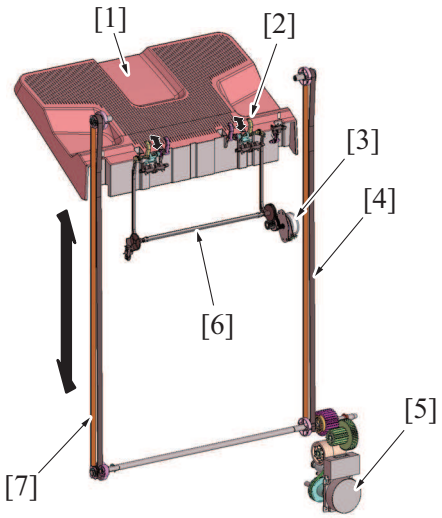
8.1 Configuration



[1]	Main tray	[2]	Sub tray
[3]	Sub tray full detection sensor/out (PS39)	[4]	Main tray upper sensor/in (PS40) (Not used)
[5]	Main tray paper detection sensor (PS13)	[6]	Main tray lift up detection sensor/R (PS17)
[7]	Main tray lift down detection sensor/R (PS15)	[8]	Paper receiving control motor (M15)
[9]	Main tray full detection sensor (PS12) *	[10]	Main tray up/down motor (M6)
[11]	Saddle tray	[12]	Main tray drive belt
[13]	Paper delivery control sensor (PS11)	[14]	Main tray lift down detection sensor/F (PS14)
[15]	Main tray lift up detection sensor/F (PS16)	[16]	Main tray upper sensor/out (PS38) (Not used)
[17]	Sub tray full detection sensor/in (PS41)	-	-

- *: The installation position of the sensor is different between the FS-537 and FS-537SD models.

8.2 Drive

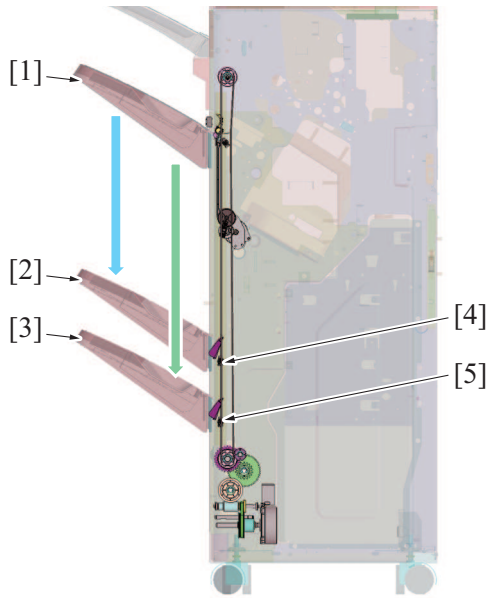


[1]	Main tray	[2]	Paper detection lever
[3]	Paper receiving control motor (M15)	[4]	Main tray drive belt/R
[5]	Main tray up/down motor (M6)	[6]	Paper detection lever drive shaft
[7]	Main tray drive belt/F	-	-

8.3 Operation

8.3.1 Main tray up/down mechanism

- Rotation of the main tray up/down motor drives the main tray drive belt to lift and lower the main tray.
- The lower limit position of the main tray (full detection position) is different between the FS-537 and FS-537SD models.

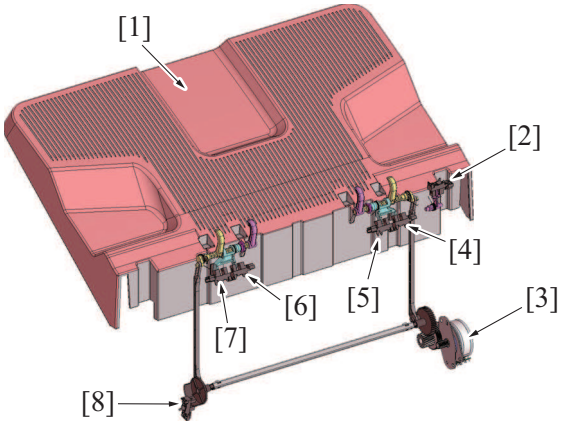


[1]	Main tray (home position)	[2]	Main tray (main tray full position) *1
[3]	Main tray (main tray full position) *2	[4]	Main tray full detection sensor (PS12) *1
[5]	Main tray full detection sensor (PS12) *2	-	-

- *1: FS-537SD
- *2: FS-537

8.3.2 Main tray paper detection

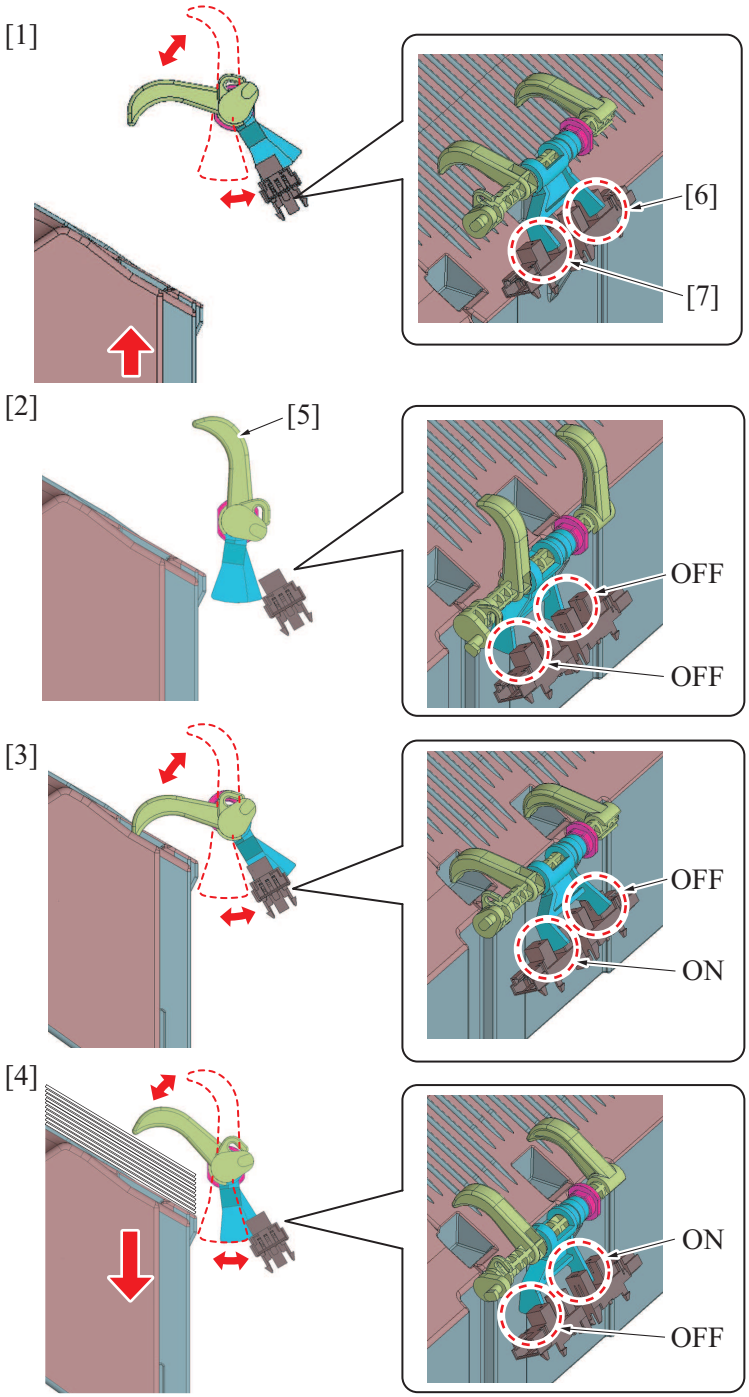
- The main tray paper detection sensor, the main tray lift up detection sensor and the main tray lift down detection sensor keep the specified distance between the upper surface of the paper exited to the main tray and the paper exit opening to eliminate the misalignment of the exited paper.
- The main tray paper detection sensor detects the upper limit position of the main tray.
- The main tray lift up detection sensors (F and R) indicate the lifting of the main tray.
- The main tray lift down detection sensors (F and R) indicate the lowering of the main tray.
- By operation of the paper detection lever, the on/off states of the main tray lift up detection sensors and the main tray lift down detection sensors are detected.
- The paper receiving control motor drives the paper detection lever. The paper delivery control sensor detects the home position of the paper detection lever.
- The paper detection lever is operated each time a sheet of paper is discharged. This operation is used to confirm the alignment of discharged paper and the discharge state of the main tray.



[1]	Main tray	[2]	Main tray paper detection sensor (PS13)
[3]	Paper receiving control motor (M15)	[4]	Main tray lift up detection sensor/R (PS17)
[5]	Main tray lift down detection sensor/R (PS15)	[6]	Main tray lift down detection sensor/F (PS14)
[7]	Main tray lift up detection sensor/F (PS16)	[8]	Paper delivery control sensor (PS11)

(1) Main tray operation

- The paper detection lever and main tray paper detection sensor confirm the paper load status of the main tray and main tray position (height) when the printing starts.
- The paper detection lever is operated to confirm the state of the main tray lift detection sensor.
- When the main tray lift up detection sensor is on and the main tray paper detection sensor is off, the main tray is lifted until the main tray paper detection sensor turns on.
- The paper detection lever returns to the home position. The system waits for the discharged paper.
- After the paper is discharged into the main tray, the paper detection lever is operated to confirm the load status of the main tray. At this time, if the main tray lift down detection sensor is on, the main tray is lowered to a predetermined height. If this sensor is off, the lower operation is not performed.
- This paper detection lever is driven for each sheet of discharged paper to confirm the load status of the main tray.
- After the printing completes the paper detection lever returns to the home position.
- The main tray operation (lifting) is not performed as long as there is a subsequent print instruction even if the discharged paper is removed.



[1]	Main tray lift up state	[2]	Finisher stop state
[3]	Main tray paper load status (no discharged paper)	[4]	Main tray paper load status (with discharged paper)
[5]	Paper detection lever (home position)	[6]	Main tray lift down detection sensor/F (OFF)
[7]	Main tray lift up detection sensor/F (ON)	-	-

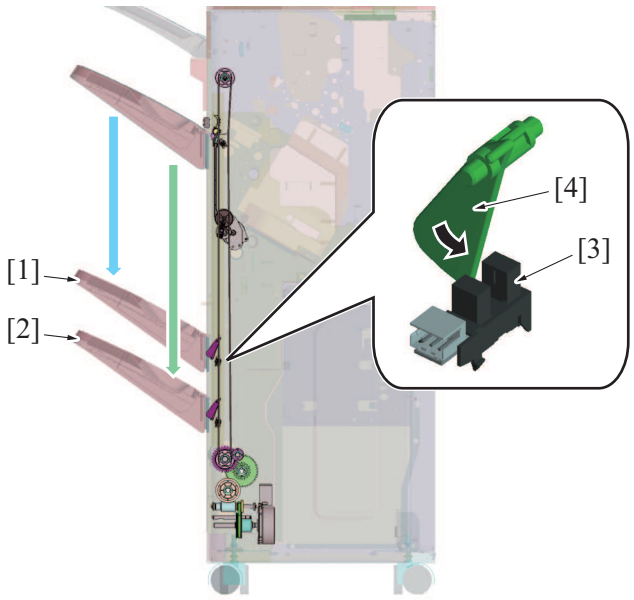
8.3.3 Tray full detection mechanism

(1) Main tray

- The main tray has the paper full detection mechanism.
- When paper full is detected, the warning message appears on the control panel.
- In this state, any main tray related configurations and jobs that use the main tray cannot be performed.

(a) Paper full detection mechanism 1

- When machine determines that the amount of paper stacked on the main tray exceeds the specified height, the paper detection lever causes the main tray up/down motor to rotate to lower the main tray to the specified position.
- When the main tray is lowered to the position of the main tray full detection sensor, the main tray full is determined.

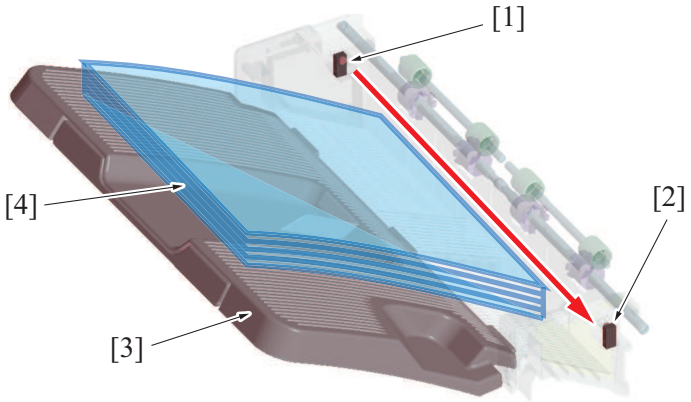


[1]	Main tray (main tray full position) *1	[2]	Main tray (main tray full position) *2
[3]	Main tray full detection sensor (PS12)	[4]	Actuator

- *1: FS-537SD
- *2: FS-537

(2) Sub tray

- When paper is discharged into the sub tray, the stacked paper blocks the sub tray full detection sensor. This blocked state is interpreted as a detection of a full exit tray.
- When the sub tray full is detected, the warning message appears on the control panel.
- In this state, any sub tray configurations and jobs that use the sub tray cannot be performed.



[1]	Sub tray full detection sensor/out (PS39)	[2]	Sub tray full detection sensor/in (PS41)
[3]	Sub tray	[4]	Paper

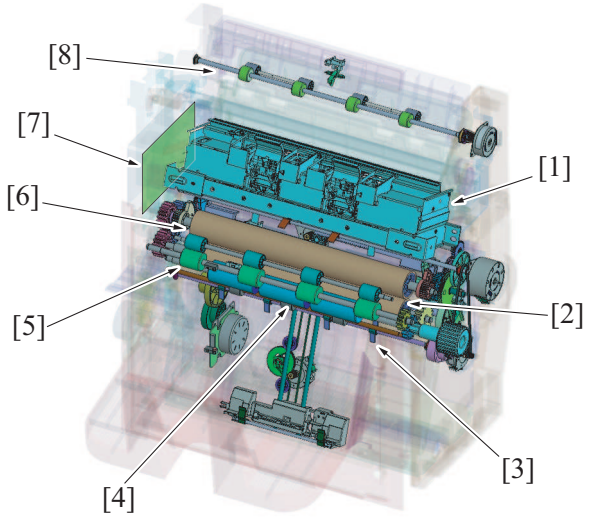
9. SADDLE SECTION FS-537SD

9.1 Configuration

NOTE

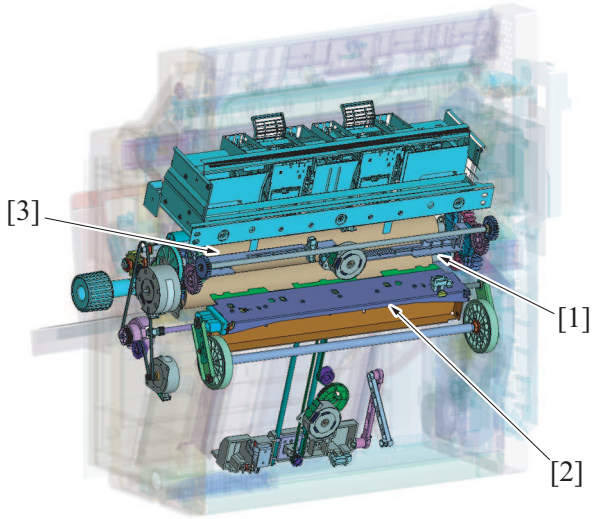
- **FS-537SD only**

Front left side perspective view



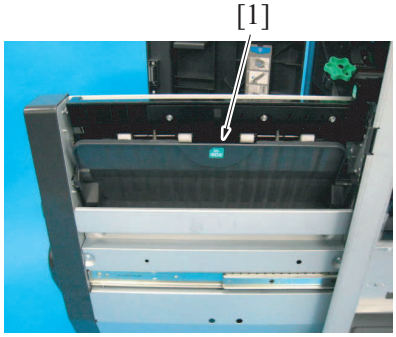
[1]	Staple unit	[2]	Center folding roller/2
[3]	Center fold section lower paddle	[4]	Tri-folding roller
[5]	Saddle section exit roller	[6]	Center fold roller/1
[7]	SD drive board (SDDB)	[8]	Saddle section paper feed roller

Front right side perspective view



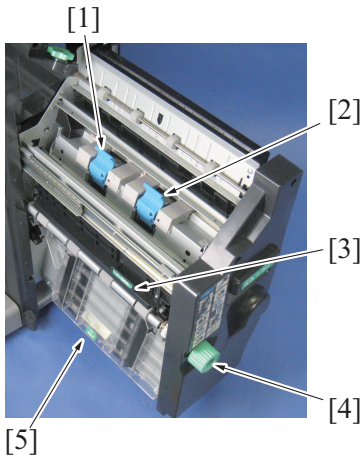
[1]	Center staple alignment plate drive gear/Rr	[2]	Center fold knife
[3]	Center staple alignment plate drive gear/Fr	-	-

Right side view



[1]	Jam removal cover (transport section)	-	-

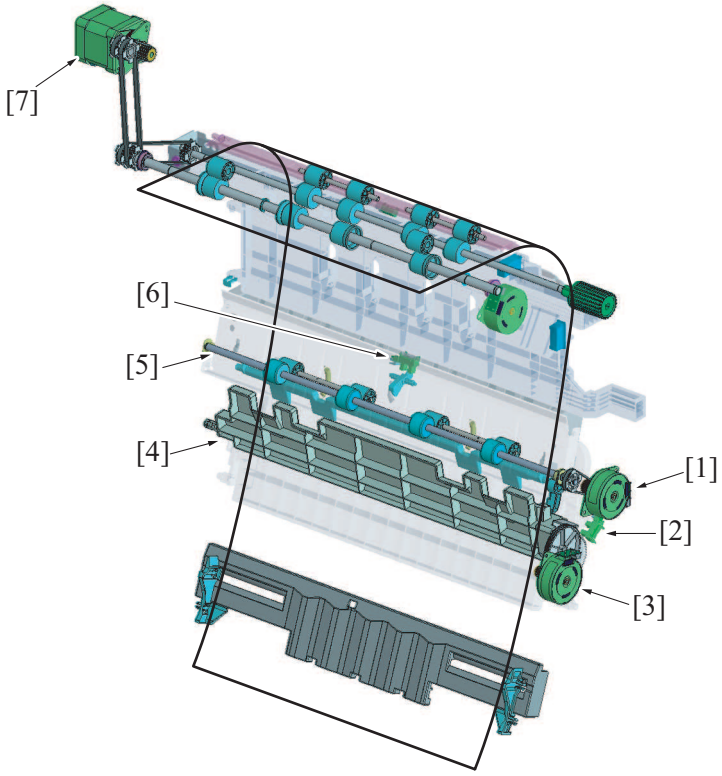
Front left side perspective view



[1]	Staple cartridge (rear side)	[2]	Staple cartridge (front side)
[3]	Jam removal cover (exit section)	[4]	Jam removal dial (folding section)
[5]	Jam removal cover (alignment section)	-	-

9.2 Transport section

9.2.1 Drive



[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover
[5]	SD transport roller	[6]	SD entrance sensor (PS1)
[7]	FNS discharge motor (M3)	-	-

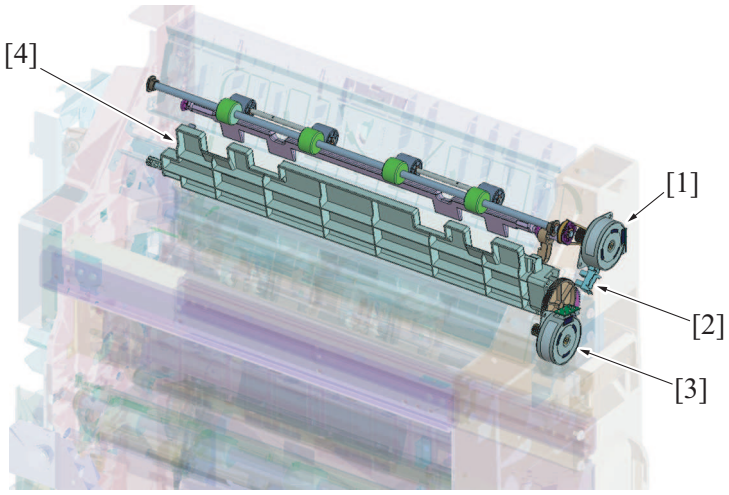
9.2.2 Paper transport

- The FNS discharge motor rotates reversely to transport the paper from the finisher transport section into the saddle unit.
- The paper then is transported to the alignment section by SD transport roller.
- The SD transport roller rotates when the SD transport motor is driven.

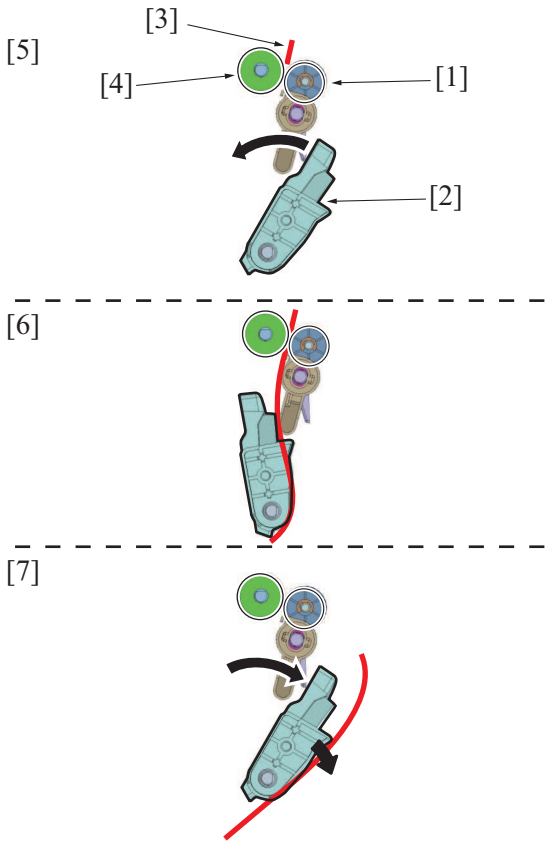
9.2.3 Curl cover

- The paper is transported to the alignment section one–by-one. A paper which is curled may cause paper misfeed at the entrance of the saddle stitcher.

- In order to prevent this paper misfeed, the curl cover is installed so that each paper is transported to the alignment section without fail.
- The curl cover is operated by the paper discharge control motor. Paper receiving opens/closes the feeding port inside the saddle unit entrance when the paper discharge control motor rotates in forward/reverse direction.



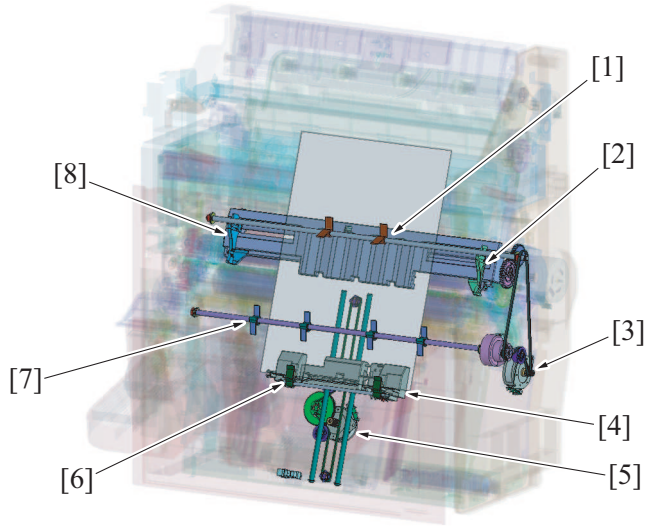
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover



[1]	SD transport roll	[2]	Curl cover
[3]	Paper	[4]	SD transport roller
[5]	Paper transportation from within the finisher	[6]	Curl cover operation
[7]	Next paper standby (moves curl cover to the home position)	-	-

9.3 Alignment section

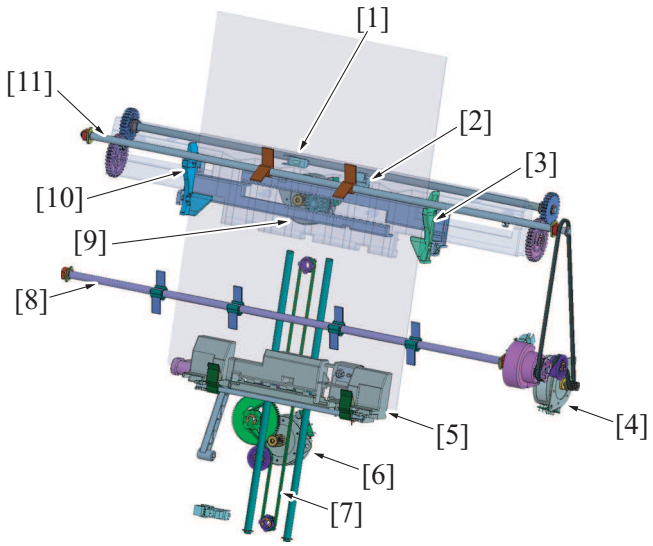
9.3.1 Drive



[1]	Center folding section upper paddle	[2]	Alignment plate/F
[3]	SD paddle motor (M7)	[4]	Stopper guide
[5]	Stopper drive motor (M4)	[6]	Paper grip
[7]	Center folding section lower paddle	[8]	Alignment plate/R

9.3.2 Alignment

- It aligns the paper transported to the alignment section.
- The paper CD alignment is conducted by alignment plate/F and alignment plate/R. The alignment plate shifts by forward/reverse rotation of the alignment motor to align the paper edge.
- The paper FD alignment is conducted by the stopper guide, center folding section upper paddle and center folding section lower paddle.
- The stopper guide moves up when the stopper drive motor rotates in forward/reverse direction to stop at the position which suits the length of the paper transported. The leading edge of the paper stops by the stopper guide to align the leading edge.
- When the paper is transported, the stopper drive motor rotates in forward/reverse direction to operate the stopper guide drive belt, and moves the stopper guide up/down.
- The center folding section upper paddle and the center folding section lower paddle are installed in order to receive the transported paper to the alignment section without fail.
- The paddle is driven by the SD paddle motor.



[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Alignment home sensor (PS4)
[3]	Alignment plate/F	[4]	SD paddle motor (M7)
[5]	Stopper guide	[6]	Stopper drive motor (M4)
[7]	Stopper guide drive belt	[8]	Center folding section lower paddle
[9]	Alignment motor (M3)	[10]	Alignment plate/R
[11]	Center folding section upper paddle	-	-

(1) Alignment operation

- When the saddle exit sensor of the finisher detects the leading edge of the paper, the alignment motor starts rotating in the direction to close the alignment plate, and the alignment plate/F and the alignment plate/R stop at the position where it is slightly wider than the paper width.
- When the specified period of time has passed after the SD entrance sensor detects the trailing edge of the paper, the alignment motor rotates in forward/reverse direction to do oscillation of the alignment plate to align paper.
- The oscillation of the alignment plate is conducted each time a sheet of paper is transported, and the alignment plate is shifted to the standby position after the alignment operation is finished.
- The home position of the alignment plate is detected by the alignment home sensor.

(2) Stopper guide operation

- The stopper guide is moved up according to the paper size.
- The stopper guide moves up and stops at the specified position after the leading edge of the paper passes the main tray exit sensor.

(3) Paddle operation

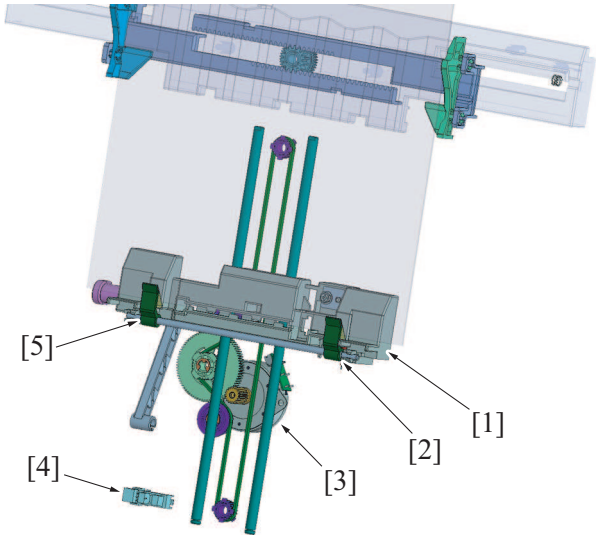
- The up/down paddle is driven by the SD paddle motor. The up/down paddle is driven when the specified period of time has passed after the leading edge of the paper passed the saddle exit sensor of the finisher.
- The up/down paddle stops after the paper trailing edge passes the finisher's main tray exit sensor and the paddle rotates for the specified number of times.

9.3.3 Stopper guide

- At the stopper guide, paper is aligned in the FD direction. Paper conveyed to the aligning section is conveyed to the specified position.
- The exit grip holds the paper when shifting it to the specified position and when stapling papers.
- The alignment section, staple position and other positions (center folding, saddle folding, tri-folding) have their own up/down stop positions. They are controlled by the pulse number of the stopper drive motor.

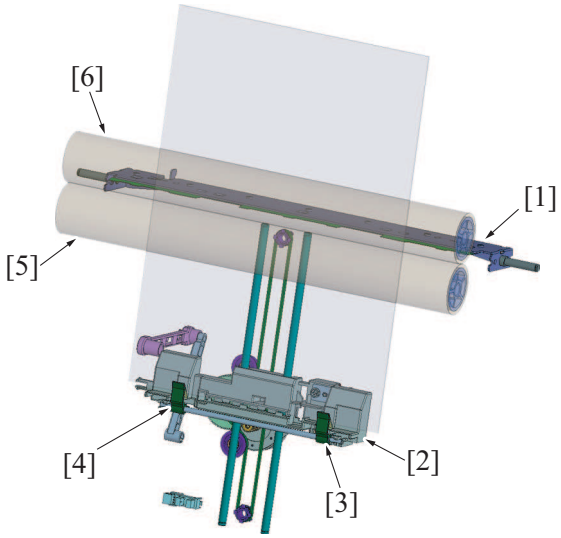
(1) Stopper operation

- The stopper drive motor moves the stopper guide up and down in accordance with the paper size. The stopper home sensor detects the home position.



[1]	Stopper guide	[2]	Exit grip/Fr
[3]	Stopper drive motor (M4)	[4]	Stopper home sensor (PS6)
[5]	Exit grip/Rr	-	-

(2) Stopper control



[1]	Center folding knife assy	[2]	Stopper guide
[3]	Exit grip/Fr	[4]	Exit grip/Rr
[5]	Center folding roller/2	[6]	Center folding roller/1

(a) Folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the folding position.

(b) Saddle stitching mode

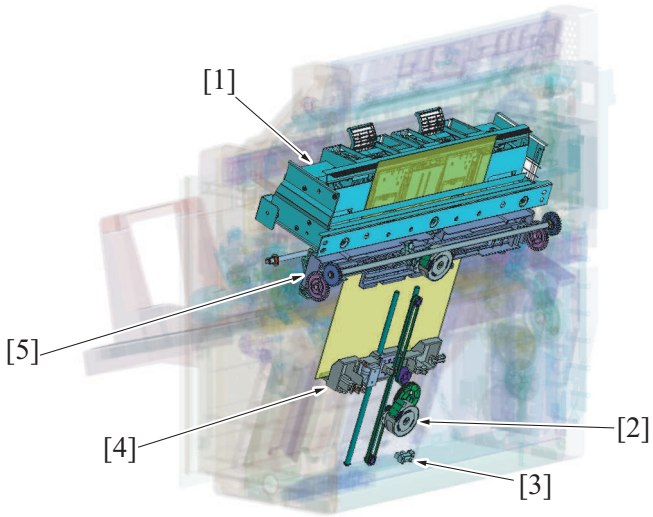
- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the saddle stitching position.
- After a specified period of time since stapling operation was completed, the alignment motor opens the alignment plates and the stopper drive motor starts rotating to move the stopper guide further down and lower the paper to the folding position.

(c) Tri-folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the 1st folding position in the tri-folding.

9.4 Stapler

9.4.1 Drive



[1]	Stapler unit	[2]	Stopper drive motor (M4)

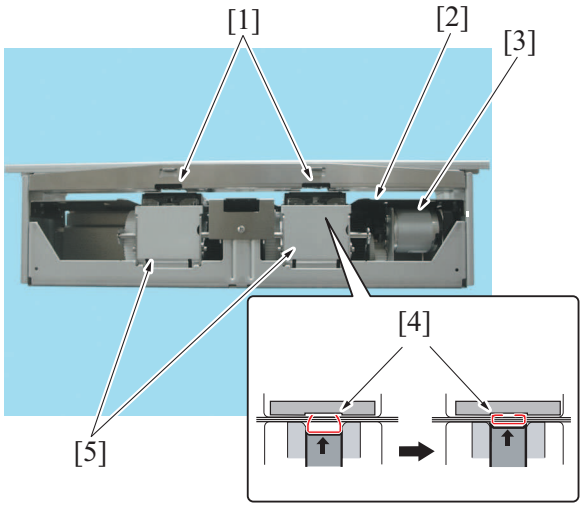
[3]	Stopper home sensor (PS6)	[4]	Stopper guide
[5]	Alignment tray	-	-

9.4.2 Operation

- The stapling operation is performed by the stapler motor.

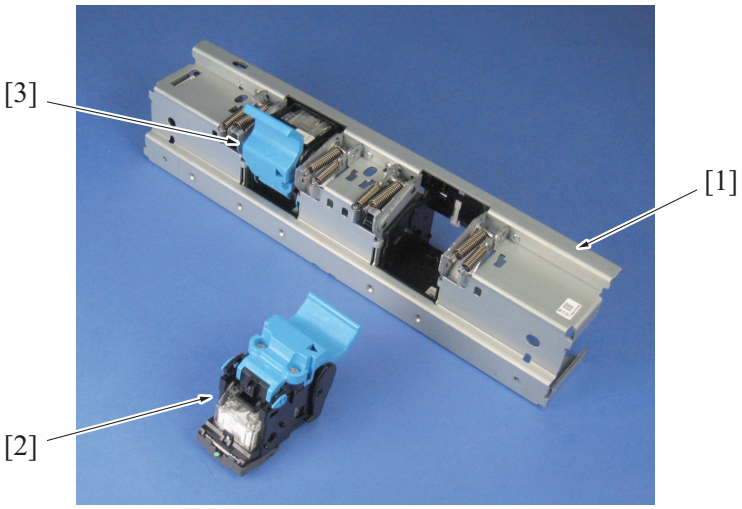
(1) Stapling operation

- The stapling operation is performed by the staple motor in the stapler.
- The drive gear pushes out the pressed portion of the paper toward the clincher to hold the paper, and then the pin will be pushed out.
- When the pin penetrates the paper batch, the pin will be bent to staple the paper batch at the clincher section.



[1]	Clincher	[2]	Drive gear
[3]	Stapler motor	[4]	Staple
[5]	Stapler	-	-

(2) Staple control



[1]	Staple unit	[2]	Staple cartridge (Front side): Removed
[3]	Staple cartridge (Rear side): Installed	-	-

(a) Stapling

- After completing the alignment operation of the alignment plate, the staple motor performs the stapling operation.
- The stapling operation is completed when the stapler home position sensor (rear) detects the home position and turn ON.

(b) Clogged staple detection

- When the stapler home position sensor (rear) does not turn ON after the specified period of time after it turned OFF during stapling, it is determined that the staple motor has the trouble, and stops the stapler motor.

(c) Staple cartridge detection

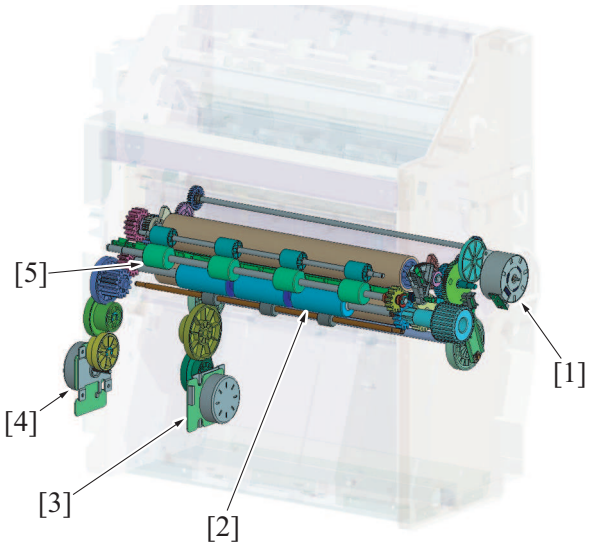
- The staple cartridge switch detects the presence of a cartridge or the incorrect settings of a staple cartridge.
- When no staple cartridge is installed or it is installed incorrectly, an error message appears on the machine control panel.

(d) Staple detection control

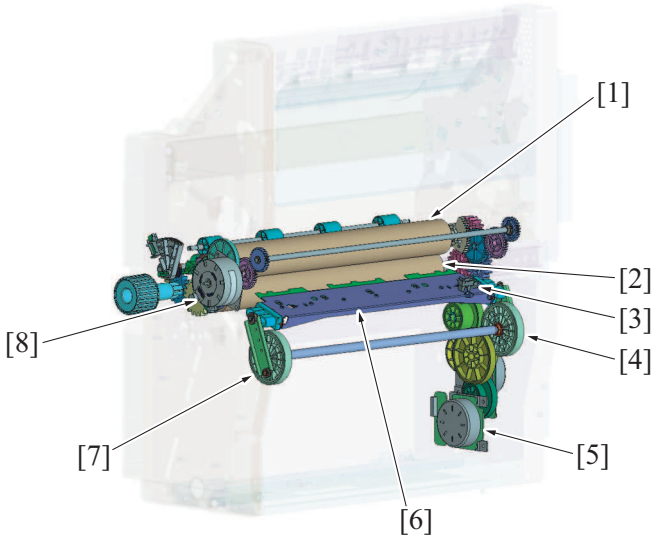
- When the staple goes empty, the staple empty switch turns ON and a message appears on the machine control panel.

9.5 Folding/Saddle stitching

9.5.1 Drive



[1]	Tri-folding guide motor (M6)	[2]	Tri-folding roller
[3]	Center fold knife motor (M9)	[4]	Center fold roller motor (M5)
[5]	Saddle section exit roller	-	-



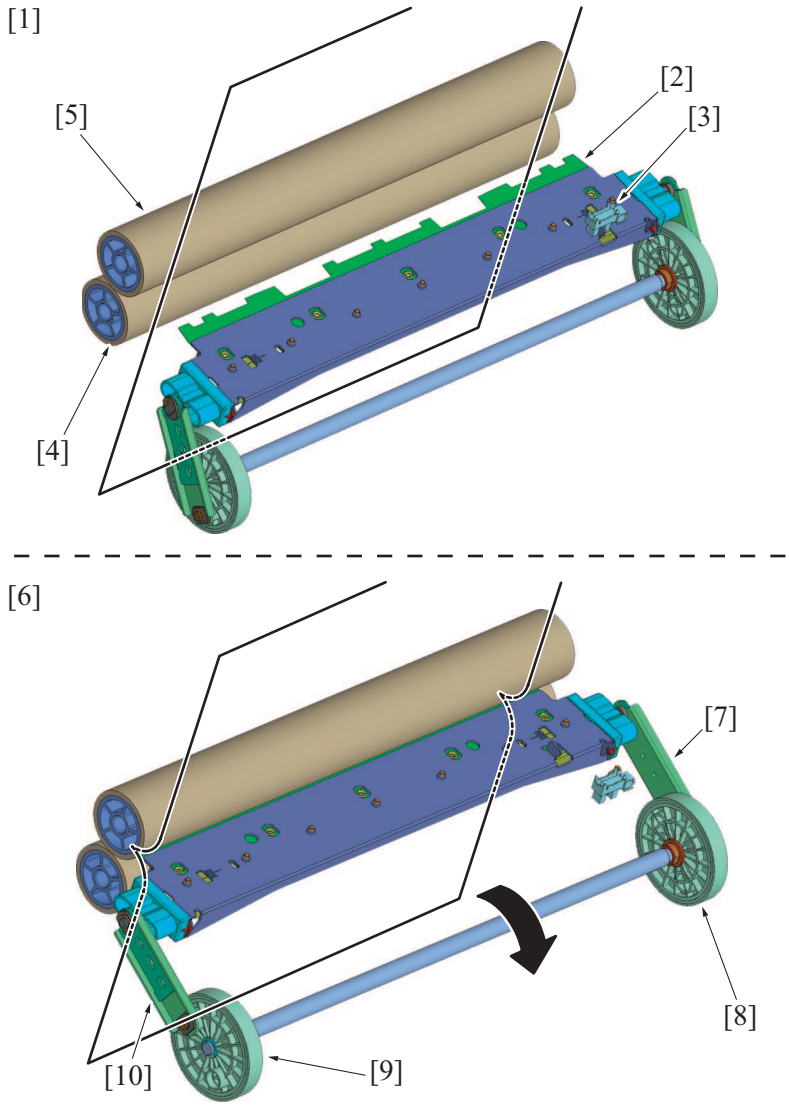
[1]	Center folding roller/1	[2]	Center folding roller/2
[3]	Center fold knife home sensor (PS8)	[4]	Fold drive gear/Rr
[5]	Center fold knife motor (M9)	[6]	Center folding knife assy
[7]	Fold drive gear/Fr	[8]	Tri-folding guide motor (M6)

9.5.2 Folding knife

- The center fold knife motor drives the folding knife.
- The folding knife is used in the folding/saddle stitching/tri-folding mode.
- In the tri-folding mode, it is used at the 1st folding.

(1) Folding knife operation

- The center fold knife motor rotates the crank shaft a half turn via the gear, and pushes the paper to the nip section with the folding knife.
- The folding rollers draw and fold the paper.
- The position of the stopper guide controls the folding position.



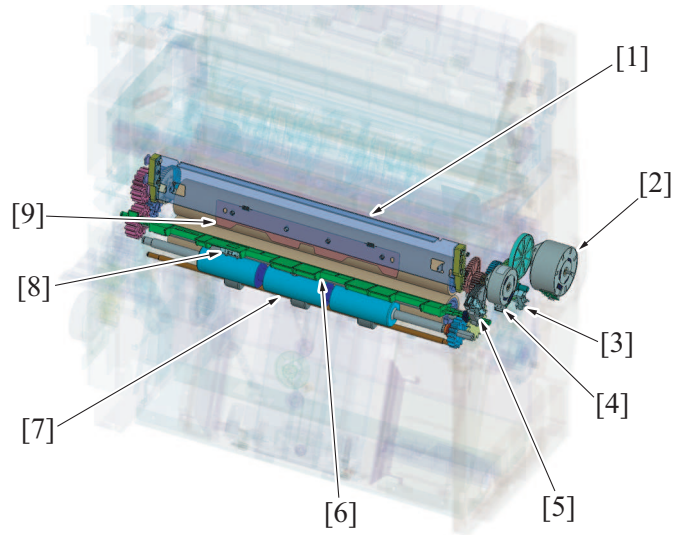
[1]	Before folding	[2]	Folding knife
[3]	Center fold knife home sensor (PS8)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Folding operation
[7]	Crank shaft/Rr	[8]	Fold knife assy drive gear/Rr
[9]	Fold knife assy drive gear/Fr	[10]	Crank shaft/Fr

(2) Folding knife control

- The center fold knife motor turns ON and sticks out the folding knife to the paper after a specified period of time since the stopper guide stops at the folding position.
- The center fold knife motor stops when the folding knife reciprocates after fold operation is completed and the center fold knife home sensor turns OFF.

9.6 Tri-folding

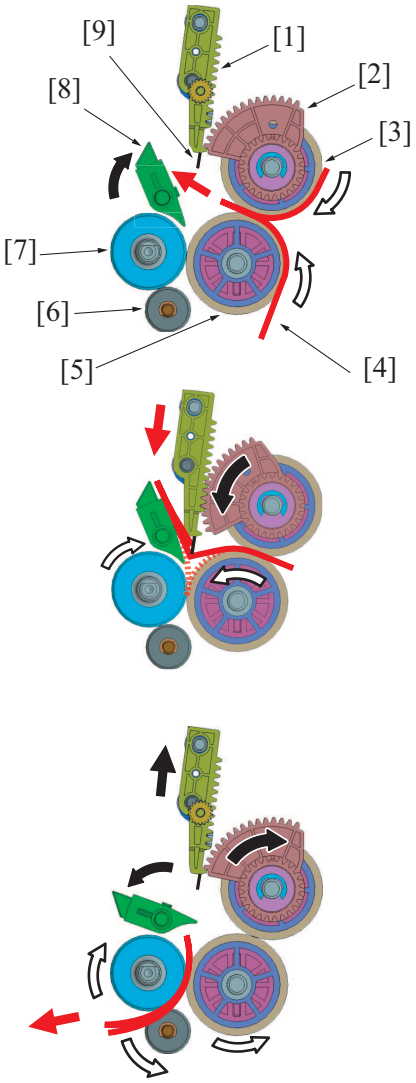
9.6.1 Drive



[1]	Tri-folding knife assy	[2]	Center fold guide motor (M8)
[3]	Guide home sensor (PS7)	[4]	Tri-fold guide motor (M6)
[5]	Tri-folding gate home sensor (PS11)	[6]	Center folding change gate
[7]	Tri-folding roller	[8]	Fold exit sensor (PS12)
[9]	Tri-folding knife	-	-

9.6.2 Tri-folding operation

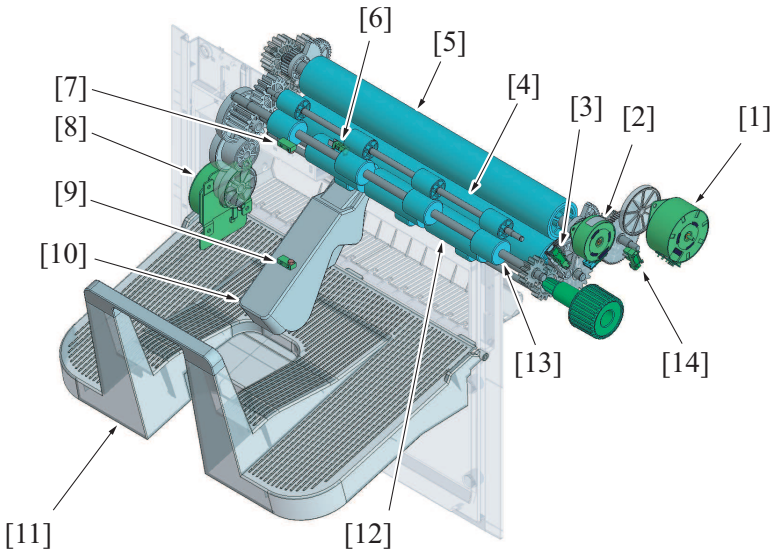
1. When the center fold guide motor drives, the tri-folding gate rotates. The leading edge of the paper to which the first fold was applied at the center folding section, will be transported to the tri-folding path.
2. When the tri-folding guide motor drives, the tri-folding knife assy drive gear rotates to move down the tri-folding knife assy. The paper to which the first fold is applied at the center folding section will be pushed out to the tri-folding roller.
3. The paper is pulled into the tri-folding roller to tri-fold the paper.
4. When tri-folding is finished, the tri-folding gate will return to the home position. The home position of the tri-folding gate is detected by the tri-folding gate home sensor.



[1]	Tri-folding knife assy	[2]	Tri-folding knife assy drive gear
[3]	Center folding roller/1	[4]	Paper
[5]	Center folding roller/2	[6]	Tri-folding roll
[7]	Tri-folding roller	[8]	Tri-folding gate
[9]	Tri-folding knife	-	-

9.7 Exit section

9.7.1 Drive



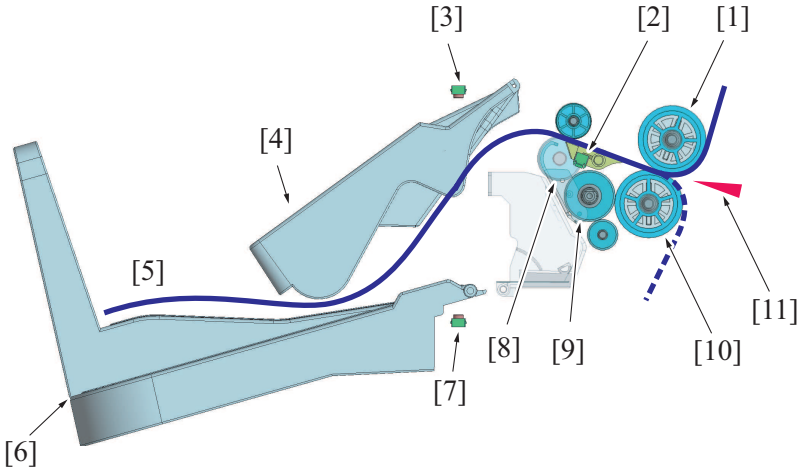
[1]	Center fold guide motor (M8)	[2]	Tri-fold guide motor (M6)
[3]	Tri-folding gate home sensor (PS11)	[4]	Center folding roller/2
[5]	Center folding roller/1	[6]	Fold exit sensor (PS12)
[7]	Booklet tray empty detection sensor/in (PS13)	[8]	Center fold roller motor (M5)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Paper press
[11]	Saddle tray	[12]	Tri-folding roller
[13]	Saddle section exit roller	[14]	Guide home sensor (PS7)

9.7.2 Paper exit

- Center folded, saddle stitched, or tri-folded paper is discharged to the saddle tray.
- The paper that is center folded and saddle folded is sent though the upper route, and the tri-folded paper is sent through the lower route to be discharged.
- The paper is discharged by driving the exit roller and the tri-fold roller. Both rollers are driven by the center fold roller motor.

(1) Paper exit for center fold / saddle stitch

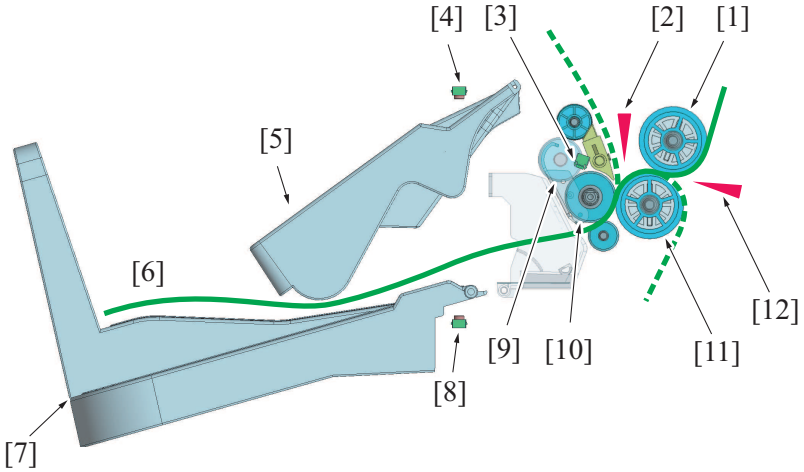
- The center fold roller motor is driven after the center fold or the saddle stitch, and discharges the paper to the saddle tray by the paper exit roller.



[1]	Center folding roller/1	[2]	Fold exit sensor (PS12)
[3]	Booklet tray empty detection sensor/in (PS13)	[4]	Paper press
[5]	Paper transport route	[6]	Saddle tray
[7]	Booklet tray empty detection sensor/out (PS14)	[8]	Saddle section exit roller
[9]	Tri-folding roller	[10]	Center folding roller/2
[11]	Folding knife	-	-

(2) Paper exit for tri-folding

- Since the paper is tri-folded by the tri-folding roller, the paper is transported through the lower route.



[1]	Center folding roller/1	[2]	Tri-folding knife
[3]	Fold exit sensor (PS12)	[4]	Booklet tray empty detection sensor/in (PS13)
[5]	Paper press	[6]	Paper transport route
[7]	Saddle tray	[8]	Booklet tray empty detection sensor/out (PS14)

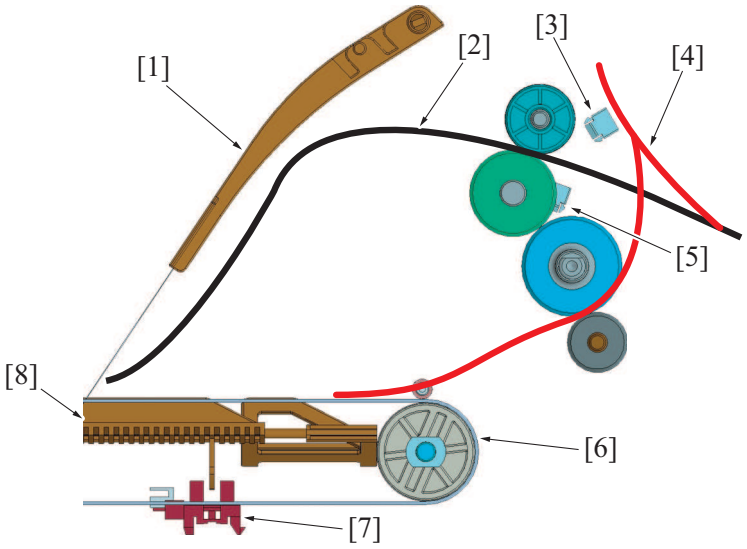
[9]	Saddle section exit roller	[10]	Tri-folding roller
[11]	Center folding roller/2	[12]	Folding knife

9.7.3 Paper transport belt

- The paper transport belt transports the processed paper to the leading edge of the tray. Besides, the paper transport belt drives to prevent paper jams at the trailing edge of the tray.

(1) Transport operation

- After the leading edge of paper passes the fold exit sensor (PS12) for a predetermined amount of time, the paper transport belt motor rotates to drive the paper transport drive belt. As the exit path is different for center folding and tri-folding, the start and stop timings of the belt differ.
- The exit tray is equipped with an SD exit full sensor to detect paper at the exit port. When there is no paper at the exit port, the belt is driven until the leading edge of paper reaches the exit port. When there is paper at the exit port, the belt is driven after the leading edge of paper reaches the port.



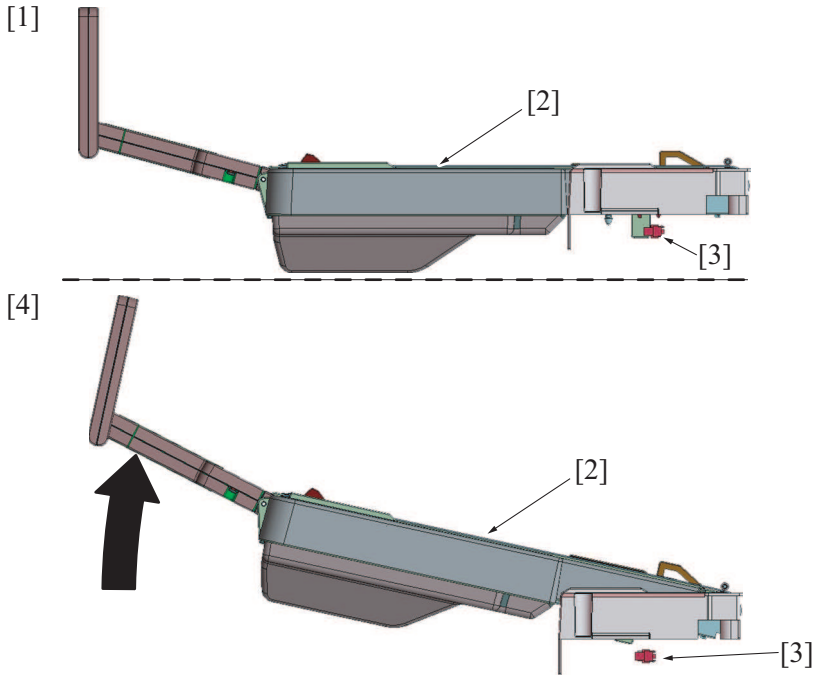
[1]	Paper press	[2]	Paper path for center folding and center staple
[3]	Fold exit sensor (position for center folding and center staple)	[4]	Paper path for tri-folding
[5]	Fold exit sensor (position for tri-folding)	[6]	Paper transport drive belt
[7]	SD exit full sensor (PS35)	[8]	Exit tray full detection actuator

(2) Exit tray upper limit detection

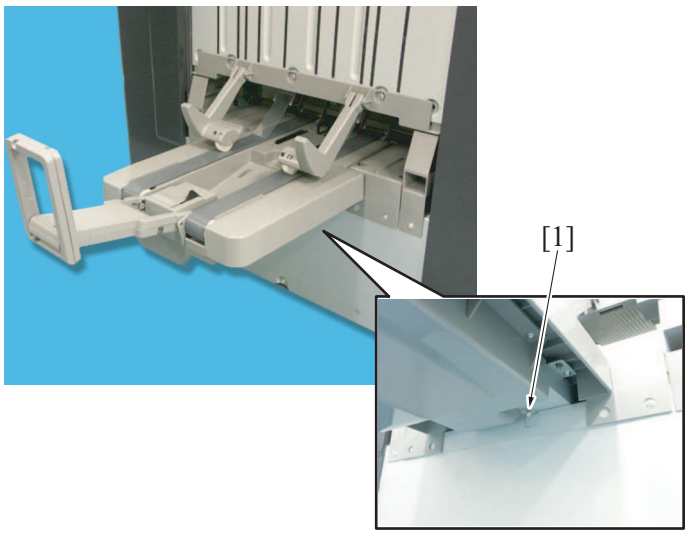
- The exit tray is equipped with an SD exit tray limit sensor to detect the load of paper in the exit tray.
- The counter starts after the SD exit tray limit sensor turns on. The finisher is stopped after the counter reaches a predetermined number, which functions as the exit tray upper limit.
- When the printing in different modes continues for some time, the mode that produces the smallest load amount is used to detect the upper limit.

(3) Paper transport belt forced drive mechanism

- Lift the leading edge of the exit tray, and thus the paper transport drive belt can be manually driven. This operation will cause paper in the exit port to move to the leading edge of the exit tray.
- The normal exit tray is secured with screws. Remove the single exit tray lock screw at the rear of the exit tray to lift this exit tray.



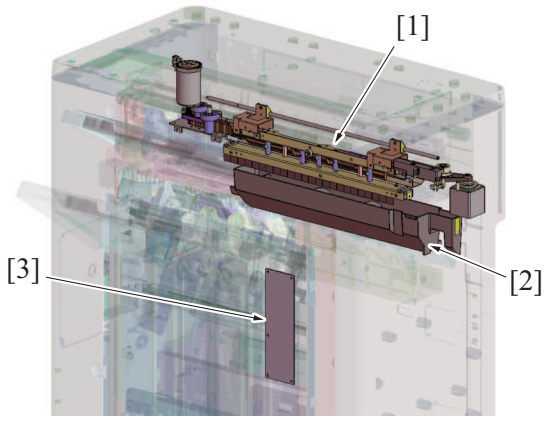
[1]	Exit tray normal position	[2]	Exit tray
[3]	SD exit tray lift sensor (PS43)	[4]	Exit tray lifting state



[1]	Exit tray lock screw	-	-

10. PK-523

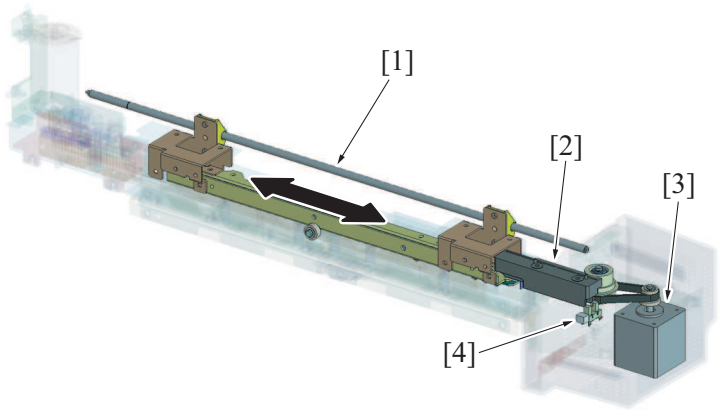
10.1 Configuration



[1]	Punch unit	[2]	Punch scraps box
[3]	Punch control board (PKCB)	-	-

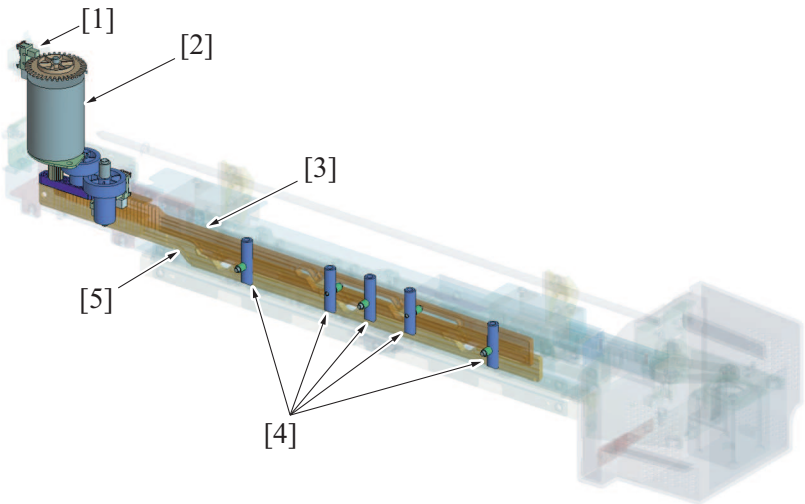
10.2 Drive

10.2.1 Punch shift section



[1]	Punch oscillating assy shift	[2]	Punch oscillating assy gear
[3]	Punch oscillating motor (M302)	[4]	PK punch home sensor/2 (PS303)

10.2.2 Punch section



[1]	Punch motor pulse sensor (PS306)	[2]	Punch drive motor (M301)
[3]	Punch blade drive guide/R	[4]	Punch blade

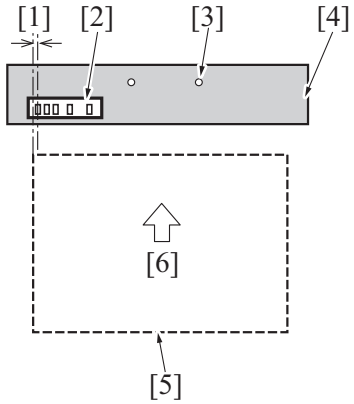
[5]	Punch blade drive guide/L	-	-

10.3 Operation

10.3.1 Punch standby position movement control

- Once the power is turned on, the punch oscillating motor rotates until the PK punch oscillation home sensor turns on to move the punch unit to the home position.
- When punch mode is selected, one of the five sensors corresponding to the paper size detects paper and moves the punch unit. After the job completes, the punch unit returns to the home position.
- When punch mode is not uses, the punch oscillation section is driven and moved to a predetermined position that will not cause feed jams.

<Example.: A4 size>



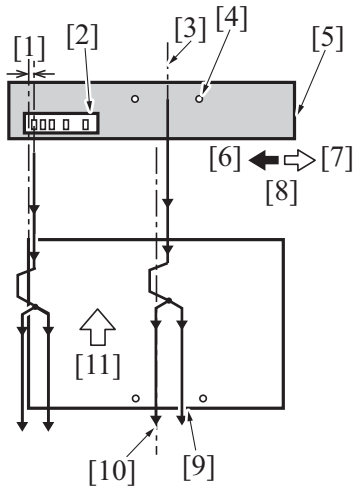
[1]	Distance of movement from the paper edge	[2]	Paper size detect board (PSDTB)
[3]	Punch blade	[4]	Punch unit
[5]	Paper	[6]	Paper transfer direction

10.3.2 Punch position correction control

The following procedure is used to correct the position of the punch unit that is positioned internally from the side edge of paper. So that, the center of paper can be punched at any time. By oscillation of the punch unit back and forth while paper is transported, so the punch position correction is performed.

- After the punch operation starts, or the paper size detection or punch operation completes, the punch unit is moved forward once until the paper size detect board detects the side edge of paper. The punch unit is then moved backward until the paper size detect board detects the side edge of paper again. (Position detection based on side edges)
- When the side edge positions are detected, the punch unit is again moved and positioned so that the center of the punch blade aligns with the center of the paper. The amount of distance and travel direction varies depending on the paper size.

<Example.: A4 size>



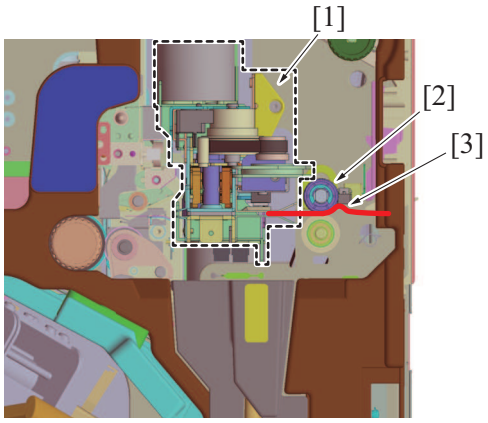
[1]	Side edge position	[2]	Paper size detect board (PSDTB)
[3]	Punch blade center	[4]	Punch blade
[5]	Punch unit	[6]	Front side
[7]	Rear side	[8]	Direction of punch unit movement
[9]	Paper	[10]	Center of paper

[11]	Paper transfer direction	-	-

10.3.3 Punch control

(1) Registration loop control

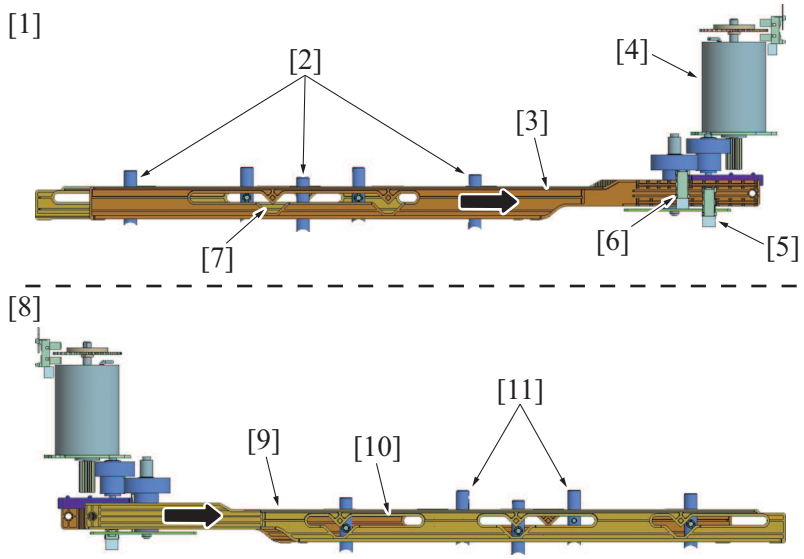
The FNS entry transport motor (finisher section) turns OFF temporarily to stop conveyance of paper when the specified time has passed since paper exit sensor detected the leading edge of the paper. Thus the paper is pressed against the entrance roller forming a loop to correct the bend. When the specified time has passed, the FNS entry transport motor (finisher section) turns ON to restart conveying the paper.



[1]	Punch kit	[2]	FNS entry roller (finisher section)
[3]	Loop formation	-	-

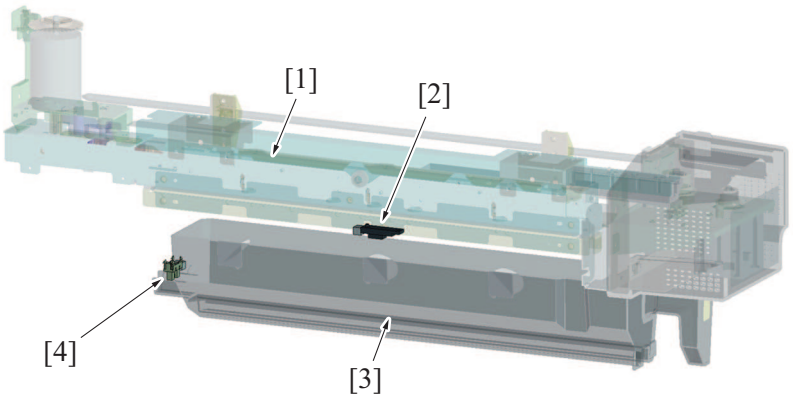
(2) Punch control

Transmitting the start signal from the main body, the FNS entry transport motor (finisher section) rotates.
In the punch mode, the FNS entry transport motor (finisher section) stops temporarily a specified period of time after the FNS entrance sensor detects the trailing edge of the paper.
At the same time, the punch drive motor is driven to move the punch blade drive guide/L/R horizontally. The punch blade drive guide has slots to shift punch blades up and down. Punch blades moving downward conduct the punch operation. punch drive motor stops and the punch operation is completed when the PK punch hole position sensor turns ON.
The FNS entry transport motor (finisher section) rotates again to convey the paper a specified period of time after it stops temporarily.



[1]	Right side view	[2]	Punch blade (for 3 holes)
[3]	Punch blade drive guide/R	[4]	Punch drive motor (M301)
[5]	PK punch hole position sensor (PS307)	[6]	PK punch home sensor/1 (PS301)
[7]	Punch drive plate (for 2 holes)	[8]	Left side view
[9]	Punch blade drive guide/L	[10]	Punch drive plate (for 3 holes)
[11]	Punch blade (for 2 holes)	-	-

10.3.4 Punch scraps box control



[1]	Punch kit	[2]	PK punch hole scraps box full sensor (PS302)
[3]	Punch scraps box	[4]	Punch scraps box set sensor (PS28: finisher section)

(1) Punch scraps box full sensor

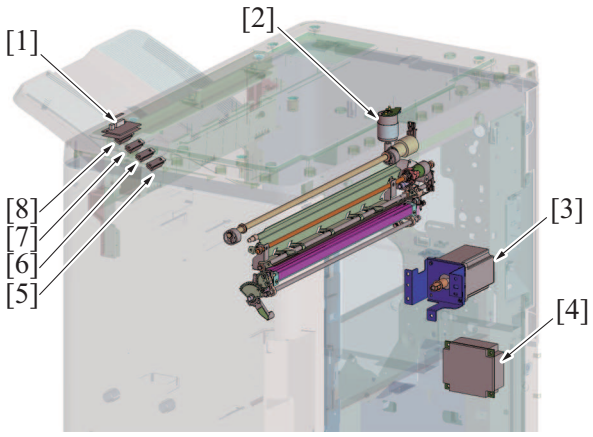
Punch scraps produced by the punch operation drops into the punch scraps box. When the punch scraps box becomes full of punch scraps, the PK punch hole scraps box full sensor turns on. So, the punch scraps box full information is sent to the main body.

(2) Punch scraps box detection

The punch scraps box set sensor detects the punch scraps box set state. When the punch scraps box is not located, the punch scraps box set sensor turns on and sends the no punch scraps box information to the main body.

11. ZU-609

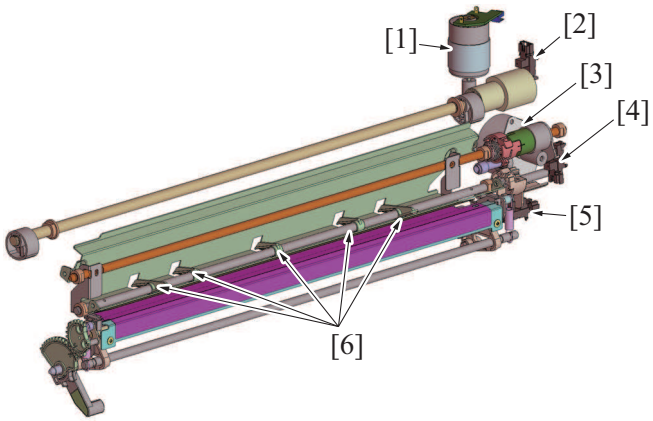
11.1 Configuration



[1]	ZU relay board (ZURB)	[2]	Pressure motor (M502)
[3]	ZU transport motor (M500)	[4]	ZU drive board (ZUDB)
[5]	Upper limit sensor4 (PS506)	[6]	Upper limit sensor3 (PS505)
[7]	Upper limit sensor2 (PS504)	[8]	Upper limit sensor1 (PS503)

11.2 Drive

11.2.1 1st folding

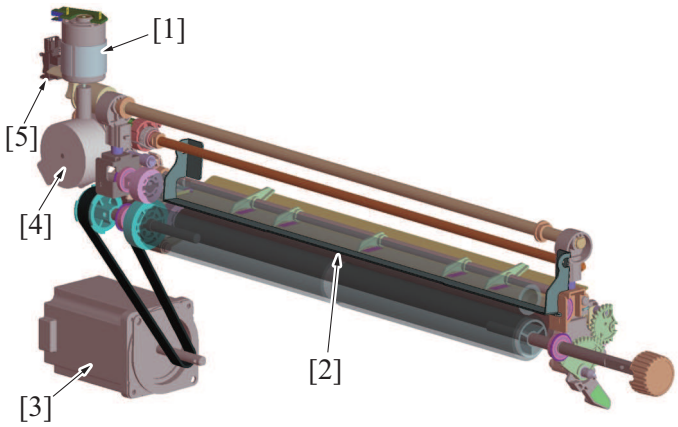


[1]	Pressure motor (M502)	[2]	Press home sensor (PS502)
[3]	Folding guide motor (M501)	[4]	Guide home sensor (PS500)
[5]	Chopper home sensor (PS501)	[6]	Folding claw

11.2.2 2nd folding/transport

NOTE

- **The dedicated the ZU transport motor (M500) is required for the finisher when the Z-folding unit is installed.**
- **At time of set-up, make sure to replace the ZU transport motor (M21) that is attached to the finisher with the supplied the ZU transport motor(M500). However, it is not necessary to install the ZU transport motor(M500) if the post inserter is already installed.**



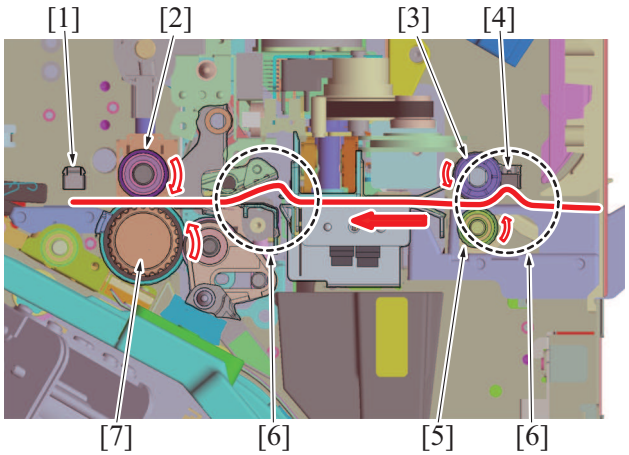
[1]	Pressure motor (M502)	[2]	Folding guide
[3]	ZU transport motor (M500)	[4]	Folding guide motor (M501)
[5]	Press home sensor (PS502)	-	-

11.3 Operation

11.3.1 1st folding mechanism

(1) FNS middle sensor downstream from paper transport

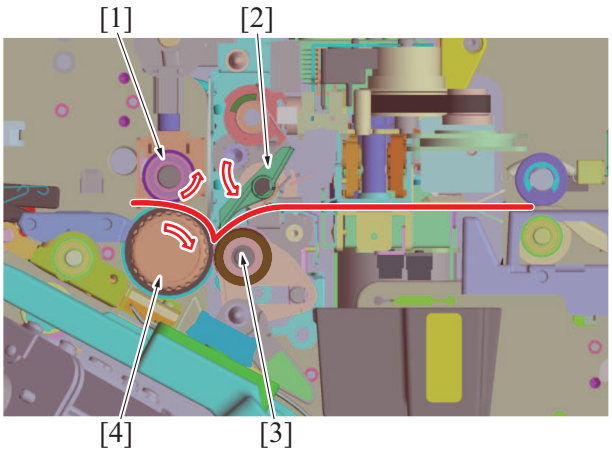
- To correct the skew of the transported paper, a loop is formed at the FNS entry roller and front of the transport roller. When a predetermined amount of time elapses after the paper passes the FNS entrance sensor, the transport roller is driven to transport paper until it reaches the paper exit sensor.
- Paper that is transported to the finisher passes through the transport roller in the finisher and is transported until it reaches the FNS middle sensor.
- The transport roller is temporarily stopped after the transport roller is rotated for specified times.



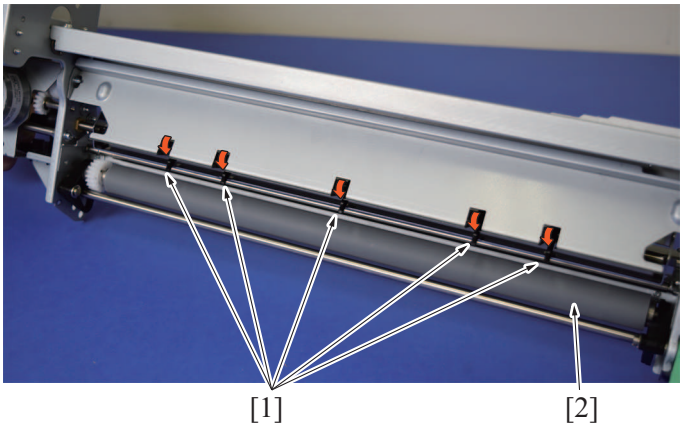
[1]	FNS middle sensor (PS36: finisher section)	[2]	Transport roller 1 (finisher section)
[3]	FNS entry roller 1 (finisher section)	[4]	FNS entrance sensor (PS34: finisher section)
[5]	FNS entry roller 2 (finisher section)	[6]	Location of loop creation
[7]	Transport roller 2 (finisher section)	-	-

(2) 1st folding downstream from the FNS middle sensor

- The folding guide motor drives to lower the folding clip and transport the paper downward.
- At the same time, the transport roller rotates in reverse to transport paper downward.
- The transport roller 2 and the Z-fold roller drive to fold paper that has been transported downward.



[1]	Transport roller 1 (finisher section)	[2]	Folding claw
[3]	Z-fold roller	[4]	Transport roller 2 (finisher section)

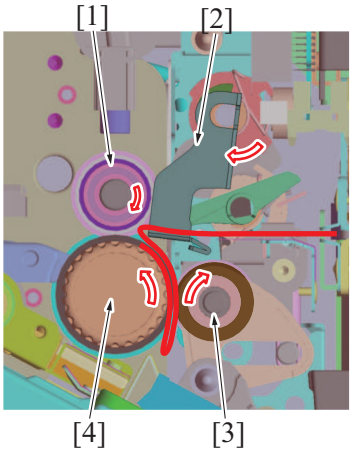


[1]	Folding claw	[2]	Z-fold roller

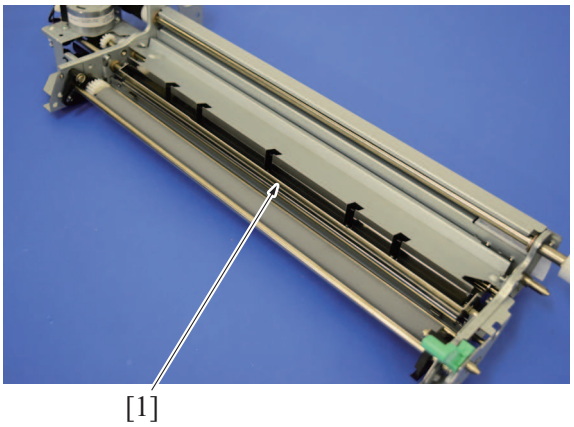
11.3.2 2nd folding mechanism

(1) 2nd folding

- 2nd folds are performed with the transport roller and folding guide.
- The folding guide drives to support the 2nd folding process. The 2nd folding is performed with the transport roller.
- The transport roller rotates counterclockwise, and the Z-fold roller rotates clockwise.



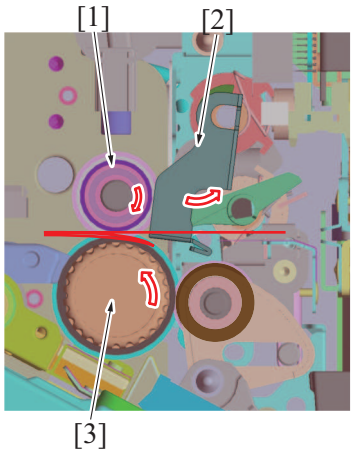
[1]	Transport roller 1 (finisher section)	[2]	Folding guide
[3]	Z-fold roller	[4]	Transport roller 2 (finisher section)



[1]	Folding guide	-	-

(2) Transport

- The Z-folded paper is transported to the finisher.
- When the Z-folded paper is transported, the folding guide returns to the home position at the same time.



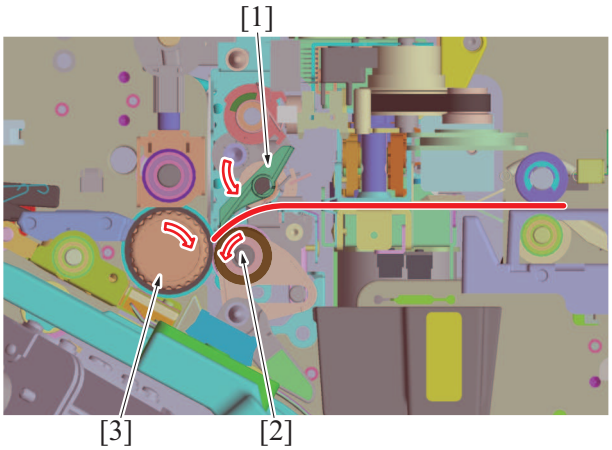
[1]	Transport roller 1 (finisher section)	[2]	Folding guide
[3]	Transport roller 2 (finisher section)	-	-

11.3.3 Double-folding mechanism

- A mechanism to double-fold paper for which a Z-fold cannot be performed is provided.
- When the paper has a size of 8-1/2 x 14, selecting Z-fold on the control panel will result in paper being double-folded instead of Z-folded.

(1) Transport roller downstream from the paper transport (Z-fold roller)

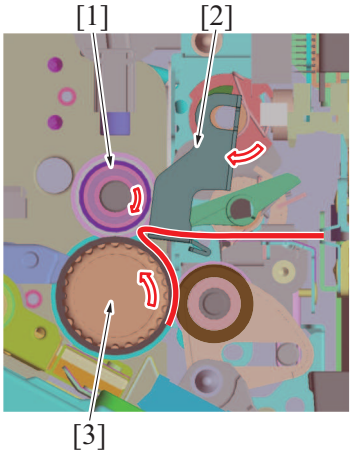
- When the double-fold operation starts, the folding guide motor is driven to lower the folding claw.
- Paper that is transported to the finisher is transported to the transport roller and Z-fold roller by the lowered folding claw.



[1]	Folding claw	[2]	Z-fold roller
[3]	Transport roller 2 (finisher section)	-	-

(2) Paper transport downstream from the double-fold section

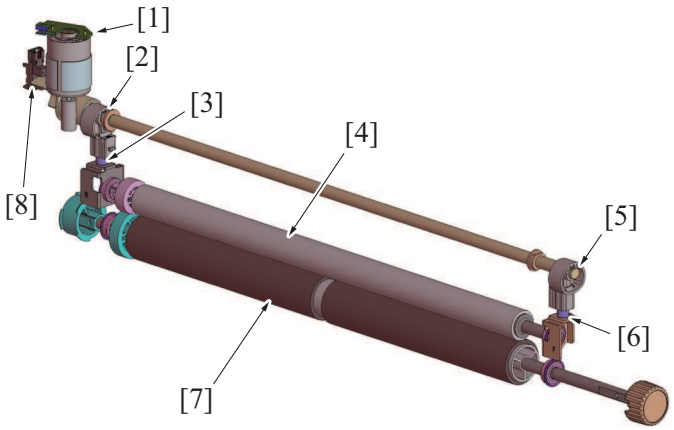
- 2nd folding is performed with the transport roller and folding guide.
- The folding guide drives to support the 2nd folding process. The 2nd folding is performed with the transport roller.
- Control equivalent to that for the 2nd folding mechanism is performed.



[1]	Transport roller 1 (finisher section)	[2]	Folding guide
[3]	Transport roller 2 (finisher section)	-	-

11.3.4 Transport roller pressure change

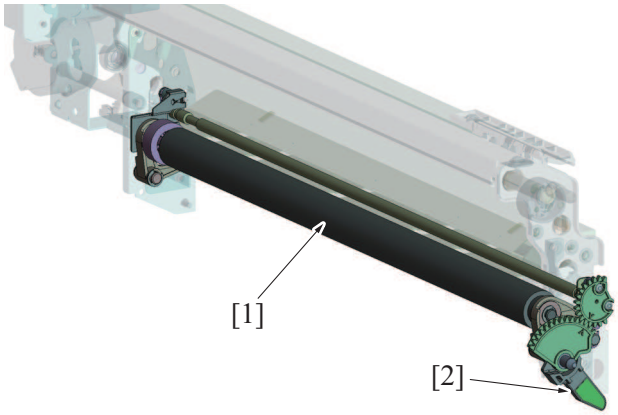
- The transport roller in the finisher transports paper during the Z-fold process. In this scenario, the normal transport roller pressure may be too weak to produce folds reliably.
- The transport roller pressure can be changed to enable reliable production of folds.
- Rotation of the pressure cam that is installed in the Z-fold unit moves the transport roller 1 vertically. This movement changes the transport roller pressure via the pressure spring.
- The pressure motor drives the pressure cam. The press home sensor controls the position of the pressure cam.



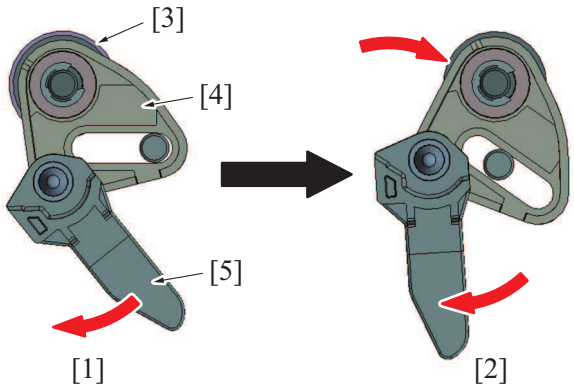
[1]	Pressure motor (M502)	[2]	Pressure cam /R
[3]	Pressure spring /R	[4]	Transport roller 1 (finisher section)
[5]	Pressure cam /F	[6]	Pressure spring/F
[7]	Transport roller 2 (finisher section)	[8]	Press home sensor (PS502)

11.3.5 Z-fold pressure release mechanism

- A Z-fold roller pressure release mechanism is provided to enable the removal of jams in the Z-fold unit.
- Operation of the pressure release lever rotates the cam is rotated, and thus releases the Z-fold roller from the transport roller 2 in the finisher.



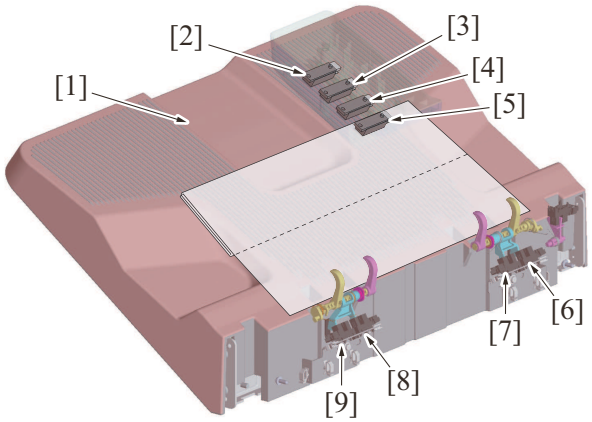
[1]	Z-fold roller	[2]	Pressure release lever

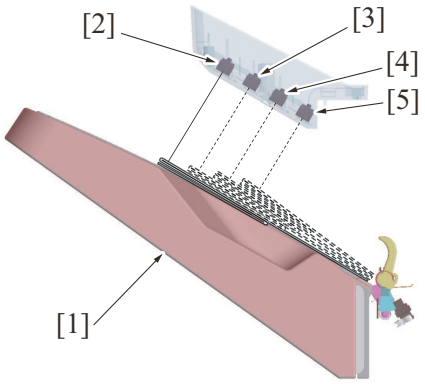


[1]	Before release	[2]	After release
[3]	Z-fold roller	[4]	Pressure release cam
[5]	Pressure release lever	-	-

11.3.6 Z-fold paper detection

- The upper limit sensor detects the Z-folded paper.
- When paper is discharged from the Z-fold section, the thickness of paper is different at the leading edge and trailing edge. The main tray upper sensor in the finisher cannot detect the Z-folded area. For this reason, the Z-folding upper limit sensor detects paper thickness (height).
- The main tray is lowered in accordance with the paper thickness (height).
- The upper limit sensor only makes detections for paper that is discharged from the Z-fold section. For normal paper discharge scenarios (including staple and punch operations), the finisher main tray upper sensor detects paper for the main tray.
- Four sensors are installed in the upper limit sensor, and the thickness (height) of the paper can be detected depending on the paper size.





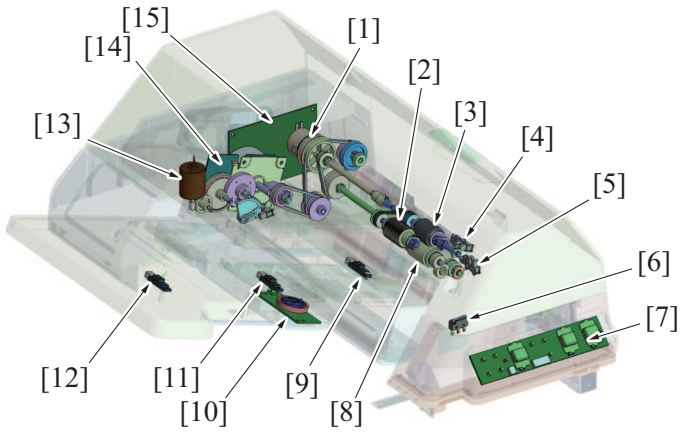
[1]	Main tray	[2]	Upper limit sensor1 (PS503)
[3]	Upper limit sensor2 (PS504)	[4]	Upper limit sensor3 (PS505)
[5]	Upper limit sensor4 (PS506)	[6]	Main tray lift up detection sensor/R (PS17: finisher section)

[7]	Main tray lift down detection sensor/R (PS15: finisher section)	[8]	Main tray lift down detection sensor/F (PS14: finisher section)
[9]	Main tray lift up detection sensor/F (PS16: finisher section)	-	-

12. PI-507

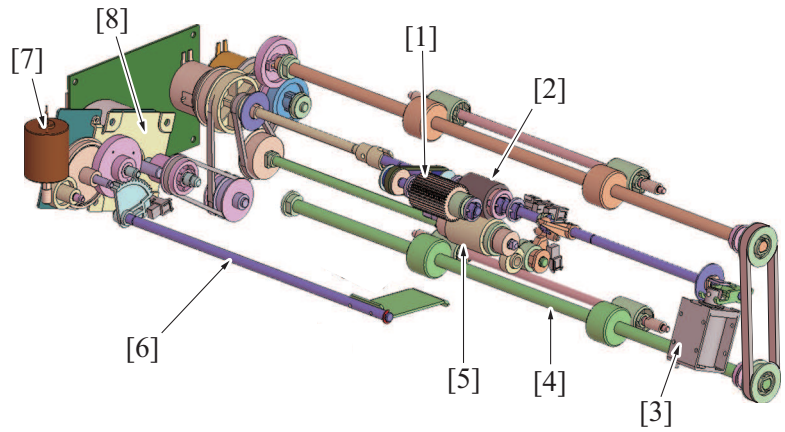
12.1 Configuration

- No control operation is performed for the upper tray.
- The detail of the post inserter section is explained with lower tray.



[1]	Transfer clutch /Lw (CL202)	[2]	Pick-up roller/Lw
[3]	Paper feed roller /Lw	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Paper entrance sensor /Lw (PS206)	[6]	Upper door open/close switch (MS205)
[7]	PI operation board (PIOB)	[8]	Separation roller /Lw
[9]	Paper empty sensor /Lw (PS207)	[10]	Paper size VR /Lw (VR202)
[11]	Paper set sensor /Lw (PS208)	[12]	L size sensor /Lw (PS212)
[13]	Tray lift motor /Lw (M202)	[14]	Transfer motor (M203)
[15]	PI drive board (PIDB)	-	-

12.2 Drive

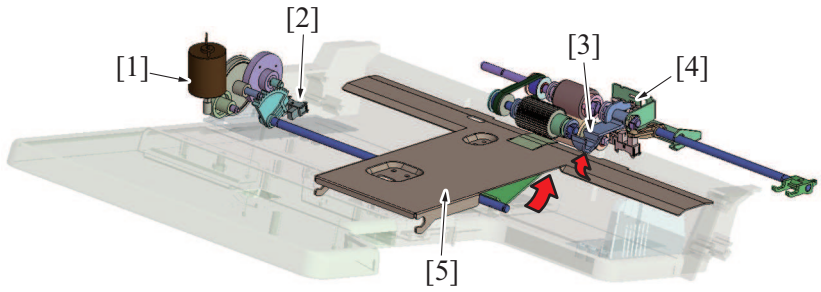


[1]	Pick-up roller/Lw	[2]	Paper feed roller /Lw
[3]	Pick-up solenoid /Lw (SD202)	[4]	Transport roller
[5]	Separation roller /Lw	[6]	Tray lift shaft/Lw
[7]	Tray lift motor /Lw (M202)	[8]	Transfer motor (M203)

12.3 Operation

12.3.1 Tray lift mechanism

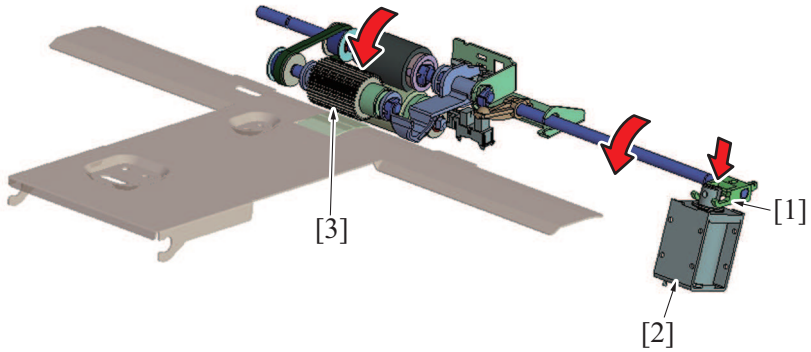
- The tray lift motors /up and /Lw move up and down the trays /Lw by rotating in the forward and reverse direction to drive the lift arms /Lw and move up and down the lift plates /Lw, respectively.
- At the upper limit position of the tray, the tray upper limit sensors /Lw detect the actuators lifted up by the lift plates.
- At the lower limit position of the tray, the tray lower limit sensors /Lw detect the actuators coupled with the lift arms /Lw.



[1]	Tray lift motor /Lw (M202)	[2]	Tray lower limit sensor /Lw (PS210)
[3]	Actuator /Lw	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Tray lift plate /Lw	-	-

12.3.2 Pick-up mechanism

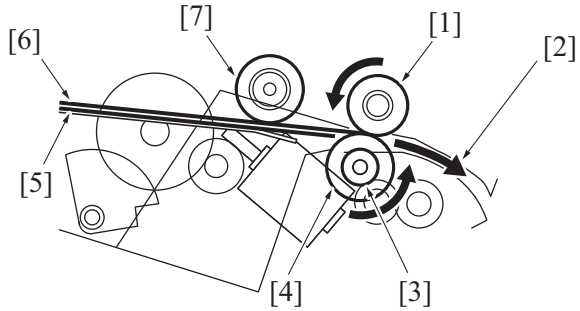
- The pick-up solenoids /Lw turn ON to pick up the paper.
- The release arm held upward by the spring lifts up the pick-up roller mounting plate to release the pick-up roller.
- When the pick-up solenoids /Lw turn ON, the release arm moves backward, and then the pick-up roller mounting plate and the pickup roller fall down by their own weight.
- The pick-up roller driven by the transfer motor presses the paper and picks it up to transfer it to the separation section.



[1]	Release arm/Lw	[2]	Pick-up solenoid /Lw (SD202)
[3]	Pick-up roller/Lw	-	-

12.3.3 Separation mechanism

- The separation roller is driven to rotate in the opposite direction from the paper transfer direction. When transferring no or 1 sheet of paper, the separation roller rotates in the paper transfer direction to transfer the paper to the paper transfer section because the frictional force between the paper feed roller or the paper and the separation roller is stronger than the frictional force of the torque limiter.
- When transferring 2 or more sheets of paper, the separation roller rotates in the reverse direction to prevent the bottom sheet from being transferred because the frictional force between the sheets is smaller than the frictional force of the torque limiter.



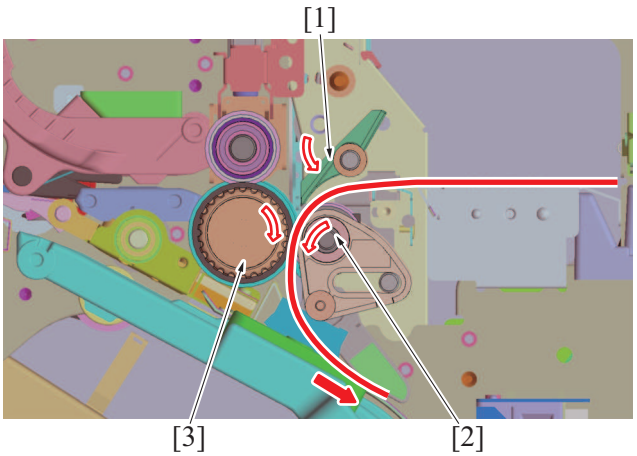
[1]	Paper feed roller	[2]	Paper transfer direction
[3]	Torque limiter	[4]	Separation roller
[5]	Second sheet	[6]	First sheet
[7]	Pick-up roller	-	-

12.3.4 Path switching mechanism

- A path switching mechanism is provided to transport paper to the saddle unit when tri-folding or booklet is selected from the post inserter section.
- When the normal switchback operation is performed, pages can become misaligned. For this reason, a transport path mechanism is provided to transport paper to the saddle unit.
- The transport path is changed with the Z-folding unit if the Z-folding unit is installed as option. If the Z-folding unit is not installed, the path switching assy that is supplied with the post inserter is required.
- When the tri-folding or the booklet function is selected from the post inserter, the folding guide motor is driven to lower the folding clip.
- Paper that is transported to the finisher is transported to the transport roller and Z-fold roller by the lowered folding clip. Paper is then transported to the saddle unit.

NOTE

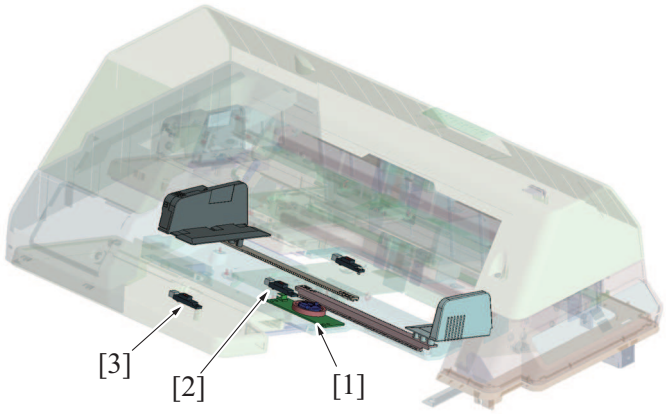
- **The dedicated the transport roller drive motor(M204) is required for the finisher when the post inserter is installed.**
- **At time of set-up, make sure to replace the ZU transport motor (M21) that is attached to the finisher with the supplied the transport roller drive motor(M204). However, it is not necessary to install the transport roller drive motor(M204) if the Z-folding unit is already installed.**



[1]	Folding claw	[2]	Z-fold roller
[3]	Transport roller 2 (finisher section)	-	-

12.3.5 Paper size detection control

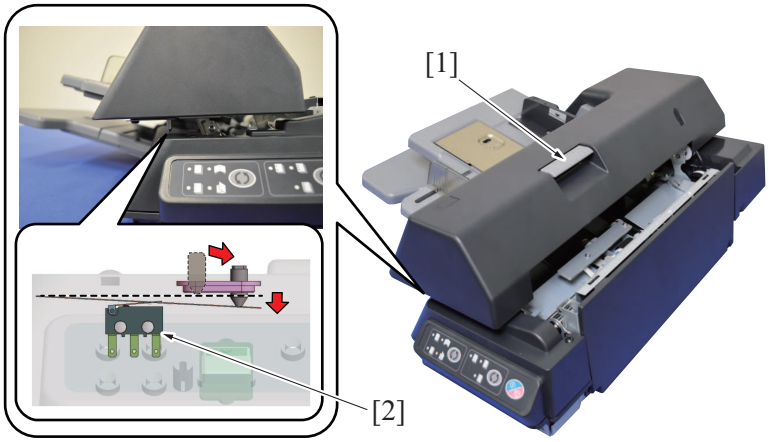
- The paper size VR /Lw coupled with the side guide detects the paper size in the main scan direction.
- The paper set sensors /Lw and the L size sensor /Lw detects the paper size in the sub scan direction.



[1]	Paper size VR /Lw (VR202)	[2]	Paper set sensor /Lw (PS208)
[3]	L size sensor /Lw (PS212)	-	-

12.3.6 Door open/close detection mechanism

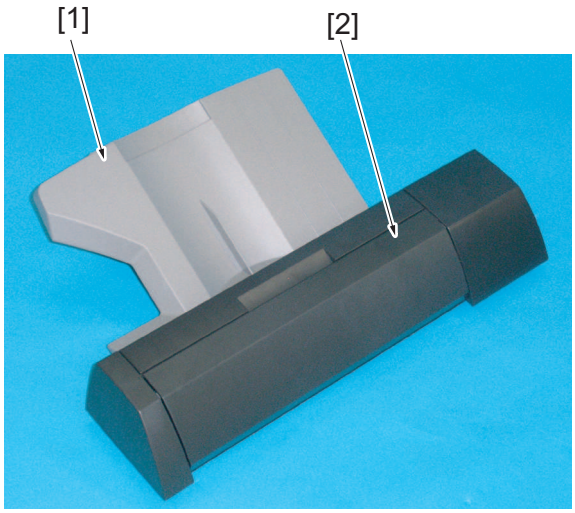
- The upper door open/close switch is installed in the lower-front of the post inserter to detect open/close states of the door.
- Open the door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Upper door open/close lever	[2]	Upper door open/close switch (MS205)

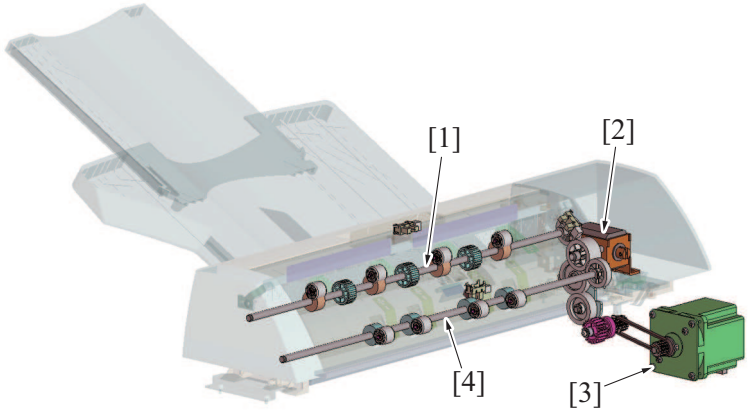
13. JS-602

13.1 Configuration



[1]	Job tray	[2]	Job separator cover

13.2 Drive

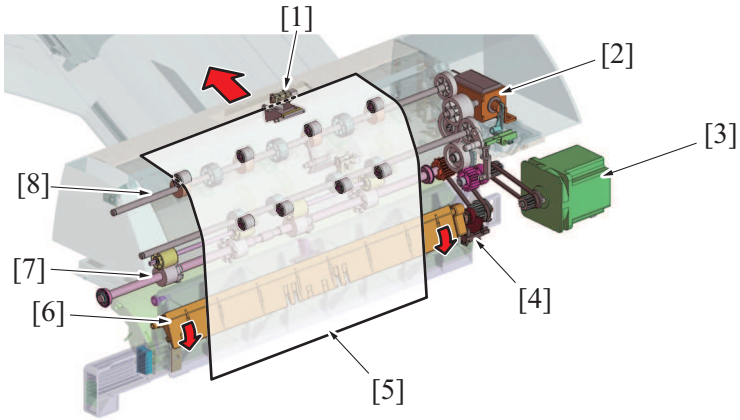


[1]	Job separator exit roller	[2]	Entrance switching solenoid (SD401)
[3]	Sub tray discharge motor (M18: finisher section)	[4]	Job separator transport roller

13.3 Operation

13.3.1 Job tray transport mechanism

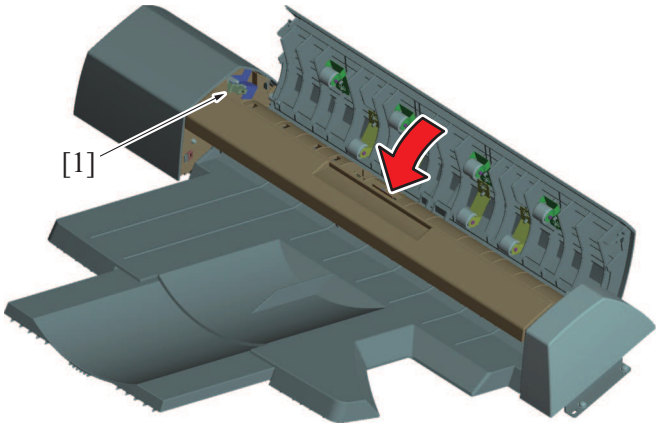
- The sub tray discharge motor in the finisher drives to rotate the job separator transport roller and job separator exit roller to transport paper to the tray.
- At the sub tray/JS route change gate, change of the transport path to the job tray is performed.
- The sub tray discharge motor of finisher drives to move the sub tray/JS route change gate horizontally to switch between the paper paths. Therefore the entrance switching solenoid is not used.



[1]	Job tray paper exit sensor (PS402)	[2]	Entrance switching solenoid (SD401)
[3]	Sub tray discharge motor (M18: finisher section)	[4]	Sub tray/JS route change gate home sensor (PS23: finisher section)
[5]	Paper	[6]	Route change gate
[7]	Job separator transport roller	[8]	Job separator exit roller

13.3.2 Door open/close detection mechanism

- The job tray door sensor is installed in the rear of the job separator section to detect open/close states of the door.
- When the job tray door is opened, a warning screen appears on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.

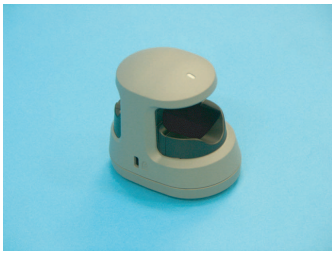


[1]	Job tray door sensor (PS401)	-	-

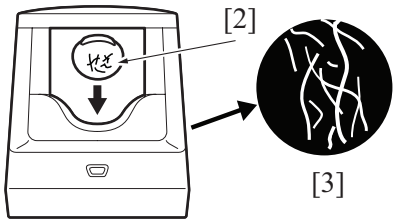
PM THEORY OF OPERATION AU-102/AU-201S

1. AU-102

1.1 Configuration



[1]



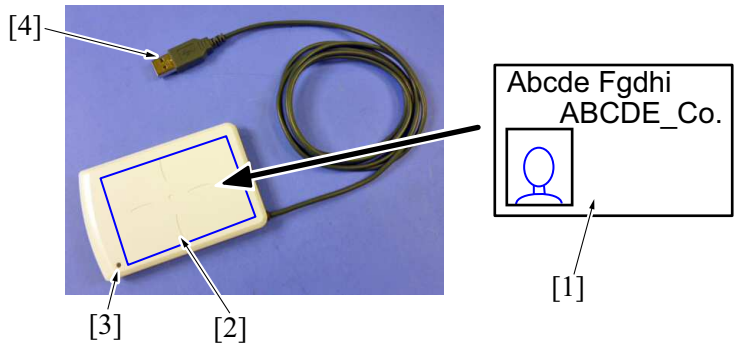
[1]	Authentication unit (AU-102)	[2]	Finger
[3]	Vein image	-	-

1.2 Operation

- A finger vein pattern is used for personal identification.
- Vein patterns are inside the body and cannot be visually recognized. This makes vein patterns extremely difficult to forge or falsify. The vein pattern authentication system can provide high security.
- With ultra-red LED radiation, a finger vein pattern is captured by camera and its image is created. The vein pattern image is registered and a person can be identified if the person's vein pattern matches the registered one at the time of user authentication.

2. AU-201S

2.1 Configuration



[1]	Non-contact IC card	[2]	Read-write area
[3]	Status LED	[4]	USB connector (Type-A)

- Use the Local Interface Kit EK-608/EK-609 and the Installation Kit MK-735 to attach the authentication device inside the main unit.

2.2 Operation

- Place the non-contact IC card on the authentication device to read and write data.
- Displays the operational status via LEDs on the unit.
  - Yellow-green light glows: Normal operation.
  - Red light or orange light is on: Unit is experiencing an issue.

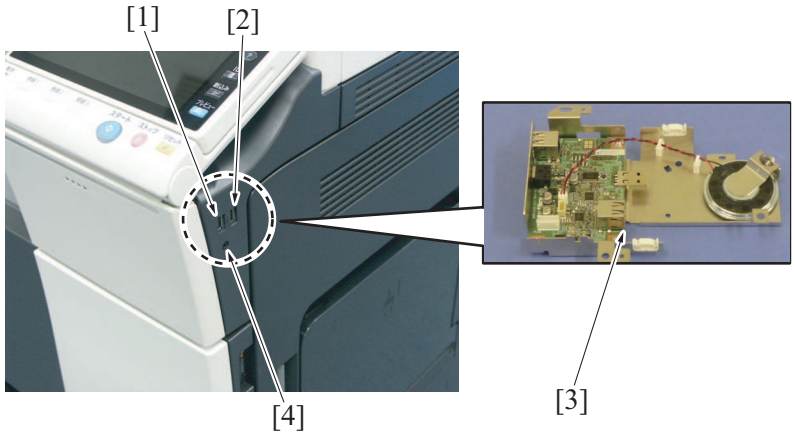
2.3 Specifications

Communication Type	TypeA/Mifare	TypeB	FeliCa
Communication Speed	106 Kbps	106 kbps, 212 kbps, 424 kbps	212 kbps, 424 kbps
Authentication Function	Mifare Crypt	-	DES, AES
Compatible IC cards	• Non-contact IC cards compliant with ISO14443 Type A • Non-contact IC cards compliant with TN2 (SEE55R)	Non-contact IC cards compliant with ISO14443 Type B	FeliCa card
Inter-terminal Communication	Inter-terminal communication compliant with ISO18092 (communication speed: 106, 212, and 424 kbps)		

PN THEORY OF OPERATION EK-608/EK-609/SC-508

1. EK-608

1.1 Configuration



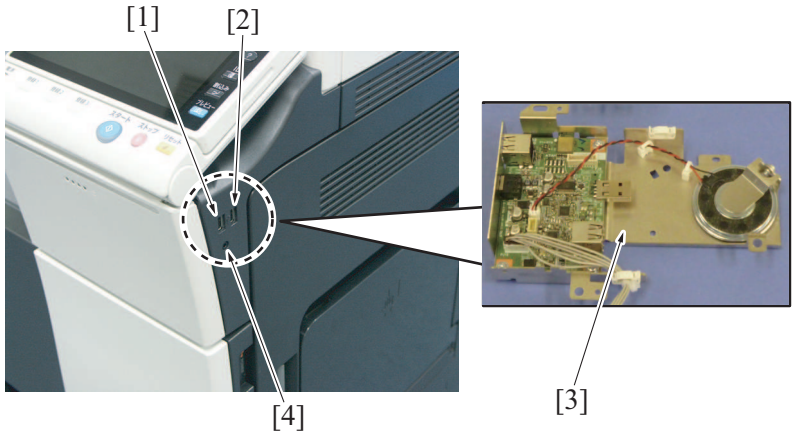
[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-608	[4]	Voice guidance output terminal

1.2 Operation

- The document can be printed directly from, or saved in, the USB memory.
- Connecting the USB keyboard (dealer option: overseas market only) will permit keyboard input.
- To use the voice guidance function, i-Option LK-104 v3 and Upgrade Kit UK-211 are required.

2. EK-609

2.1 Configuration



[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-609	[4]	Voice guidance output terminal

2.2 Operation

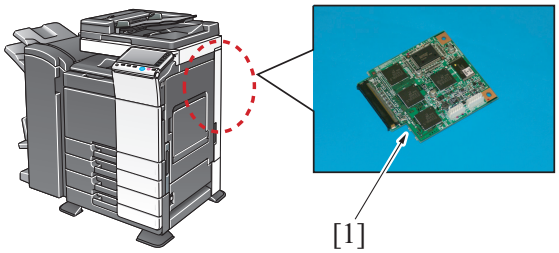
- The document can be printed directly from, or saved in, the USB memory.
- Connecting the USB keyboard (dealer option: overseas market only) will permit keyboard input.
- The local interface kit is mounted when the voice guidance function, and functions interacting with the portable phone or PDA (portable data terminal), compatible with Bluetooth, are to be used. It has a built-in speaker and Bluetooth communication receiver.
- To use the voice guidance function, i-Option LK-104 v3 and Upgrade Kit UK-211 are required.



[1]	Portable phone, PDA	[2]	Local Interface Kit EK-609

3. SC-508

3.1 Configuration



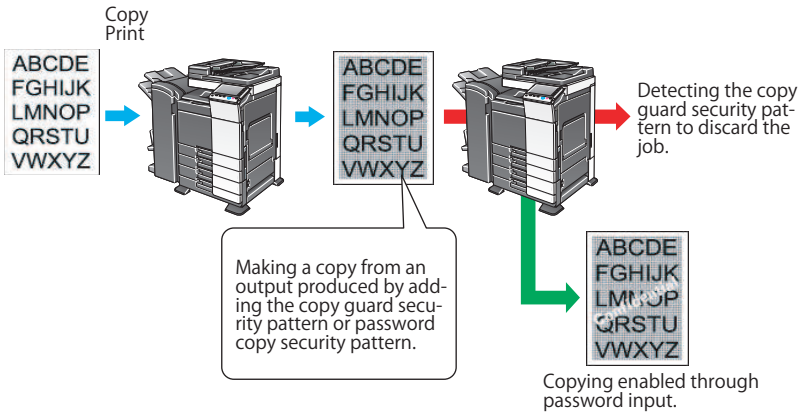
[1]	Security Kit SC-508 *	-	-

NOTE

- ***: It is necessary to install two security kits to the machine for each front side scanning and back side scanning.**

3.2 Operation

- The security kit offers the copy guard (copy prohibited) and password copy functions in addition to the conventional copy protect function. The copy guard security pattern or password copy security pattern printed on the original, is detected to thereby prevent unauthorized copies from being produced.
- The copy guard security pattern and password copy security pattern can be detected only by the Konica Minolta machine mounted with the copy guard and password copy functions.

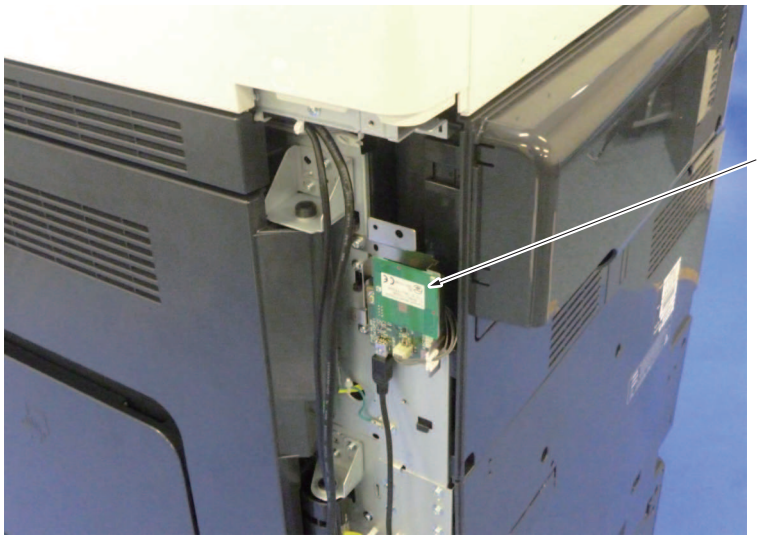


PO THEORY OF OPERATION UK-212/UK-215

1. CONFIGURATION

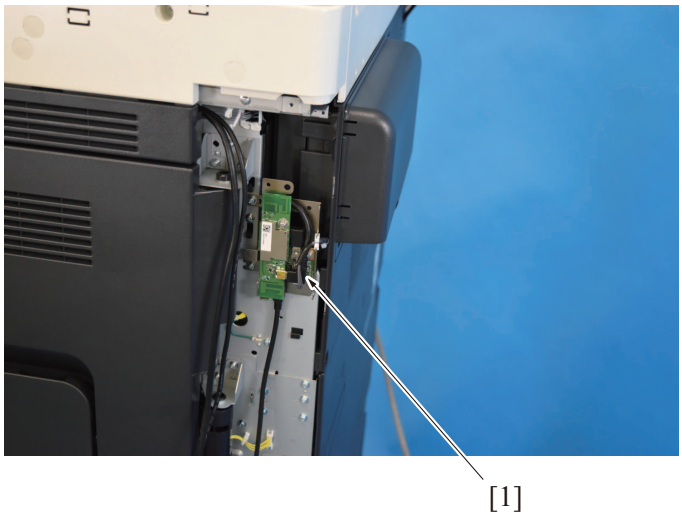
1.1 Mounting position

UK-212



[1]	Upgrade kit (UK-212)	-	-

UK-215



[1]	Upgrade kit (UK-215)	-	-

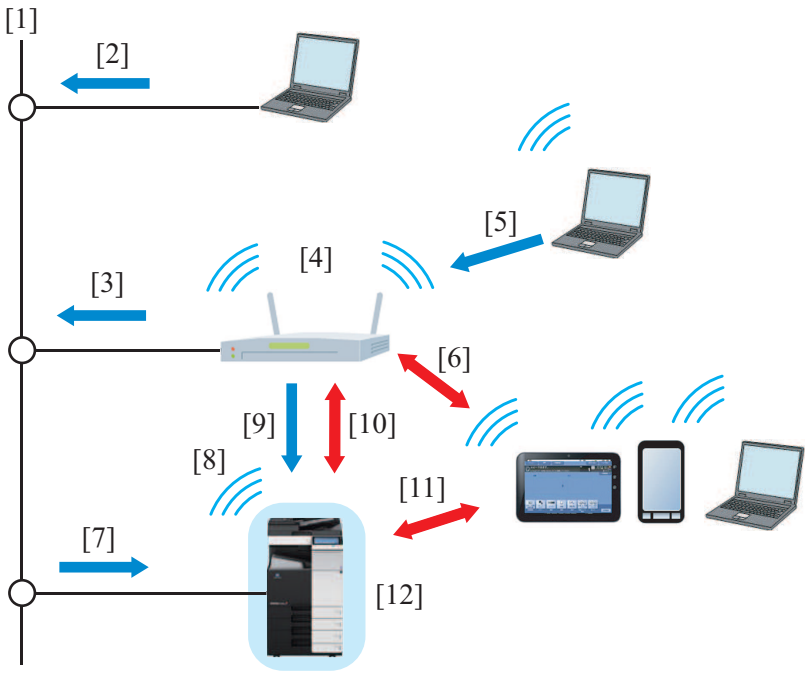
2. OPERATION

2.1 Outline

When the Upgrade kit (UK-212/UK-215) is installed, the following functions can be added:

- Connect the MFP main unit as a wireless LAN adapter to a wireless LAN access point connected to the LAN environment, a job can be executed. The MFP main unit can be connected to both a wireless LAN environment and a LAN environment. (Wireless Only, Wired +Wireless (Secondary Mode))
- Direct communication between the MFP main unit and the mobile device (Android device, iOS device or Wi-Fi support devices) will be enabled. (Wired+Wireless (Primary Mode)*, Wired+Wireless (Wi-Fi Direct))
- Even when the MFP main unit is at standby in "Erp Auto Power Off" mode, a client can start the machine to execute a job.

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC connected to the LAN environment
[3]	Job received via the wireless LAN access point	[4]	Wireless LAN access point connected to the LAN environment
[5]	Job received from a PC connected to the wireless LAN environment	[6]	Communication with a mobile device connected to the wireless LAN environment *1
[7]	Job received from the MFP main unit via the LAN	[8]	• Communication with the wireless LAN access point (Wireless Only, Wired+Wireless (Secondary Mode)) • Enabled communication with a mobile device (Wired + Wireless (Primary Mode)*, Wired + Wireless (Wi-Fi Direct))
[9]	Job received from the MFP main unit via the wireless LAN	[10]	Communication via the wireless LAN access point connected to a mobile device (Android device, iOS device or Wi-Fi support devices)
[11]	Direct communication with a mobile device (Wired + Wireless (Primary Mode)*, Wired + Wireless (Wi-Fi Direct))	[12]	Machine (on startup)

NOTE

- **To use UK-212/UK-215, the following settings are required.**
  [SERVICE MODE] -> [Network Settings] -> [2nd Network Setting]
- **The "Interface structure" includes the following five patterns. These patterns can be selected depending on the connection environment of the machine.**
  [SERVICE MODE] -> [Network Settings] -> [2nd Network Setting] -> [Network Interface Settings]

No.	Network Interface Settings	Connection environment of MFP main unit
1	Wired Only	Use when the machine is connected only to a LAN environment.
2	Wireless Only	Use when the machine is connected only to a wireless LAN environment.
3	Wired+Wireless (Secondary Mode)	Use when the machine is connected to both a LAN environment and a wireless LAN environment.
4	Wired+Wireless (Primary Mode)	• Use when the machine is connected to both a LAN environment and a wireless LAN environment. • The machine is used as a wireless LAN access point (Primary Mode).

No.	Network Interface Settings	Connection environment of MFP main unit
5	Wired+Wireless (Wi-Fi Direct)	• Use when the machine is connected to both a LAN environment and a wireless LAN environment. • The machine is used as a wireless LAN access point. • A mobile device (excluding iOS) can be connected to Wi-Fi Direct authentication devices easily.

2.2 2nd network interface structure

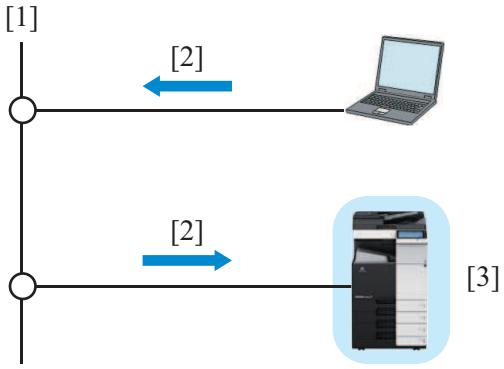
2.2.1 Wired Only

- Use when the machine is connected only to a LAN environment. (Initial setting)
- The LAN line is the main line.

(1) Operation

- To execute a job received from a client via the LAN.

Basic concept of connection



[1]	LAN environment	[2]	Job
[3]	MFP main unit (on startup)	-	-

2.2.2 Wireless Only

- Use when the machine is connected only to a wireless LAN environment.
- The wireless LAN line is the main line.

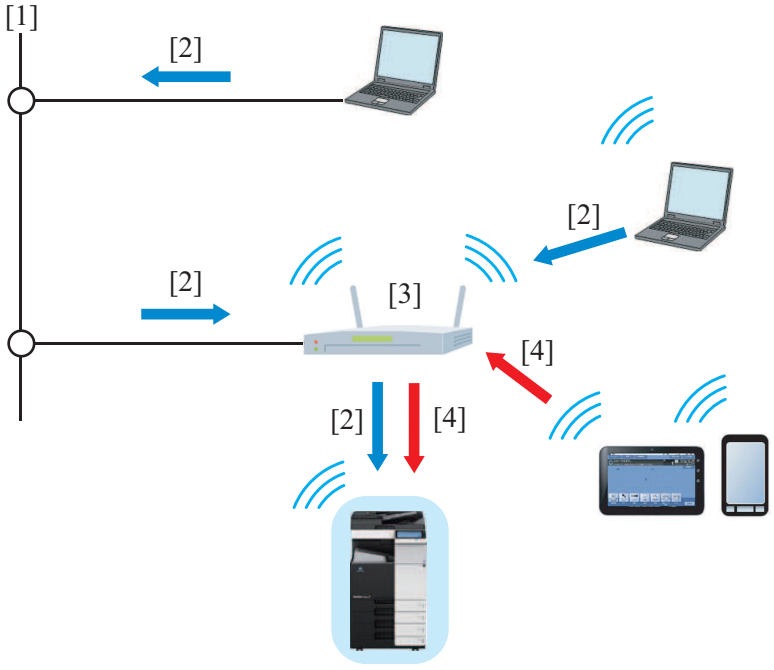
(1) Operation

- To execute a job received from a client via the wireless LAN access point.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android device or iOS device (called mobile device hereafter) connected to the wireless LAN.

NOTE

- **A wireless communication is performed between the machine and a client via the wireless LAN access point.**

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC

[3]	Wireless LAN access point	[4]	Job received from a mobile device

2.2.3 Wired+Wireless (Secondary Mode)

- Use when the machine is connected to both a LAN environment and a wireless LAN environment.
- The LAN line is the main line, and the wireless LAN line is the sub line.

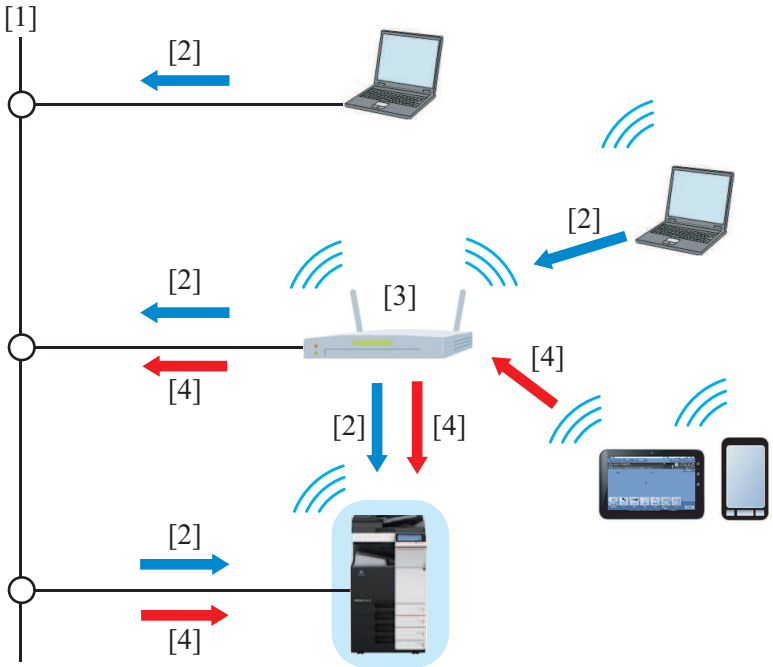
(1) Operation

- To execute a job received from a client via the LAN.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android device or iOS device (called mobile device hereafter) connected to the wireless LAN.
- To execute a job from a client via the wireless LAN access point.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android device or iOS device (called mobile device hereafter) connected to the wireless LAN.

NOTE

- **A communication is performed between the machine and the mobile device via the LAN and wireless LAN access point.**

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC
[3]	Wireless LAN access point	[4]	Job received from a mobile device

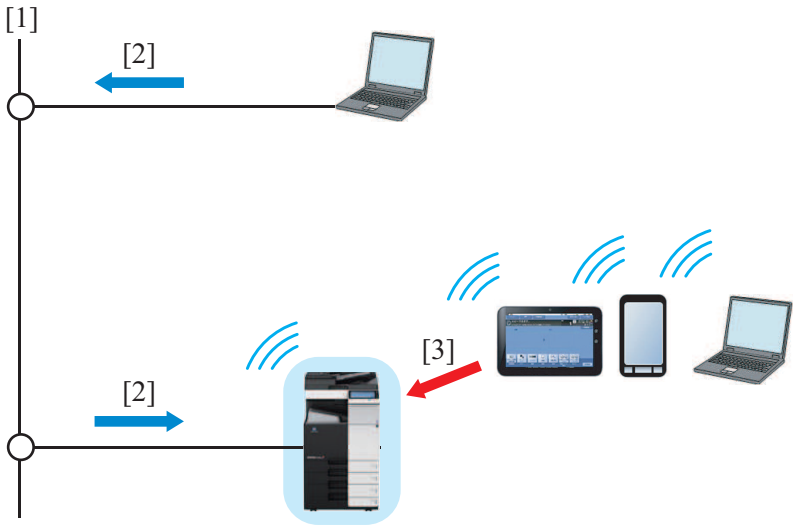
2.2.4 Wired+Wireless (Primary Mode)

- Use when the machine is connected to both a LAN environment and a wireless LAN environment.
- The LAN line is the main line, and the wireless LAN line is the sub line.
- The machine is used as a wireless LAN access point.
- During startup of the machine, perform wireless LAN communication between the machine and the mobile device (Android device, iOS device, or devices supporting Wi-Fi) without via wireless LAN access point.

(1) Operation

- To execute a job received from a client via the LAN.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
- To execute a job received from a mobile device through a wireless communication.

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC
[3]	Job received from a mobile device	-	-

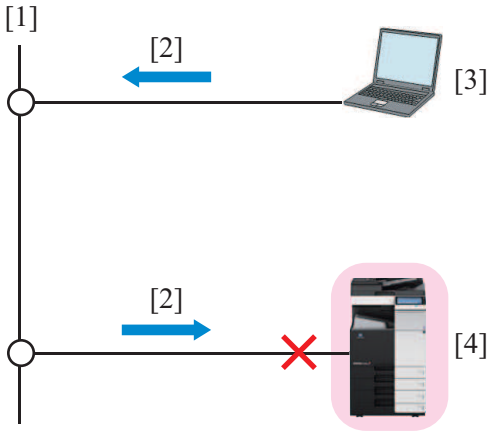
2.2.5 Wired+Wireless (Wi-Fi Direct)

- This mode performs same control as that with Wired+Wireless (Primary Mode).
- When connected to devices supporting Wi-Fi Direct authentication, connection without settings of SSID and password is enabled.

2.3 Operation on ErP Auto Power Off mode

- On ErP Auto Power Off mode, the sub power supply turns off, so that the power consumption is controlled. Touching the power key to start the MFP main unit.
- When the machine without UK-212 or UK-215is switched to ErP Auto Power Off mode, the following operations are disabled. Such as receiving data, fax RX, scanning original, printing, and so on.
- When UK-212 or UK-215is installed, ErP Auto Power Off mode can be released remotely (by starting up the machine).
  [Setting menu] -> [Administrator settings] -> [Network Settings] -> [Wireless Network Setting]

Diagram of standby state in "ErP Auto Off mode" of the MFP main unit



[1]	LAN environment	[2]	Print job
[3]	Client (PC)	[4]	Machine (on standby in ErP Auto Power Off mode)

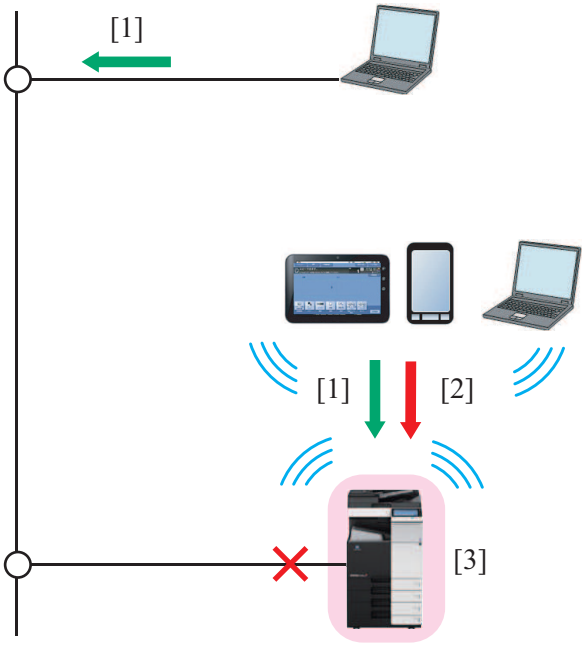
2.3.1 Wired+Wireless (Secondary Mode)

NOTE

- **To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].**

1. The machine waits for a startup indication that is sent via the wireless LAN communication.
2. Receive a startup command from a client via the wireless LAN communication without via the wireless LAN access point to start up the machine.
   - Receiving a startup indication from a PC to start up the MFP main unit.
   - Receiving a communication from a mobile device to start up the MFP main unit.

   Diagram of startup operation

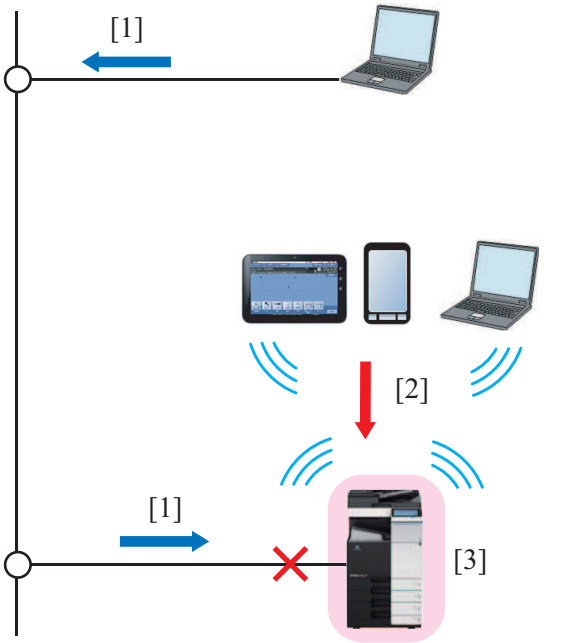


[1] Startup indication *1
[2] Job received from a mobile device
[3] Machine (on startup)

- *1: To execute a print job, [Wake-On-Lan setting] is required to configure at [Initial settings] of a printer driver.

3. After the machine starts up, execute a job that is received from a client.
   - Execute a job received from a PC via the LAN.
   - Execute a job received from a PC via the wireless LAN communication.
   - Execute a job received from a mobile device via the wireless LAN communication.

Diagram of operation after startup



[1] Job received from a PC
[2] Job received from a mobile device
[3] Machine (after startup)

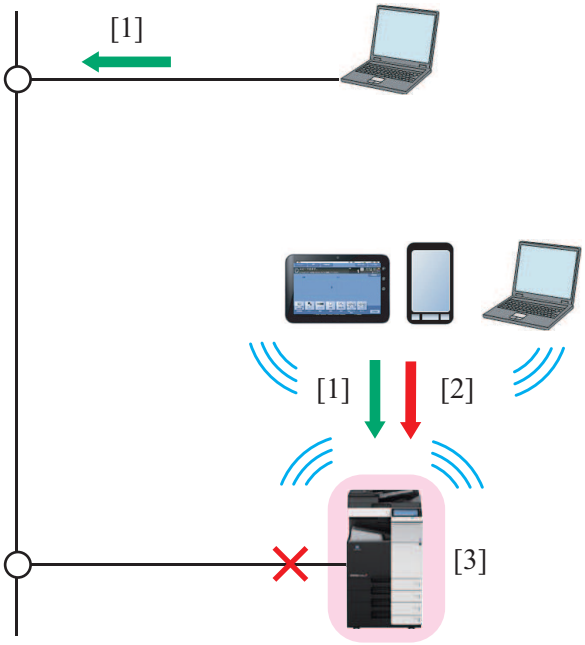
2.3.2 Wired+Wireless (Primary Mode), Wired+Wireless (Wi-Fi Direct)

NOTE

- **To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].**

1. The machine waits for a startup indication that is sent via the wireless LAN communication.
2. Receive a startup command from a client via the wireless LAN communication without via the wireless LAN access point to start up the machine.
   - Receiving a startup indication from a PC to start up the MFP main unit.
   - Receiving a communication from a mobile device to start up the MFP main unit.

Diagram of startup operation



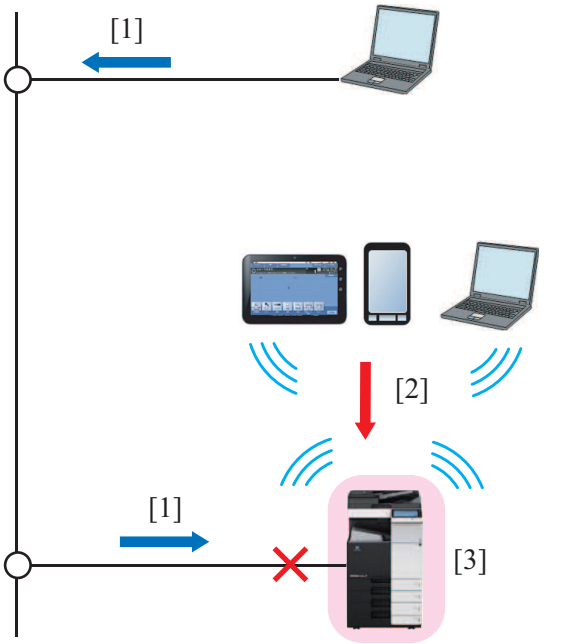
[1] Startup indication *1
[2] Job received from a mobile device
[3] Machine (on startup)

- *1: To execute a print job, [Wake-On-Lan setting] is required to configure at [Initial settings] of a printer driver.

3. After the machine starts up, execute a job that is received from a client.

- Execute a job received from a PC via the LAN.
- Execute a job received from a mobile device through a direct wireless LAN communication.

Diagram of operation after starting up the MFP main unit



[1] Job received from a PC
[2] Job received from a mobile device
[3] Machine (on startup)

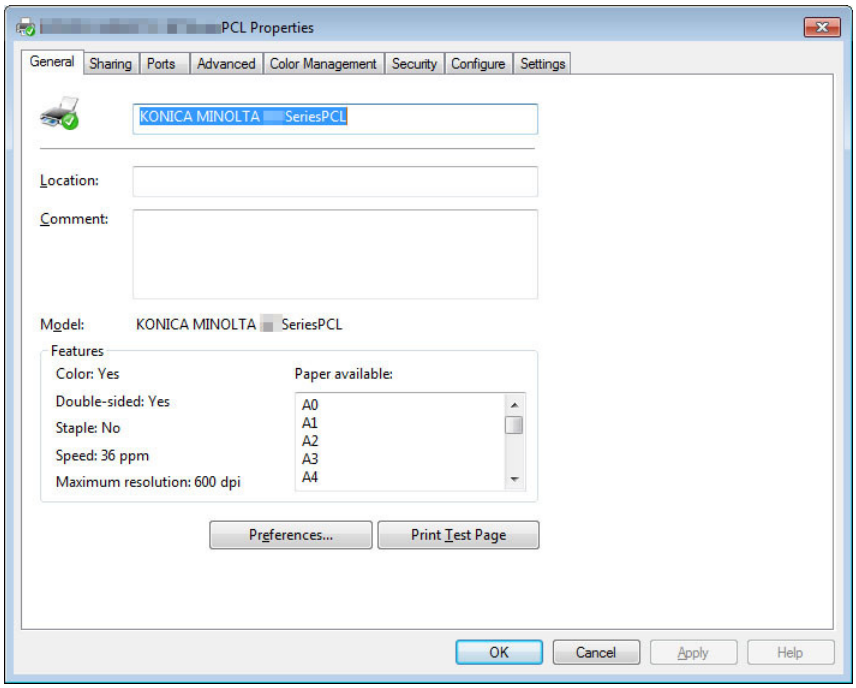
- After the machine starts up, the wireless LAN communication between the machine and the wireless LAN access point will be completed.

2.3.3 Setting for printer driver

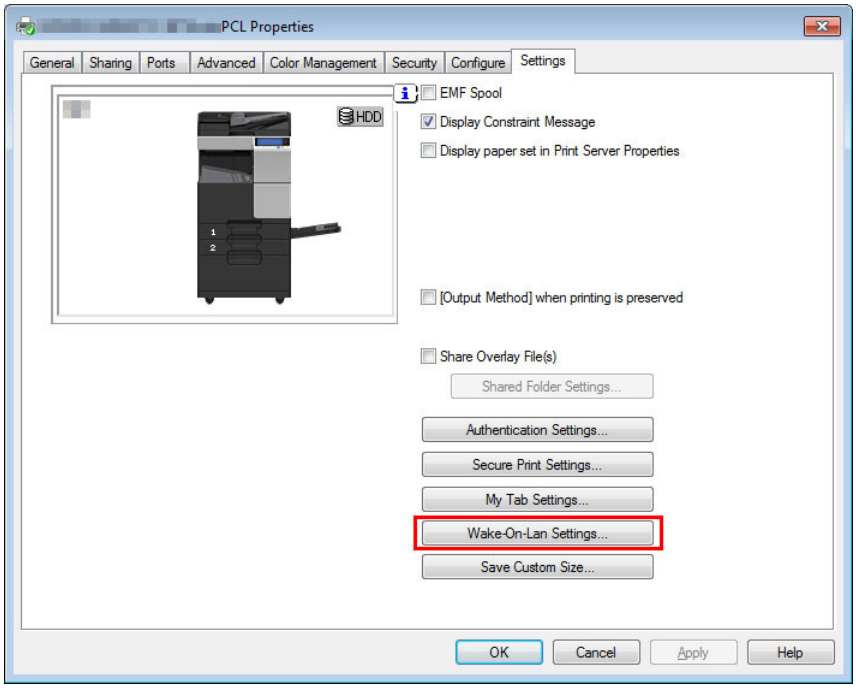
- To execute a print job, property settings are required for the printer driver to start up the MFP main unit from ErP Auto Power Off mode.

(1) Setting procedure

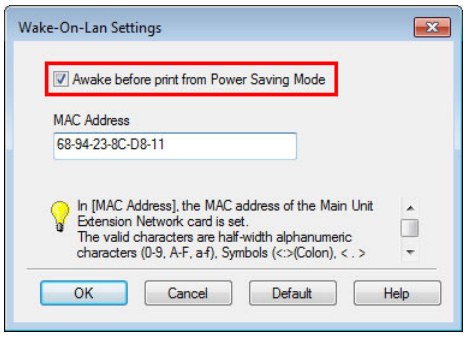
1. Open the property window of the printer.



2. Select the [Initial settings] tab, and select [Wake-On-Lan setting].



3. Select the [Awake before print from Power Saving Mode] check box.



PP THEORY OF OPERATION FK-514/FK-515/MK-742

1. COMMUNICATION CONTROL

1.1 FIF bits of DIS, DTC and DCS

NOTE

- **Considered to be A4 width when the DIS recording paper width is invalid (1, 1).**
  Becomes a FIF error when the DCS recording paper width is invalid (1, 1).
- **Considered to be unlimited when the DIS recording paper length is invalid (1, 1).**
  Considered to be unlimited when the DCS recording paper length is invalid (1, 1).
  The DCS recording paper length in a machine is made to be of the same length as that in a remote station and is sent.
- **Considered to be 2400 bps when the DIS transmission speed is an undefined value.**
  Becomes a FIF error when the DCS transmission speed is an undefined value.
- **Considered to be 40ms instruction when the MSLT of DCS is an undefined value.**
- **Considered to have mm ability when DIS inch ability and mm ability are both set to OFF.**
  Considered to be 200x100 pels/inch when the DCS resolution receives the inch instruction at 3.85 l/mm.
  Becomes a FIF error when more than one of bit41, 42 and 43 are set to on in the resolution of DCS.
- **Becomes a FIF error when DCS receives the MMR instruction without ECM.**
- **Becomes a FIF error when DCS receives the file transfer (BFT) instruction without ECM.**
- **Becomes a FIF error when DCS shows an instruction which exceeds the ability of the machine.**
- **FIF of DIS/DTC is not sent if last octet is 0.**
  DCS sends FIF whose length is the same as that of the machine.
- **When undefined signals are received, they are received and ignored in consideration of the future expansion. (not an error)**

1.1.1 FIF data configuration list (DIS/DTC)

(1) Octet 4

bit	Function	Contents	Default
1	T.37 Internet fax (Simple mode)		0
2	Reserved		0
3	T.38 real time Internet fax		0
4	Third generation mobile network		0
5	Reserved		0
6	V.8 ability		0
7	ECM frame	1: 64 octet 0: 256 octet	0
8	Reserved		0

(2) Octet 5

bit	Function	Contents	Default
9	Ready for polled transmission	1: polled transmission documents exist 0: no polled transmission documents	@
10	Receiver ability	1: Reception is possible. 0: Reception is impossible.	@
11	Transmission speed ability	Refer to *1.	1
12			1
13			0
14			1
15	R8×7.7 l/mm and/or 200×200 pels/25.4 mm		1
16	Two-dimensional coding ability	1: MR 0: MH	1

- @: Changes to 0 or 1 according to a status of devices.
- *1: Transmission speed ability (bit 11, 12, 13 and 14)

11	12	13	14	Contents	Transmission speed
0	0	0	0	V27 ter fall back mode	24
0	1	0	0	V27 ter	48, 24
1	0	0	0	V29	96, 72
1	1	0	0	V27 ter & V29	96, 72, 48, 24
1	1	0	1	V27 ter & V29 & V17	144, 120, 96, 72, 48, 24

(3) Octet 6

bit	Function	Contents	Default
17	Recording paper width ability	bit 17, 18 0,0=A4 0,1=A3 1,0=B4	0
18			1

bit	Function	Contents	Default
		1,1=Invalid	
19	Recording paper length ability	bit 19, 20 0,0=A4 0,1=Unlimited 1,0=B4 1,1=Invalid	0
20			1
21	Minimum scan line time ability	Refer to *2.	1
22			0
23			0
24	Expansion field		1

- *2: Minimum scan line time ability (bit 21, 22 and 23)

21	22	23	Contents	
0	0	0	3.85 l/mm --- 20 ms	7.7 l/mm --- 20 ms
0	0	1	3.85 l/mm --- 40 ms	7.7 l/mm --- 40 ms
0	1	0	3.85 l/mm --- 10 ms	7.7 l/mm --- 10 ms
0	1	1	3.85 l/mm --- 10 ms	7.7 l/mm --- 5 ms
1	0	0	3.85 l/mm --- 5 ms	7.7 l/mm --- 5 ms
1	0	1	3.85 l/mm --- 40 ms	7.7 l/mm --- 20 ms
1	1	0	3.85 l/mm --- 20 ms	7.7 l/mm --- 10 ms
1	1	1	3.85 l/mm --- 0 ms	7.7 l/mm --- 0 ms

(4) Octet 7

bit	Function	Contents	Default
25	Reserved		0
26	Non-compression mode		0
27	Error correction mode (ECM) ability	1: with ECM 0: without ECM	1
28		0: fixed	0
29	Reserved		0
30	Reserved		0
31	T.6 coding (MMR) ability	1: with MMR 0: without MMR	1
32	Expansion field		1

(5) Octet 8

bit	Function	Contents	Default
33	Field not valid		0
34	Multi-selective polling	1: Ability 0: No ability	0
35	Polled sub-address		0
36	T.43 coding ability		0
37	Plain Interleave		0
38	32K ADPCM voice coding		0
39	Reserved		0
40	Expansion field		1

(6) Octet 9

bit	Function	Contents	Default
41	R8×15.4 l/mm		1
42	300×300 pels/25.4 mm		0
43	R16×15.4 l/mm and/or 400×400 pels/25.4 mm		1
44	inch ability		1
45	mm ability		1
46	Minimum scan line time ability of high resolution	0: T15.4=T7.7 1: T15.4=1/2T7.7	0
47	Selective polling		1
48	Expansion field		1

(7) Octet 10

bit	Function	Contents	Default
49	Sub address ability		1
50	Password		1
51	Ready for data file transmission (polling)		0
52	Reserved		0
53	BFT transfer ability		0
54	DTM transfer ability		0
55	EDI transfer ability		0
56	Expansion field		0

(8) Octet 11

bit	Function	Contents	Default
57	BTM transfer ability		0
58	Reserved		0
59	Character or mixed mode documents ready for Tx (polling)		0
60	Character mode ability		0
61	Reserved		0
62	Mixed mode ability		0
63	Reserved		0
64	Expansion field		0

(9) Octet 12

bit	Function	Contents	Default
65	Processible mode (T.505)		0
66	Digital network ability		0
67	Full-duplex communication ability	1: Full-duplex 0: Half-duplex	0
68	JPEG coding ability		0
69	Full color mode		0
70		0: Fixed	0
71	12 bits / pixel component		0
72	Expansion field		1

(10) Octet 13

bit	Function	Contents	Default
73	No sub sampling (1:1:1)		0
74	Custom illuminance		0
75	Custom gamut range		0
76	North America Letter (215.9*279.4) ability		0
77	North America Legal (215.9*355.6) ability		0
78	Single progression sequential coding (T.85) basic ability		1
79	Single progression sequential coding (T.85) optional LO ability		@
80	Expansion field		0

- @: Changes to 0 or 1 according to a status of devices.

(11) Octet 14

bit	Function	Contents	Default
81	HKM key management capability		0
82	RSA key management capability		0
83	Override capability		0
84	HFX40 cipher capability		0
85	Alternative cipher number 2 capability		0
86	Alternative cipher number 3 capability		0
87	HFX40-I hashing capability		0
88	Expansion field		1

(12) Octet 15

bit	Function	Contents	Default
89	Alternative hashing system number 2 capability		0
90	Alternative hashing system number 3 capability		0
91	Reserved		0
92	T.44 (Mixed raster content)		0
93	T.44 (Mixed raster content)		0
94	T.44 (Mixed raster content)		0
95	Page length maximum strip size for T.44 (Mixed raster content)		0
96	Expansion field		1

(13) Octet 16

bit	Function	Contents	Default
97	Color/gray-scale 300 pels/25.4 mm x 300 lines/25.4 mm or 400 pels/25.4 mm x 400 lines/25.4 mm resolution		0
98	100 pels/25.4 mm x 100 lines/25.4 mm for color/gray scale		0
99	Simple phase C BFT negotiations capability		0
100	Extended BFT negotiations capability		0
101	Internet selective polling address (ISP)		0
102	Internet routing address (IRA)		0
103	Reserved		0
104	Expansion field		1

(14) Octet 17

bit	Function	Contents	Default
105	600 pels/25.4 mm x 600 lines/25.4 mm		1
106	1200 pels/25.4 mm x 1200 lines/25.4 mm		0
107	300 pels/25.4 mm x 600 lines/25.4 mm		0
108	400 pels/25.4 mm x 800 lines/25.4 mm		0
109	600 pels/25.4 mm x 1200 lines/25.4 mm		0
110	Color/gray-scale 600 pels/25.4 mm x 600/25.4 mm resolution		0
111	Color/gray-scale 1200 pels/25.4 mm x 1200/25.4 mm resolution		0
112	Expansion field		0

(15) Octet 18

bit	Function	Contents	Default
113	Double sided printing capability (alternate mode)		0
114	Double sided printing capability (continuous mode)		0
115	Black and white mixed raster content profile (MRCbw)		0
116	T.45 (run length color encoding)		0
117	Shared date memory capacity	bit 117, 118 0,0=Disable 0,1= Level 1=1.0 Mbytes 1,0= Level 2=2.0 Mbytes 1,1= Level 3=unlimited (i.e. 32 Mbytes or more)	0
118			0
119	Reserved		0
120	Expansion field		0

(16) Octet 19

bit	Function	Contents	Default
121	Flow control capability for T.38 communication		0
122	K > 4		0
123	Internet aware T.38 mode fax device		0
124	T.89 (Application profiles for ITU-T T.88)	Refer to *3.	0
125			0

bit	Function	Contents	Default
126			0
127	sYCC-JPEG coding		0

- *3: T.89 (Application profile for ITU-T T.88)

124	125	126	Contents
0	0	0	Not used
0	0	1	Profile 1
0	1	0	Profile 2
0	1	1	Profile 3
1	0	0	Profile 2 and 3
1	0	1	Reserved
1	1	0	Reserved
1	1	1	Reserved

1.1.2 FIF data configuration list (DCS)

(1) Octet 4

bit	Function	Contents	Default
1	T.37 Internet fax (Simple mode)		0
2	Reserved		0
3	T.38 real time Internet fax		0
4	Third generation mobile network		0
5	Reserved		0
6	Invalid		0
7	Invalid		0
8	Reserved		0

(2) Octet 5

bit	Function	Contents	Default
9		0: fixed	0
10	Reception command		1
11	Transmission speed instruction	Refer to *1.	@
12			@
13			@
14			@
15	R8×7.7 l/mm or 200×200 pels/25.4 mm	1: 7.7 l/mm 0: 3.85 l/mm	@
16	Two-dimensional coding instruction	1: MR 0: MH	@

- @: Changes to 0 or 1 according to a status of devices.
- *1: Transmission speed appointment (bit 11, 12, 13 and 14)

11	12	13	14	Contents
0	0	0	0	24/V27 ter
0	1	0	0	48/V27 ter
1	0	0	0	96/V29
1	1	0	0	72/V29
0	0	0	1	144/V17
0	1	0	1	120/V17
1	0	0	1	96/V17
1	1	0	1	72/V17

(3) Octet 6

bit	Function	Contents	Default
17	Recording paper width instruction	bit 17, 18 0,0=A4 0,1=A3 1,0=B4 1,1=Invalid	@
18			@
19	Recording paper length instruction	bit 19, 20 0,0=A4 0,1=Unlimited	@
20			@

bit	Function	Contents	Default
		1,0=B4 1,1=Invalid	
21	Minimum scan line time instruction	Refer to *2.	@
22			@
23			@
24	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.
- *2: Minimum scan line time instruction (bit 21, 22 and 23)

21	22	23	Contents
0	0	0	20 ms
0	0	1	40 ms
0	1	0	10 ms
1	0	0	5 ms
1	1	1	0 ms

(4) Octet 7

bit	Function	Contents	Default
25	Reserved		0
26	Non-compression mode		0
27	Error correction mode (ECM) instruction	1: with ECM 0: without ECM	@
28	Frame size instruction	1: 64 octet 0: 256 octet	@
29	Reserved		0
30	Reserved		0
31	T.6 coding (MMR) instruction	1: with MMR 0: without MMR	@
32	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(5) Octet 8

bit	Function	Contents	Default
33	Field not valid capability		0
34		0: fixed	0
35		0: fixed	0
36	T.43 Coding		0
37	Plain Interleave		0
38	32K ADPCM voice coding		0
39	Reserved		0
40	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(6) Octet 9

bit	Function	Contents	Default
41	R8×15.4 l/mm		@
42	300×300 pels/25.4 mm		@
43	R16×15.4 l/mm or 400×400 pels/25.4 mm		@
44	inch/mm instruction	1: mm setting 0: inch setting	@
45	Arbitrary		0
46	Arbitrary		0
47		0: fixed	0
48	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(7) Octet 10

bit	Function	Contents	Default
49	Sub address transmission		@

bit	Function	Contents	Default
50	Password (SID) transmission		@
51		0: fixed	0
52	Reserved		0
53	BFT transfer		@
54	DTM transfer		0
55	EDI transfer		0
56	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(8) Octet 11

bit	Function	Contents	Default
57	BTM transfer		0
58	Reserved		0
59		0: fixed	0
60	Character mode		0
61	Reserved		0
62	Mixed mode		0
63	Reserved		0
64	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(9) Octet 12

bit	Function	Contents	Default
65	Processible mode (T.505)		0
66	Digital network ability		0
67	Full-duplex communication instruction	1: Full-duplex 0: Half-duplex	0
68	JPEG coding		0
69	Full color mode		0
70	Default Huffman table use		0
71	12 bits / pixel component		0
72	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(10) Octet 13

bit	Function	Contents	Default
73	No sub sampling (1:1:1)		0
74	Custom illuminance		0
75	Custom gamut range		0
76	North America Letter (215.9 x 279.4)		0
77	North America Legal (215.9 x 355.6)		0
78	Single progression sequential coding (T.85) basic		@
79	Single progression sequential coding (T.85) optional LO		@
80	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(11) Octet 14

bit	Function	Contents	Default
81	HKM key management selected		0
82	RSA key management selected		0
83	Override mode selected		0
84	HFX40 cipher selected		0
85	Alternative cipher number 2 selected		0
86	Alternative cipher number 3 selected		0
87	HFX40-I hashing selected		0
88	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(12) Octet 15

bit	Function	Contents	Default
89	Alternative hashing system number 2 selected		0
90	Alternative hashing system number 3 selected		0
91	Reserved		0
92	T.44 (Mixed raster content)		0
93	T.44 (Mixed raster content)		0
94	T.44 (Mixed raster content)		0
95	Page length maximum strip size for T.44 (Mixed raster content)		0
96	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(13) Octet 16

bit	Function	Contents	Default
97	Color/gray-scale 300 pels/25.4 mm x 300 lines/25.4 mm or 400 pels/25.4 mm x 400 lines/25.4 mm resolution		0
98	100 pels/25.4 mm x 100 lines/25.4 mm for color/gray scale		0
99	Simple phase C BFT negotiations capability		0
100		0: Fixed	0
101		0: Fixed	0
102	Internet routing address (IRA) Transmission		0
103	Reserved		0
104	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(14) Octet 17

bit	Function	Contents	Default
105	600 pels/25.4 mm x 600 lines/25.4 mm		@
106	1200 pels/25.4 mm x 1200 lines/25.4 mm		0
107	300 pels/25.4 mm x 600 lines/25.4 mm		0
108	400 pels/25.4 mm x 800 lines/25.4 mm		0
109	600 pels/25.4 mm x 1200 lines/25.4 mm		0
110	Color/gray-scale 600 pels/25.4 mm x 600/25.4 mm resolution		0
111	Color/gray-scale 1200 pels/25.4 mm x 1200/25.4 mm resolution		0
112	Expansion field		0

- @: Changes to 0 or 1 according to a status of devices.

(15) Octet 18

bit	Function	Contents	Default
113	Double sided printing selected (alternate mode)		0
114	Double sided printing selected (continuous mode)		0
115		0: Fixed	0
116	T.45 (run length color encoding)		0
117	Shared date memory required	bit 117, 118 0,0= not used 0,1= Level 1=1.0 Mbytes 1,0= Level 2=2.0 Mbytes 1,1= Level 3=unlimited (i.e. 32 Mbytes or more)	0
118			0
119	Reserved		0
120	Expansion field		0

(16) Octet 19

bit	Function	Contents	Default
121	Flow control capability for T.38 communication		0
122	K > 4		0

bit	Function	Contents	Default
123	Internet aware fax device operating in T.38 mode		0
124	T.89 (Application profiles for ITU-T T.88)	Refer to *3.	0
125			0
126			0
127	sYCC-JPEG coding		0

- *3: T.89 (Application profile for ITU-T T.88)

124	125	126	Contents
0	0	0	Not used
0	0	1	Profile 1
0	1	0	Profile 2
0	1	1	Profile 3
1	0	0	Invalid
1	0	1	Reserved
1	1	0	Reserved
1	1	1	Reserved

1.2 Modem fallback sequence

- Fallback sequences of TCF and CTC are shown as follows:

1.2.1 V17, V29, and V27 ter

Ability of a remote station	TCF fallback sequence
V27 ter/V29	96/V.29 -> 72/V.29 -> 48/V.27 ter -> 24/V27 ter
V27 ter/V29/V33 V17	144/V.17 -> 120/V.17 -> 96/V.17 -> 72/V.17 -> 48/V.27 ter -> 24/V27 ter

- On the transmission side: If PPR is received four times, a modem is set in the fallback state.
- On the reception side: In case of sending PPR, when the number of error frames exceeds the FP value, a modem is set in the fallback state.

1.2.2 V34 fallback

- Line quality is always water by modem. Optimum speed is automatically selected on-the-fly.

1.3 V8/V34 sequence

1.3.1 V34

(1) Outline

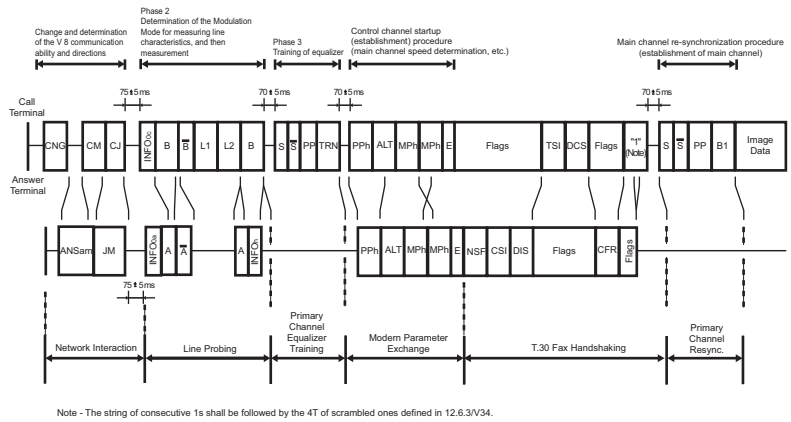
- The 33.6kbps data transmission method and protocol including the V8 protocol. As for each of full-duplex and half-duplex, startup handshake until data transmission starts is divided into four phases, phase1 to 4, and signals used in each phase are regulated.

(2) Features

- Full-duplex (echo canceler method) / Half-duplex method are regulated (for data / FAX respectively)
- 2400, 3000 and 3200 symbols / sec (mandatory) and 2743, 2800 and 3429 symbols / sec (option) QAM synchronous transmission at each symbol rate
- Communication at each signal rate of 33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800, 14400, 12000, 9600, 7200, 4800 and 2400 bps
- Four-dimensional-symbol trellis coding
- A 200bps sub channel which can be used as an asynchronous second channel (option)
- Negotiation in which characteristics of a line is measured before transmission starts and the maximum communication speed is achieved by finely adjusting the transmission parameter, based on the result of measurement (carrier / frequency / equalizer / symbol rate / level, etc.)
- Data transmission in the super frame with the hierarchical structure

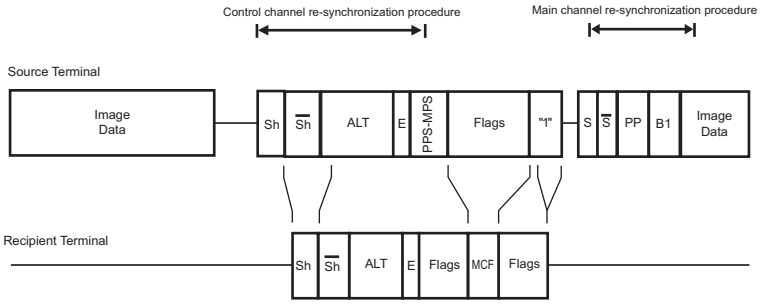
1.3.2 Sample of a signal procedure at sending two pages

(1) Beginning of communications to beginning of 1st page transmission

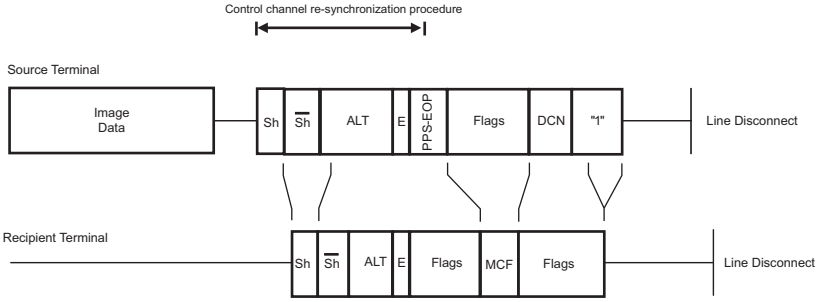


Note - The string of consecutive 1s shall be followed by the 4T of scrambled ones defined in 12.6.3/V34.

(2) Signals between pages



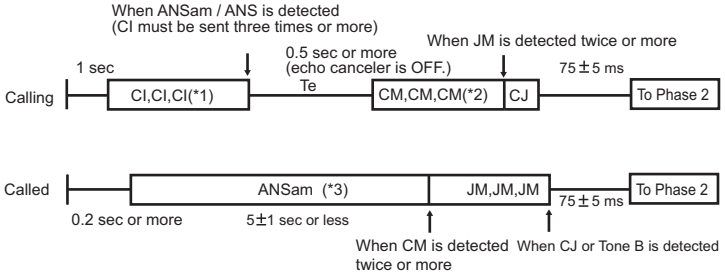
(3) 2nd page transmission termination to communication termination



Note - Some terminals may disconnect the line immediately after sending DCN without sending consecutive 1s.

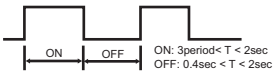
1.3.3 Procedure details

(1) Phase 1 (V8) ....Beginning of connection between a calling modem and a called modem



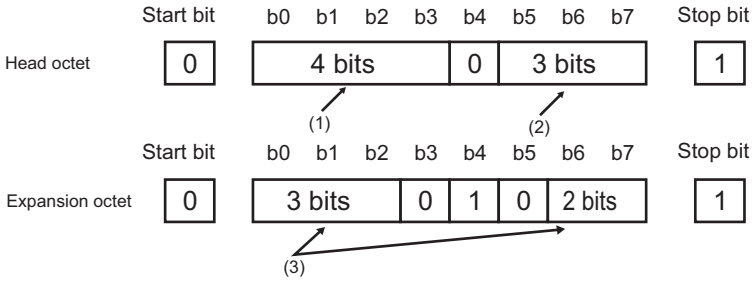
- *1: One of no signals / C1 / CNG (T.30) / CT (V.25)
- *2: V.34 full-duplex ability in the modulation mode bit is ON.
- *3: ANSam of phase inversion is sent. Phase inversion is an option in case of supporting only half-duplex. When CM or valid signal from the calling side is not detected, the procedure is moved to T.30, etc. after 75 ± 5 ms interval.

(a) Signal Definition

Signal type	Meaning	Signal direction call called	Signal speed	Timing of transmission
CI (Call Indicator)	Function display on the calling side	->	V21(L) (300 bps)	• Start: after 0.4 seconds after line connection from ON condition (in the following format) • Stop: when 3 period or more has passed after ANSam / ANS is detected 
	[Comments] • CI is a signal to carry call function. • The calling side send CI, CT (Call Tone - V25) or CNG. • CI transmission and detection are optional. • The ON minimum time (=3 Period) is of duration of three CI signals in the following format.			
ANSam (Modified Answer Tone)	V.8 procedure on the called side Support display	<-	-	When 0.2 seconds or more has passed after reception
	[Comments] • Essential for a called machine which supports the V8 procedure. • 2100 Hz sine wave is phase-inverted by 400 +/-25 ms periods, then amplitude modulated by 15 +/-0.1 Hz sine wave • Average value of modulation factor (x) 0.8 +/- 0.01 < x < 1.2 +/- 0.01 • Average transmission power compliant to V2 • 2100 +/- 200 Hz external power is smaller than the average power by 24 dB or more.			
CM (Call Menu)	Modulation mode etc. on the calling side	-> (300 bps)	V.21 (L)	• Start: Te (0.5 sec. ≤ Te ≤ 1 sec.) has passed after CI transmission stops • Stop: When two or more JM are detected
	[Comments] • CM is a signal which carries call function, modulation modes, protocols and GSTN access. • The first information category is call function. • Protocols and GSTN access category are added when the calling side has ability and when needed to inform to a remote station.			
CJ	CM termination	-> (300 bps)	V.21 (L)	When CM is completed
	[Comments] • START bit (0) and STOP bit (1) are added to 1 octet of all bit 0. • Signal format Start bit b0 b1 b2 b3 b4 b5 b6 b7 Stop bit 0 0 0 0 0 0 0 0 0 1			
JM (Joint Menu)	Display of common ability on both calling and called sides	<- (300 bps)	V.21 (H)	• Start: When two or more same CM are received • Stop: When CJ is received or receives a signal matching the selected Modulation Mode from the calling side
	[Comments] • JM is a response signal to CM and of the same format as the received CM. • The fist information category is Call Function as same as CM. • Modulation mode sets the common bit on calling and called sides and sends by the same octet as received CM. • When there is no common ability, all bits are set to 0 and send by the same octet as received CM. • The minimum item No. is selected from the common bits to determine the actual Modulation Mode. • Protocol is added when it is included in received CM and needed to instruct. • GSTN access is added when it is included in received CM and needed to instruct. • Bit 6 is set to ON when needed to show ability. Bit 5 is set to the same one as received CM.			

(b) Signal format

1. Preamble: a signal added before each signal when CI, CM and JM signals are sent.
   - Format: 1111111111 +0000000001 (for CI)
   - Format: 1111111111 +0000001111 (for CM and JM)
2. Common format among each signal CI, CM and JM
   - Start Bit (=0) is put at the top and Stop Bit (=1) is put at the end of each octet.



- (1): Category tag (tags which represent information types)

Bit assignment					Meaning (information type)	Included signal
b0	b1	b2	b3			
1	0	0	0	...	Call Func	Top of CM, JM / CI
1	0	1	0	...	Modulation Mode	CM/JM
0	1	0	1	...	Protocols	CM/JM
1	0	1	1	...	GSTN access	CM/JM
0	1	1	0	...	PCM modem ability	CM/JM

- (2): Option bit (Differs depending on category tags. See " PP.1.3.4 Common signal bit definition".)
- (3): Additional option bit (Differs depending on category tags. See " PP.1.3.4 Common signal bit definition".)

1.3.4 Common signal bit definition

(1) Call function (1 octet)

(a) Top octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	0	0	0	0				(Call Function category tag)
					0	0	0	Defined by ITU-T
					1	0	0	PSTN multi-media terminal
					0	1	0	V18 text phone
					1	1	0	Video tex
					0	0	1	FAX transmission from the calling terminal
					1	0	1	FAX reception in the calling terminal
					0	1	1	Data transmission / reception
					1	1	1	Expansion octet = with call function represented by next octet

- (Other than the above = Reserved)

(2) Modulation mode (3 octets)

(a) 1st octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
1	0	1	0	0				(Modulation mode category tag, b4 = 0 is first octet)	
					0/1			PCM modem ability disabled/enabled	
						0/1		V34 full-duplex ability disabled/enabled	1
							0/1	V34 half-duplex ability disabled/enabled	2

(b) 2nd octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
			0	1	0			(b3, 4 and 5=0, 1, 0 means expanded oct.)	
0/1								V32 bis / V32 ability disabled / enabled	3
	0/1							V22 bis / V22 ability disabled / enabled	4
		0/1						V17 ability disabled / enabled	5
						0/1		V29 half-duplex ability disabled / enabled (used in T.30)	6
							0/1	V27 ter ability disabled / enabled	7

(c) 3rd octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
			0	1	0			(b3, 4 and 5=0, 1, 0 means expanded oct.)	
0/1								V26 ter ability disabled / enabled	8
	0/1							V26 bis ability disabled / enabled	9

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
		0/1						V23 full-duplex ability disabled / enabled	10
						0/1		V23 half-duplex ability disabled / enabled	11
							0/1	V21 ability disabled / enabled	12

(3) Protocols (1 octet)

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
0	1	0	1	0				(Protocols category tag)
					1	0	0	V42 LAPM protocol
					1	1	1	Protocol represented by expanding octet

- (Other than the above = Reserved)

(4) GSTN access (1 octet)

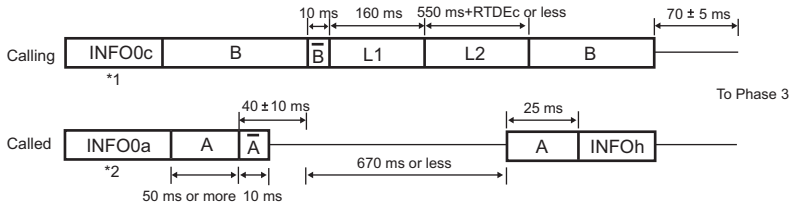
b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	0	1	1	0				(GSTN access category tag)
					0/1			Celluler connection in the calling side
						0/1		Celluler connection in the called side
							0/1	0: Analog network connection 1: Digital network connection

(5) PCM modem capability (1 octet)

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	1	1	0	0				(PCM modem category tag)
					0/1			V.90 analog modem capability
						0/1		V.90 digital modem capability
							0/1	V.91 capability

1.3.5 Phase 2 (Probing) ..... V.34 basic setting

- Exchange of modulation ability
- Measurement of line characteristics (bi-direction)
- Determination and exchange of compensation values to line characteristics (compensation values of maximum data rate, transmission level, pre-emphasis (*))
  - *: linear equalizer for compensating amplitude distortion



A	• 2400 Hz tone signal output from the called side (Level is a set value -1 dB). • 1800 Hz guard tone (Level is a set value -7 dB) is output simultaneously from the called side.
$\bar{A}$	• 2400 Hz tone signal output from the called side (Phase inversion of A). • 1800 Hz guard tone.
B	1200 Hz tone signal output from the called side.
$\bar{B}$	1200 Hz tone signal output from the calling side (Phase inversion of B).
INFO 0x	Binary signal for indicating auto modulation option signal (x=a/c: a: called side, c: calling side)
L1, L2	Signal for conditioning line characteristics (tone synthesis at the interval of 150 Hz from 150 to 3750 Hz (except for 900, 1200, 1800 and 2400 Hz)) — • L1: 160 ms, Level= Set value+6dB • L2: Maximum 550 ms+TRDEx, Level = Set value
INFO h	Binary signal for indicating parameters used in Phase 3 (training of main channel equalizer). This signal is sent from a modem receiving main channel data to a transmitting modem.

- *1: INFO 0c Bit 28 OFF
- *2: INFO 0a Bit 28 OFF

(1) <INFO 0x Bit Assignment>

Bits (LSB-MSB)	Value	Meaning	
0-3	1111	Fill Bits	
4-11	01110010	Bit string for frame synchronization	
12	0/1	2743 symbol / sec support	• 0: No

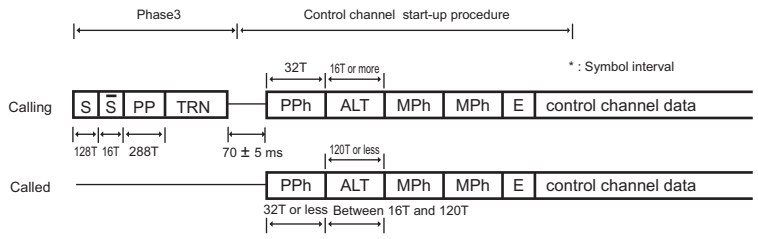
Bits (LSB-MSB)	Value	Meaning	
			• 1: Yes
13	0/1	2800 symbol / sec support	• 0: No • 1: Yes
14	0/1	3429 symbol / sec support	• 0: No • 1: Yes
15	0/1	Ability to transmit at low carrier frequency at 3000 symbol / sec	• 0: No • 1: Yes
16	0/1	Ability to transmit at high carrier frequency at 3000 symbol / sec	• 0: No • 1: Yes
17	0/1	Ability to transmit at low carrier frequency at 3200 symbol / sec	• 0: No • 1: Yes
18	0/1	Ability to transmit at high carrier frequency at 3200 symbol / sec	• 0: No • 1: Yes
19	0/1	3429 symbol / sec transmission	• 0: Disable • 1: OK
20	0/1	Ability to lower the transmission level than a preset value	• 0: No • 1: Yes
21-23	0 to 5	Maximum tolerance of symbol rates between transmission and reception	• 0: 2400 symbol/sec • 1: 2743 symbol/sec • 2: 2800 symbol/sec • 3: 3000 symbol/sec • 4: 3200 symbol/sec • 5: 3429 symbol/sec
24	0/1	1=INFO 0 is sent from the CME modem	
25	0/1	1664 signal point (33.6 K) ability	• 0: No • 1: Yes
26-27	0 to 3	Clock source transmission	• 0: Internal • 1: External • 2: Synchronous to the reception clock • 3: Reserved
28	0/1	1=Correct INFO 0 frame is received during error recovery	
29-44		CRC	
45-48	1111	Fill Bits	

(2) <INFO h Bit Assignment>

Bits (LSB-MSB)	Value	Meaning	
0-3	1111	Fill Bits	
4-11	01110010	Bit string for frame synchronization (transmitted from the left side)	
12-14	0 to 7	• Output reduction width demanded by the reception modem (dB) • When *the modem on the transmitting side can not reduce output* at INFO 0, the value is set to 0.	
15-21	0 to 127	The length of TRN which the modem of the transmitting side send in the Phase 3 (x 35 ms)	
22	0/1	High carrier is user for data mode Tx.	
23-26	0 to 10	Pre-emphasis filer index No.which is used for data transmission	
27-29	0 to 5	Symbol rate of data transmission	0: 2400 ... 5: 3429 (symbol / sec)
30	0/1	Selection of parameters used for TRN.	• 0: 4 points • 1: 16 points
31-46		CRC	
47-50	1111	Fill Bits	

1.3.6 Phase 3 .....Training of the main channel equalizer

- Band division full-duplex method
- Transmission and reception of Phase 3 signals (S, S̄PP, TRN) are executed by using parameter values which are determined by exchanging INF Oh. (symbol rate, carrier frequency, pre-emphasis filter and transmission level)



- The speed of the following signals (Phase 3) are determined by INFOh. (The following signals are used in the main channel in the half-duplex procedure.)

S	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees
$\bar{S}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees
PP	Special signal which is sent from a remote station for adjusting an equalizer
TRN	Training signal. (Symbol rate and duration are determined in INFOh.)

(1) Control channel signal

- The following signals are used for establishing the control channel or re-synchronization and retrain. (peculiar to half-duplex procedure)

Modulation method	1200 / 2400 bps QAM modulation (600 ± 0.01 symbols / sec). However, training and synchronous signals are 1200 bps.	• Calling modem: Carrier (=1200 Hz ± 0.01 % (level = set value)) • Called modem: Carrier (=2400 Hz ± 0.01 % (level = set value-1 dB)) + Guard tone (=1800 Hz ± 0.01 % (level = set value-7 dB))
Sh	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees (the same as S)	
$\bar{Sh}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees (the same as S)	
AC	Signal which send alternately 0 point and a point which rotated 0 point by 180 degrees	
PPh	Special signal which is sent from a remote station for adjusting an equalizer (used when the initial of the control channel and re-synchronization are executed)	
ALT	Signal which scrambled alternate signals of 0 and 1 (1200 bps)	
MPh	Binary signal used for exchanging parameters of the modulation method when data is actually sent and received by using the main channel (1200 bps)	• Both type 0 and type 1 (type 0+pre-recording coefficient) must be received. • When type 0 is received, pre-recording coefficient is considered to be 0 and never functions.
E	“1”, binary of 20 bit, which represents the beginning of user data transmission on the control channel	

(2) MPh (type 0) bit assignment

Bits (LSB-MSB)	Value	Meaning	
0-16	All bit 1	Bit string for frame synchronization	
17	0	Start bit	
18	0	MP signal type	
19	0	Reserved	
20-23	1 to 14	Maximum transmission rate from the calling modem to the called modem (x 2400) *1	
24-26	0,0,0	Reserved	
27	0/1	Control channel data transmission rate which is selected by the opposed transmitter	• 0: 1200 bps • 1: 2400 bps
28	0	Reserved	
29-30		Trellis coding device selection *2	• 00: 16 state • 10: 32 state • 01: 64 state • 11: Reserved
31	0/1	Non-linear encoder parameter selection for the terminal transmitter of a remote station *2	• 0: φ=0 • 1: φ=0.3125
32	0/1	Parameter (shaping) selection when the data rate is determined within each symbol rate *2	• 0: Minimum • 1: Expanded
33	0	Reserved	
34	0	Start bit	
35-49		Communication speed mask (Bit 35=2400 bps ... Bit 46=28.8 kbps, Bit 47=31.2 kbps, Bit 48=33.6 kbps and Bit 49=Reserved)	• 0: Ability of both modems disabled • 1: Enabled
50	0/1	Use of control channel imbalance data rate	• 0: No • 1: Yes
51	0	Start bit	
52-67	0	Reserved	
68	0	Start bit	
69-84		CRC	
85-87	0,0,0	Fill Bits	

- *1: 13 and 14 are used when the opposed modem supports up to 1664 points
- *2: Set to 0 on the transmitting modem.

(3) MPh (type 1) bit assignment

Bits (LSB-MSB)	Value	Meaning	
0-16	All bit 1	Bit string for frame synchronization	
17	0	Start bit	
18	1	MP signal type	
19	0	Reserved	
20-23	1 to 14	Maximum transmission rate from the calling modem to the called modem (x 2400) *1	
24-26	0,0,0	Reserved	
27	0/1	Control channel data transmission rate which is selected by the opposed transmitter	• 0: 1200 bps • 1: 2400 bps
28	0	Reserved	
29-30		Trellis coding device selection *2	• 00: 16 state • 10: 32 state • 01: 64 state • 11: Reserved
31	0/1	Non-linear encoder parameter selection for the terminal transmitter of a remote station *2	• 0: φ=0 • 1: φ=0.3125
32	0/1	Parameter (shaping) selection when the data rate is determined within each symbol rate *2	• 0: Minimum • 1: Expanded
33	0	Reserved	
34	0	Start bit	
35-49		Communication speed mask (Bit 35=2400 bps ... Bit 46=28.8 kbps, Bit 47=31.2 kbps, Bit 48=33.6 kbps and Bit 49=Reserved)	• 0: Ability of both modems disabled • 1: Enabled
50	0/1	Use of control channel imbalance data rate	• 0: No • 1: Yes
51	0	Start bit	
52-67		Pre-coding coefficient h (1) Real	
68	0	Start bit	
69-84		Pre-coding coefficient h (1) Imaginary	
85	0	Start bit	
86-101		Pre-coding coefficient h (2) Real	
102	0	Start bit	
103-118		Pre-coding coefficient h (2) Imaginary	
119	0	Start bit	
120-135		Pre-coding coefficient h (3) Real	
136	0	Start bit	
137-152		Pre-coding coefficient h (3) Imaginary	
153	0	Start bit	
154-169		Reserved	
170	0	Start bit	
171-186		CRC	
187	0	Fill Bits	

- *1: 13 and 14 are used when the opposed modem supports up to 1664 points
- *2: Set to 0 on the transmitting modem.

1.3.7 Re-synchronization procedure / Startup procedure

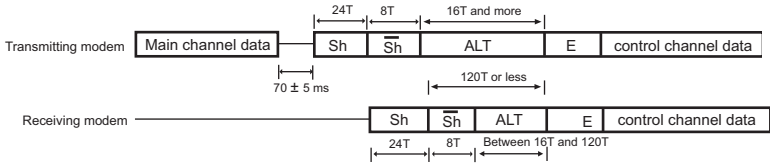
- A procedure required to switch control channel and main channel in the half-duplex procedure
- A procedure which includes another modulation parameter exchanging is especially called the startup procedure. (used for changing the communication speed)

(1) Startup procedure

- Control channel startup procedure (By exchanging MPh, the communication speed is changed.)
- “Control channel re-synchronization procedure” is not used.

(2) Re-synchronization procedure

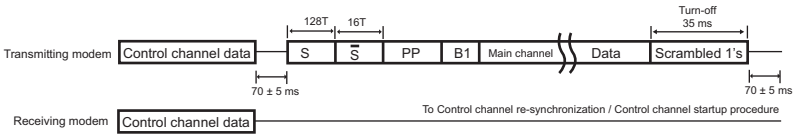
- Control channel re-synchronization.
- See signals related to control channels for signal names and change method.



(a) Main channel re-synchronization procedure and Turn-off

- The receiving modem re-synchronizes the main channel by using the PP signal. After B1, starts receiving Primary Data.
- The transmitting modem sends the scrambled 1's for 35 ms after Primary Data transmission has been completed.
- Both modems move to the control channel re-synchronization procedure or the control channel startup procedure.

S	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees
$\bar{S}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees
PP	Special for adjusting an equalizer
B1	High-speed signal of one frame length which is sent at the end of a series of startup sequence in the selected modulation parameter.



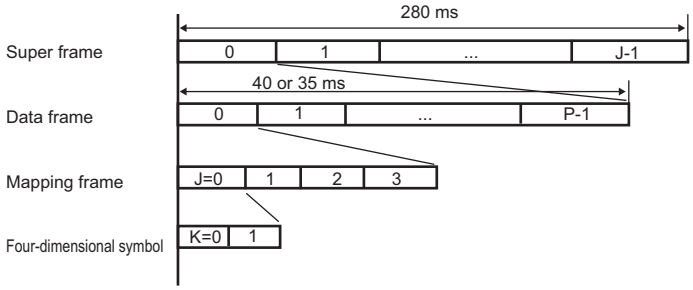
1.3.8 Other

(1) Minimum reception signal level (RLSD) (half-duplex mode only)

- The reception circuit is turned to ON when the signal becomes 43 dBm or more.
- When the signal becomes 48 dBm or less, the reception circuit is turned OFF within 20 to 25 ms after it has exceeded the thresh old.

(2) Data frame structure

- All data transmitted in V.34 (after the Phase 4) is treated in the following frame format.
  - J: The number of data frames within one super frame
  - P: The number of mapping frames within one data frame



Modulation Speed	J	P
2400 baud	7	12
2743 baud	8	12
2800 baud	7	14
3000 baud	7	15
3200 baud	7	16
3429 baud	8	15

2. FUNCTION

2.1 Telephone function

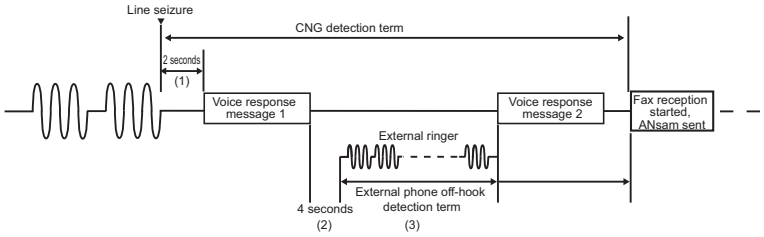
2.1.1 TEL/FAX switching

(1) Outline

- A function to switch telephone and FAX automatically after reception. (Depends on Country spec.)

(2) Operation

1. When CNG is not detected for 2 seconds (or 4 seconds, following address parameter) after line seizure, this function sends voice response message 1 and continues CNG detection.
2. If voice response 1 is sent and CNG detection is continued for 4 seconds but could not be detected, external ringer is sent to the externally installed phone.
3. When CNG is not detected for a given period (Default is 20 seconds. Changeable by address parameters), this function stops external ringer transmission and becomes fax reception after the voice response message 2 is sent.
4. This function detects OFF-HOOK of the external telephone during external ringer transmission only.
5. When OFF-HOOK of the external telephone is detected during external ringer transmission, the line is connected to the external telephone. Even if you use the telephone, you can manually switch to the fax reception after that.
6. When CNG is detected during the above-mentioned external ringer transmission, External ringer transmission is stopped and the fax reception starts.



(3) Related FP

No.	FP	Meaning and purpose	Address	Value	Default	Note
1	Tel-Fax switching	TEL/FAX switching mode	0x0e0095 bit5	0: Disabled 1: Enabled	0	Those with a Administrator Settings
2	RBT transmission time	RingBackTone signal transmission time	0x0e00fc	unit: 1000 ms, HEX	0x14 (20 sec.)	• A serviceman setting by address setting • Those with a Administrator Settings 30 sec. or less: 5 seconds 30 sec. or more: 30 seconds
3	Tel-Fax switching parameter	Time from vocal response to RBT transmission (CNG detection waiting time 2)	0x0e0095 bit7	0: 4 sec. 1: 2 sec.	0	A serviceman setting by address setting
4	Tel-Fax switching parameter	Time from reception to voice response transmission (CNG detection waiting time 1)	0x0e0095 bit6	0: 2 sec. 1: 4 sec.	0	
5	Tel-Fax switching parameter	TEL/FAX switching ON response details	0x0e0095 bit3	0: Voice response + RBT transmission 1: RBT transmission only	0	Those with a Administrator Settings

2.2 F-code

- F-code is a function to realize confidential transmission / bulletin board polling / relay transmission by using SUB, SEP and SID signals.
- To be more specific, a machine which can open “a box” on the memory is called “a F code compliant center machine” and a machine which can access to a center machine by using the F code function is called “a F-code compliant machine.” The center machine can have plural “boxes” and they are used as the confidential box, bulletin board box and relay box respectively.
- Function outline is as follows.

Function	Outline	Signals to be used			Use (Meaning)	Required function	Remark
		SUB	SEP	SID			
Confidential transmission	Sent to the center machine which opens a confidential box by appointing the confidential box No. (The center machine has memory reception to the confidential box.)	○	×	△	• SUB = Appointment of a confidential box • SID = Password	Registration = Message adding	Each box No. = Contents of a signal (20 digits or less)

Function	Outline	Signals to be used			Use (Meaning)	Required function	Remark
		SUB	SEP	SID			
Bulletin board polling	By appointing a box No. in the center machine which opens a bulletin board, contents are polled.	×	○	×	SEP = Appointment of a bulletin board box	• Registration = Message overwriting • With a mode which is not deleted by polling.	
Relay transmission	Requesting relay to the relay machine which opens a relay box (No.) in which a broadcasting transmission remote station is registered.	○	×	○	• SUB = Appointment of a relay box (No.) • SID = Password		

- ○ = interact is required
- △ = selectable
- × = do not use

2.2.1 Signal format

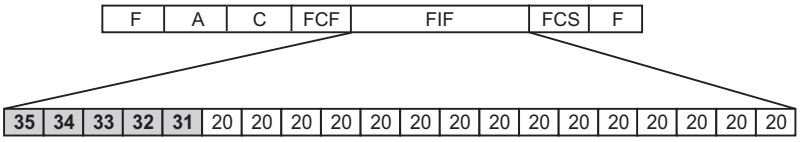
(1) Contents of signals

Item / Signal Name	SUB/SEP	SID
Characters	0 to 9 only (* and # must not be used.)	• 0 to 9 • * • #
Contents	Box No.	Password
No. of digits	Arbitrary between 1 and 20	
Space between digits	Prohibited	
Others	Impossible to designate more than one box	

(2) FIF (SUB/SEP/SID) common

- The last digit is left-justified. The remaining are filled with space (0x20)

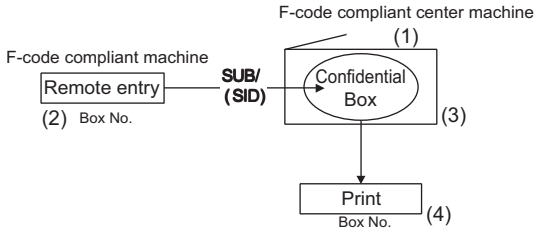
eg.) 12345



(3) DIS/DTC/DCS bit condition

Bit No.	Meaning	DIS/DTC	DCS
47	Selective polling ability	• DIS = ON when SEP reception is possible • DTC = ON when SEP is transmitted	0: fixed
49	Sub address ability / function	ON when SUB reception is possible	ON when SUB transmission is possible
50	Password / sender ID	• DIS = ON when SID reception is possible • DTC = ON when SID is transmitted	ON when SID is transmitted

2.2.2 F-code confidential transmission



1. The confidential box is registered in the center machine.
   - Registration of confidential box No. and name
   - Registration of communication password
   - Registration of box password
2. Transmission operation on the transmitting side
   - Specification of confidential box No.
3. Reception in the center machine

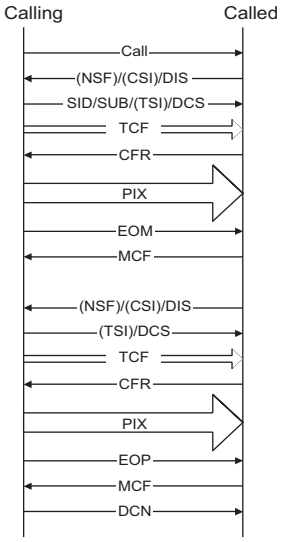
- Automatic output of confidential communication report

4. Printing in the center machine
   - Output by entering an access protect No.

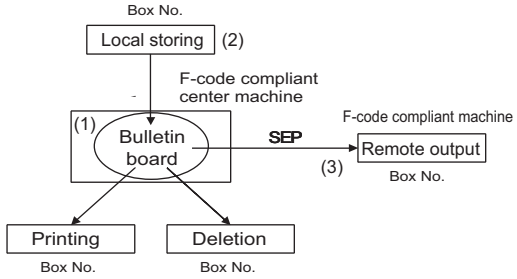
(1) BOX specifications

Confidential box No.	• Represented by a nine digit number. Operationally between 1 and 999999999. • You can not open the same box number as the bulletin board No. which has been already opened.
Communication password	Possible to use.
Confidential BOX name	Possible to resister up to 20 characters.
Erased at printing	Erased on every page after output.
Box password	Represented by eight digit number between 00000000 and 99999999.
No. of files in confidential box	100 files at the maximum including bulletin board.

(2) Example of the protocol sequence



2.2.3 F-code bulletin board polling

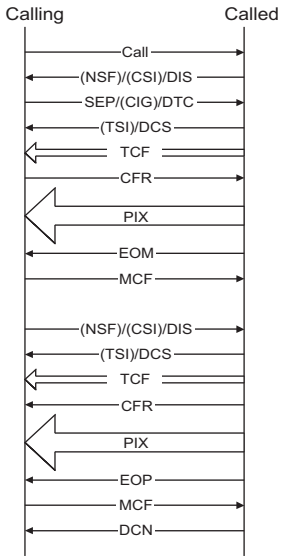


1. Registration of the bulletin board box in the center machine
   - Registration of the bulletin board No. and name
2. Storing documents in the bulletin board
3. Operations for polling reception on the compliant machine
   - Appointment of bulletin board No.

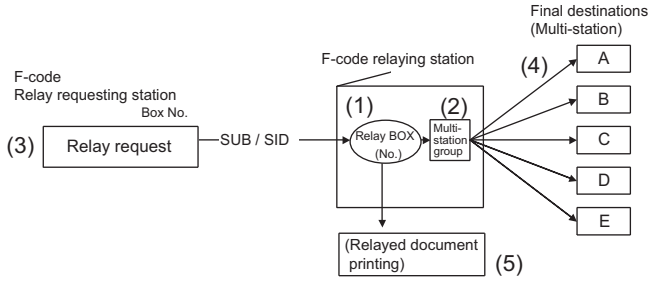
(1) BOX specifications

Bulletin board box No.	• Represented by a nine digit number. Operationally between 1 and 999999999. • You can not open the same box number as the confidential box which has been already opened.
Bulletin board password	No
Bulletin board box name	• Yes • Same number of characters as the confidential box
Erased at printing	Not erased when printed.
Erased at polling	Not erased when polled.
Access protect No.	No
No. of document registration to the bulletin board box	Only once. If already exist, it is overwritten.

(2) Example of protocol sequence



2.2.4 F-code relay transmission



NOTE

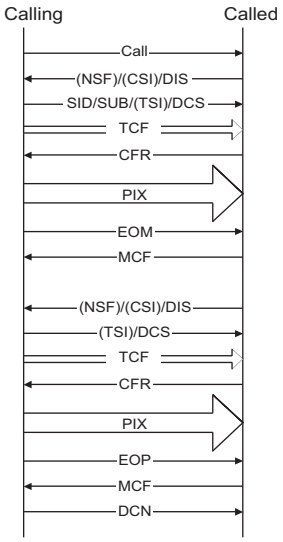
- **This machine is only relay requests and do not function as a relaying station.**

1. The relay box is registered in the relaying station.
   - Registering relay box No., relay password and relay group No.
2. Registration of group
   - Registering final destinations in the group No.
3. Transmission operation in the relay requesting station
   - Instructs relay box no. and relay password.
4. Transmission to the final remote stations registered in the group
5. Possible to printed relayed documents on the relaying station (depends on the parameter setting)

(1) BOX specifications

Relay box	Possible to register up to 5.
Relay box No.	Any box number that can range between 1 and 999999999
Relay password	Any 8-digit number
Relay BOX name	To be assignable
Access protect No.	No
Final destination designation	Possible only to register in the relay box by appointing the group.
File erasure after transfer	Always erased
Conditions to erase box by operations	Only when there are no files of received messages in the relay box, box can be erased.

(2) Protocol sequence example



2.3 Transmission function

2.3.1 Original scan mode

- The original scan mode is roughly classified by the regular original scan and the irregular original scan.

Regular original	Irregular original	Mode selection
Normal mode	Irregular mode	Default setting
Mixed original mode		Scan setting

(1) Scan mode default setting

- The scan mode can be set by [Service Mode] -> [FAX] -> [System] -> [Scan Setting]. The default is the irregular mode.

	Paper size detection	Default	Frame erasure
Irregular mode	Trailing edge detection	Yes	Trailing edge erasure may not be done.
Normal mode	DF paper size sensor	Automatically selected when using the page related application function (book transmission, etc.).	Frame erasure of all sides

2.4 Reception function

2.4.1 Reduction / division of reception

- Parameters related to reduction / division are set on the [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings]. There are two parameters as follows:
  - [Min. Reduction for RX Print]: 96, 95, 94, ..., 87: a
  - [Print Separate Fax Pages]: ON, OFF: b
- The reception recording mode is determined by the above-mentioned parameters, a and b.

(1) Auto reduction reception mode

- a = Don't care (except 100)
- b = OFF
- The received documents are automatically reduced in the range of 35 to 96 %.

(2) Page division recording reception mode

- a = 96, 95, ..., 87
- b = ON
- Documents are reduced to three reduction rate (90 %, 86 %, or 82 %) determined by the width of received documents and the selected recording paper. When they are still larger than a paper size, they are reduced to a value in "a" for the division recording.
  - 90% = Fixed value
  - 86%, 82% = Reduction rate determined by the main scanning direction
- The paper selection and division are determined in accordance with the following figure.

(3) Paper selected for division printing, magnification

(a) A4S width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
152 mm or less	A5	A5/a %	A5S/69 %	A4S/a %	A4/a %	B5S/84 %	B5/a %	B4/a %	A3/a %

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
153 to 311 mm	A4S	A4S/a %	A4/a %	B4/a %	A3/a %	-	-	-	-
312 to 384 mm	B4	B4/a %	B5/a %	B5S/84 %	A3/a %	A4/a %	A4S/a %	-	-
Over 384 mm	A3	A3/a %	A4/a %	B5S/84 %	-	-	-	-	-

- a : Set magnification

(b) B4 width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
189 mm or less	B5	B5/a %	B5S/71 %	B4/a %	A4S/82 %	A4/a %	A3/a %	-	-
189 to 384 mm	B4	B4/a %	B5/a %	B5S/71 %	A3/a %	A4/a %	A4S/82 %	-	-
Over 384 mm	A3	A3/a %	A4/a %	A4S/82 %	-	-	-	-	-

- a : Set magnification

(c) A3 width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
219 mm or less	A4	A4/a %	A4S/69 %	B4/85 %	A3/a %	-	-	-	-
Over 219 mm	A3	A3/a %	A4/a %	A4S/69 %	-	-	-	-	-

- a : Set magnification

2.4.2 Cassette / paper selection

- The cassette and paper selection is performed by using two parameters of the [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings].
  - [Print Paper Selection]: Auto Select, Fixed Size, Priority Size: a
  - [Tray Selection for RX Print]: Auto, Tray 1, Tray 2, Tray 3 and Tray 4: b

NOTE

- **When "b" is fixed to tray 1, 2, 3 or 4, "a" becomes invalid.**
- **Only when "b" is set to Auto, "a" becomes valid.**
- **Only A3, B4 and A4 sizes can be selected for the fixed size and preferential size modes.**
- **Bypass cannot be specified as fix-tray.**
- **Page dividing function becomes invalid when the tray is fixed.**

2.4.3 Compulsory memory reception

- The function to enable to print out by operations without printing out documents at reception in the FAX communications.

(1) Related settings

(a) Compulsory memory reception function

- Set in the [Service Mode] -> [FAX] > [System] -> [Display Setting].
- When this setting is set to "OFF", display and actions related to the Compulsory memory reception are not performed. In addition, you can not perform operations. If this setting is not set, the following Compulsory memory reception function used is also set to disabled.

(b) Compulsory memory reception function use

- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Memory RX Setting].
- When this setting is set to "NO", the compulsory memory reception actions are not performed at reception. In addition, you can not display, erase and print the compulsory memory reception documents. The compulsory memory reception documents are displayed on the main menu irrelevant to this setting.

(c) Compulsory memory reception password

- Within eight digits (0 to 9)
- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Memory RX Setting].
- This setting is required to display, delete or print the compulsory memory reception documents.

(2) Operation

(a) Necessary conditions for this function

- When there is the compulsory memory reception function, and it is used, the compulsory memory reception action is performed.

(b) Line seizure

- It is possible to receive up to 500 compulsory memory reception jobs including the normal reception and the substitute reception. When 500 compulsory memory reception jobs are received, machine will not catch the line. (Except the case that the polled transmission documents and bulletin board documents are registered.)

(c) Reception

- When the reception is performed in the compulsory memory reception mode, printing is not performed even with recording paper and the reception is performed in memory as the compulsory memory reception documents.
- The same as in the polled reception and manual reception.
- The auto forwarding setting is neglected in this mode, and the compulsory memory reception is performed.
- When SUB is received, related applications will start.

(d) Setting change

- When there are received compulsory memory reception documents, even if the compulsory memory reception setting is set to invalid in the utility mode, the compulsory memory reception file is not printed.
- For printing, the compulsory memory reception setting is required to be set to “ON.”

2.4.4 Closed reception (Junk FAX)

- The closed reception function used only at the time of the reception by using the F-code SID signal.

NOTE

- **You can not use this function with the F-code communications.**

(1) Closed reception function

- Set in the [Service Mode] -> [FAX] > [System] -> [Display Setting].

(2) Closed reception function use

- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Closed Network RX].
- When this setting is set to “No”, the closed reception actions are not performed at reception.

(3) Closed reception password

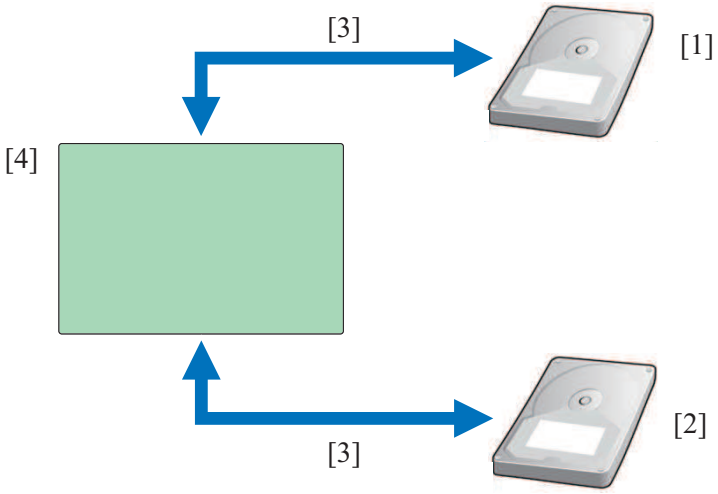
- Four digits (0 to 9)
- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Closed Network RX].

PQ THEORY OF OPERATION HD-524

1. CONFIGURATION

1.1 Outline

- Executes mirroring (RAID 1) of 2 hard disks (hereafter: HDD). (A single HDD is installed as standard, the second is an optional addition)
- Prevents data loss by duplicating data on the HDD.
- Improves data safety/reliability through protecting customers important data from an unexpected failure. Furthermore, it reduces a downtime due to the HDD failure.



[1]	HDD (A) (Master drive): 250 GB	[2]	HDD (B) (Slave drive): HD-524 250 GB
[3]	Job data	[4]	MFP board (MFPB)

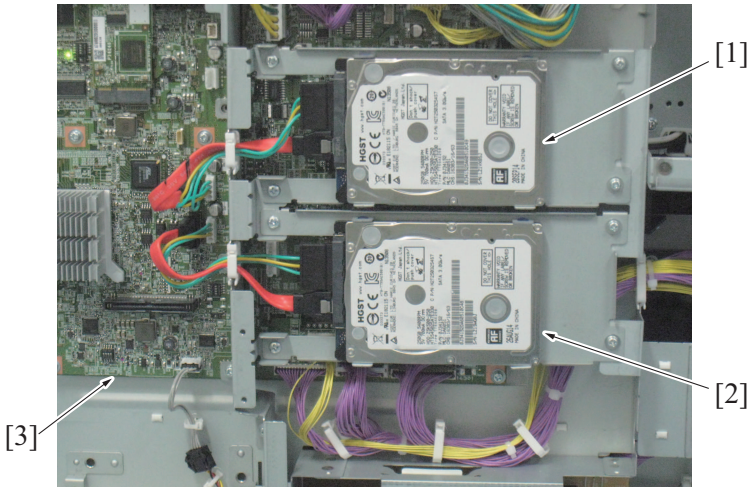
1.1.1 About RAID 1

- RAID 1: Redundant Arrays of Independent Disks 1
- Simultaneously write identical data to 2 HDDs. This procedure is known as data mirroring (duplicating).
- If one HDD fails, the risk of the other HDD failing at the same time is minimal, therefore the MFP can continue operating.

NOTE

- **The added HD-524 (250 GB) does not change the data capacity same as the standard 250 GB HDD that can be stored on the HDD.**

1.2 Unit configuration



[1]	HDD (A): Equipped as standard (Master drive)	[2]	HDD (B): HD-524 250 GB (Slave drive)
[3]	MFP board (MFPB)	-	-

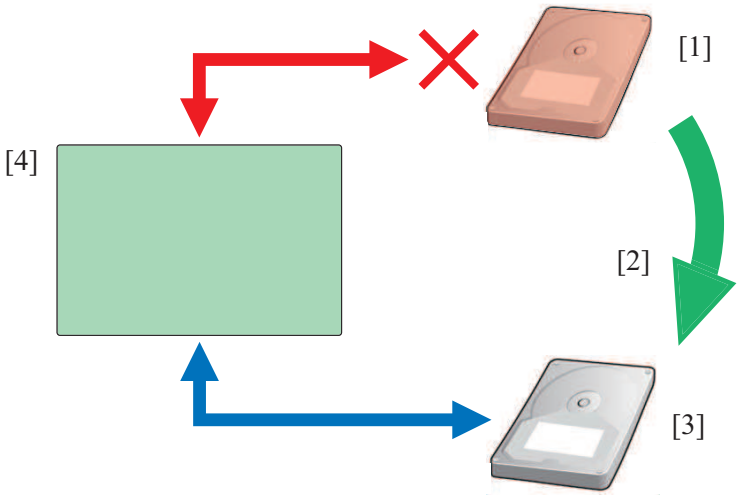
2. OPERATION

- At normal operation, a "Master Drive" is used when the machine reads out data and the "Slave Drive" is used on the backup-side.
- The master drive and the slave drive read out data simultaneously.
- When HD-524 is installed in the initial state, the standard equipped HDD (A) is specified as the master drive and HD-524 (B) as the slave drive.

2.1 HDD master/slave automatic switching control

- During correct HDD operation, the master drive and slave drive roles are locked.
- The slave drive automatically switches to the role of the master drive only during a restart when a master drive data read/write error (hereafter: R/W error) occurs.
- The machine operation can be continued or restarted without HDD data loss through accessing the drive that is switched to the new master drive.

Example: When an HDD (A) error occurs



[1]	HDD (A): R/W error occurs in the master drive	[2]	Switch the roles of master drive and slave drive
[3]	HDD (B): During normal operation (slave drive -> master drive)	[4]	MFP board (MFPB)

2.2 HDD failure detection control

- When an R/W error occurs on either the master drive of slave drive, the trouble code (CFA14: Application error inside the MFP board) is displayed on the control panel and the current job forcibly terminates.
- Restart the machine, either of the trouble codes (CD013 to CD017) relating to HDD mirroring will be displayed.
- Restart the machine, the master drive will change over, which resets the trouble screen and enables execution of a job.
- See below for the actual content/function of each trouble code

NOTE

- **It requires to disconnect the machine power cable before the faulty HDD is attempting to be replaced. The replacement of the HDD is, however, enabled at a timing at which the machine does not execute a print job.**

HDD mirroring trouble codes

Trouble code	Item	Outline
CD013	HDD mirroring error master	A master drive R/W error has occurred during the mirroring operation.
CD014	HDD mirroring error slave	A slave drive R/W error has occurred during the mirroring operation.
CD015	HDD mirroring error master slave	An R/W error has occurred on both drives during the mirroring operation.
CD016	HDD mirroring error master (rebuild)	A master drive R/W error has occurred during the HDD mirroring rebuilding.
CD017	HDD mirroring error slave (rebuild)	A slave drive R/W error has occurred during the HDD mirroring rebuilding.

- R/W error: Read error/Write error

2.2.1 A master drive error has occurred (CD013)

- After trouble code CD013 is displayed, turn the main power switch ON/OFF to switch the role of the master drive to the slave drive.
- Restart the machine, the job can be executed. A message prompting HDD replacement appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.2.2 A slave drive error has occurred (CD014)

- After trouble code CD014 is displayed, turn the main power switch ON/OFF to restart the machine and execute the job.
- A message prompting HDD replacement appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.2.3 A master-slave drive error has occurred (CD015)

- Trouble code CD015 indicates both HDDs have failed at the same time and both HDDs require replacement. (HDD data loss)
- After replacement of both HDDs, HDD formatting (physical + logical formatting) and video data installation are required.

- If the HDD data has been previously backed up, after replacement of the HDD, the data on the HDD can be recovered through implementing [HDD Data Backup/Restore].

2.2.4 A master drive error has occurred during the HDD mirroring rebuilding (CD016)

- If an R/W error occurs while the master drive is being rebuilt, the trouble code is displayed on the control panel and rebuilding is suspended.
- Before completion of rebuilding, due to a master drive error data is not correctly copied to the slave drive. It requires to replace the master drive. (HDD data loss)
- After replacement of the master drive, HDD formatting (physical + logical formatting) and video data installation are required.
- If the HDD data has been previously backed up, after replacement of the HDD, the data on the HDD can be recovered through implementing [HDD Data Backup/Restore].

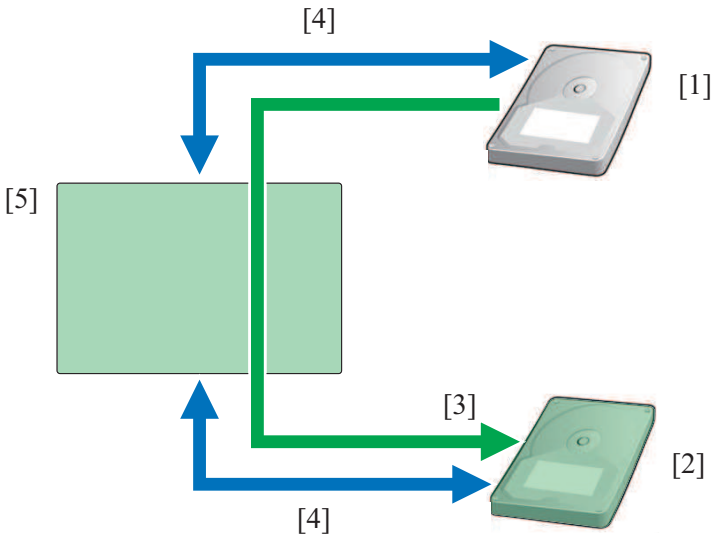
2.2.5 A slave drive error occurred during the HDD mirroring rebuilding (CD017)

- If an R/W error occurs while the slave drive is being rebuilt, the trouble code is displayed on the control panel and rebuilding is suspended.
- After trouble code CD017 is displayed, turn the main power switch ON/OFF to restart the machine and execute the job.
- A message indicating an on-going rebuilding appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.3 HDD mirroring rebuild

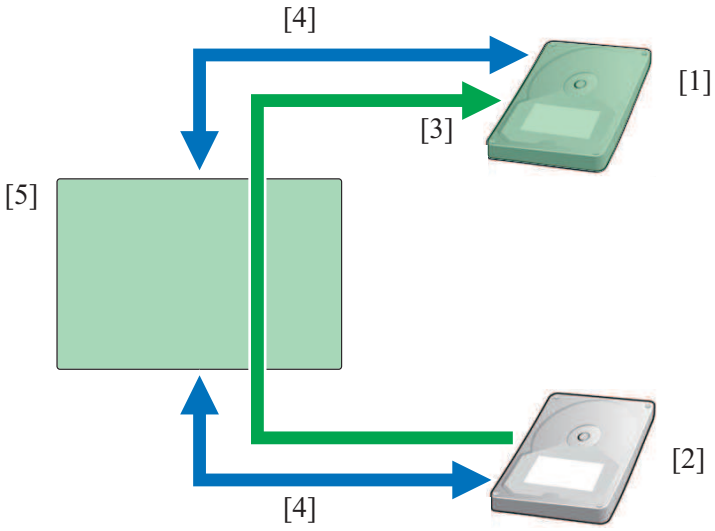
- HDD mirroring rebuilding represents a process to duplicate all data in the master drive onto the slave drive. (hereafter: rebuilding)
- When an HD-524 is newly installed, or an HDD error occurs and it is replaced with a new HD-524, it requires rebuilding from Service Mode.
  [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild]
  NOTE
  - **Approximately 1 hour is required for rebuilding.**
  - **Never turn off the main power switch, disconnect the power cord during rebuilding.**
  - **During a rebuilding, do not pause or force-quit until rebuilding is completed.**
  - **Jobs can be executed even during rebuilding. However, during a job access performance to the HDD is reduced to approx. 40%. Therefore, it also takes a longer time to complete rebuilding. (The rebuilding speed is lowered without slowing the job processing speed)**
  - **The HDD operating status and rebuilding progress can be confirmed with [Service Mode] -> [State Confirmation] -> [Memory/Storage status].**

2.3.1 Example: When HDD (B) is installed and rebuilding is executed



[1]	HDD (A): During normal operation (Master drive)	[2]	HDD (B): HD-524 (Slave drive) added
[3]	Duplicate all data in HDD (A) onto HDD (B)	[4]	Job data
[5]	MFP board (MFPB)	-	-

2.3.2 Example: When an HDD (A) R/W error occurs and HDD is replaced



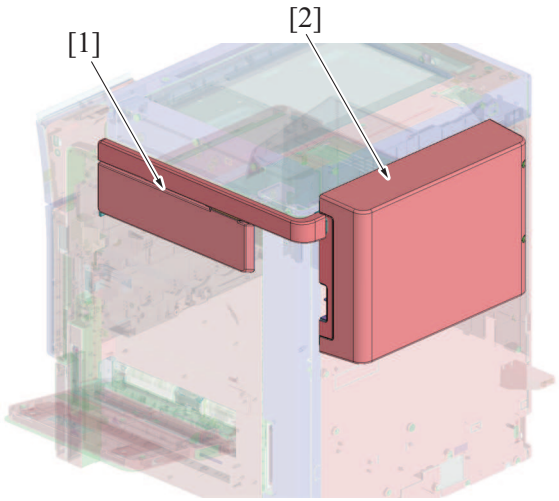
[1]	HDD (A): Replaced HD-524 (Slave drive)	[2]	HDD (B): During normal operation (Master drive)
[3]	Duplicate all data in HDD (B) onto HDD (A)	[4]	Job data
[5]	MFP board (MFPB)	-	-

2.4 Format HDD

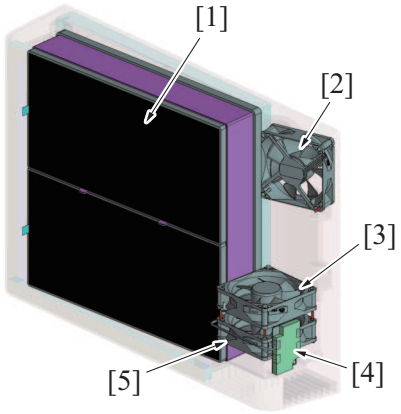
- At the time of executing HDD format with HD-524 has been installed, both HDD (A) and HDD (B) are formatted.
  NOTE
  - **No data exists on the slave drive. Caution is required at the time of formatting the HDD.**
  - **When it is used together with the HDD Data Backup security settings, data can be recovered to the formatted HDD. It requires to backup the HDD data before the HDD is formatted.**

PR THEORY OF OPERATION CU-101/MK-745

1. CONFIGURATION



[1]	Duct (MK-745)	[2]	Clean Unit (CU-101)



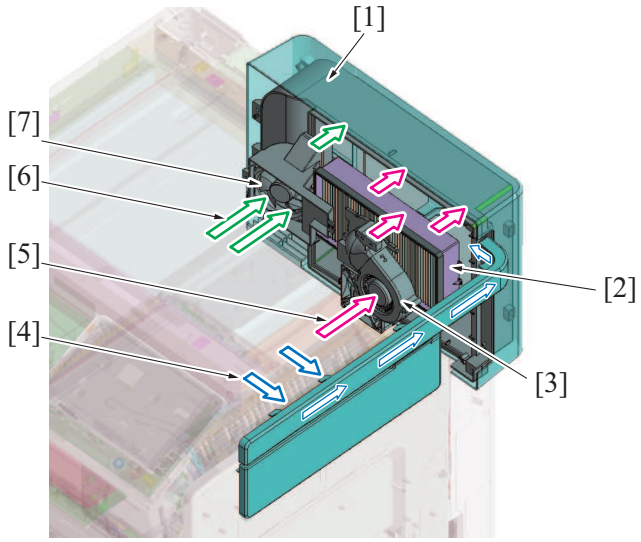
[1]	UFP filter, deodorant filter	[2]	Suction fan (FM16) *
[3]	Exhaust fan/1 (FM14)	[4]	Clean unit drive board (CUDB)
[5]	Exhaust fan/2 (FM15)	-	-

- *: Fan that is supplied with MK-745

2. OPERATION

2.1 Exhaust control

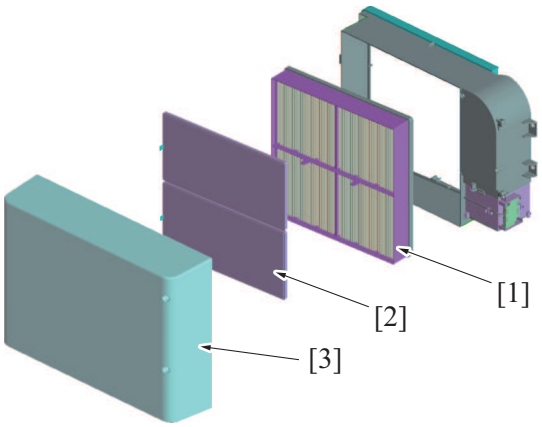
- The exhaust control collects ultrafine particles (UFP) and odor discharged from the machine into the clean unit using the UFP filter and deodorant filter and transports cleaner air to the outside of the machine.
  NOTE
  - **The UFP filter and deodorant filter are not replaced periodically.**



[1]	Clean unit	[2]	UFP filter (main body)
[3]	Paper cooling fan (main body: FM8)	[4]	Air route of the duct (MK-745)
[5]	Air route of the paper cooling fan	[6]	Air route of the suction fan
[7]	Suction fan (MK-745: FM16)	-	-

2.2 Filter configuration

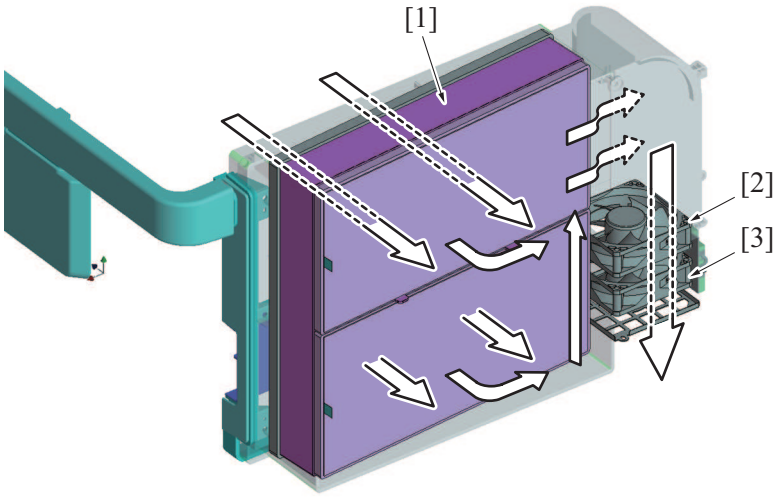
- Two types of filters are present inside the clean unit.
- The UFP filter removes ultrafine particles (UFP) while the deodorant filter removes odor.



[1]	UFP filter	[2]	Deodorant filter
[3]	Exterior cover	-	-

2.3 Airflow

- Air that is exhausted with the paper cooling fan and the suction fan of the machine is taken into the clean unit.
- The exhaust fan/1 and exhaust fan/2 exhaust the sucked air outside the machine via the UFP filter and the deodorant filter.



[1]	UFP filter, deodorant filter	[2]	Exhaust fan/1 (FM14)
[3]	Exhaust fan/2 (FM15)	-	-

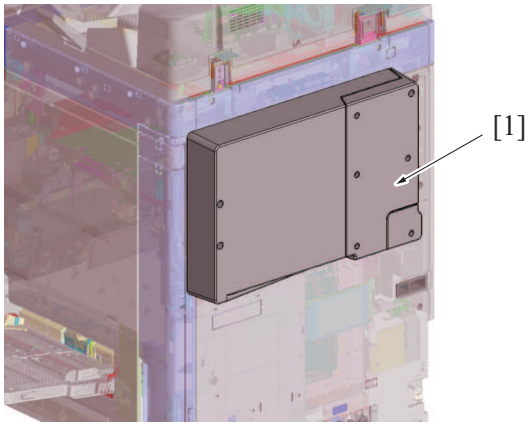
2.4 Operation timing

- The suction fan, exhaust fan/1, and exhaust fan/2 are driven at the same time that the paper cooling fan (FM8) of the machine is driven.
- If a clean unit is installed, perform the installation settings. [Service Mode] -> [System 2] -> [Cleaning Unit Setting]

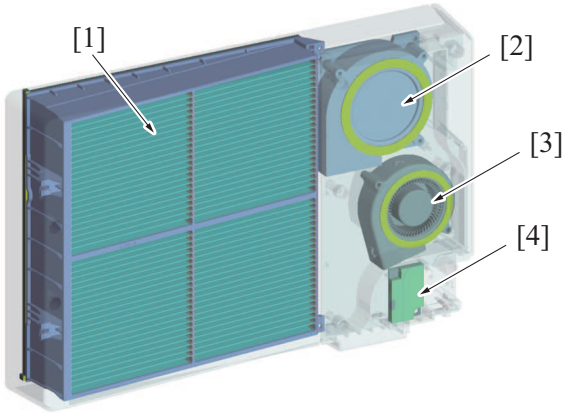
	At warm-up	During stand-by	During a print cycle
Suction fan	Full speed	Stop	Full speed
Exhaust fan/1			
Exhaust fan/2			

PS THEORY OF OPERATION CU-102

1. CONFIGURATION



[1]	Clean Unit (CU-102)	-	-

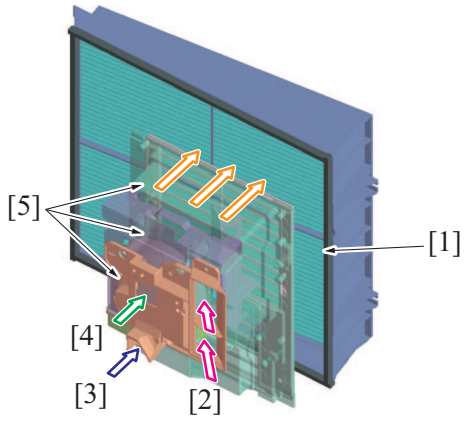


[1]	UFP filter	[2]	Exhaust fan1 (FM14)
[3]	Exhaust fan2 (FM15)	[4]	Clean unit drive board (CUDB)

2. OPERATION

2.1 Exhaust control

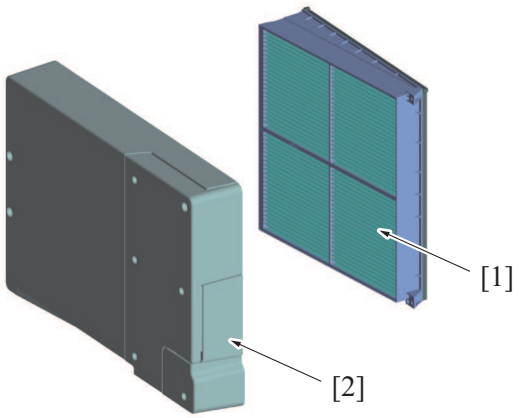
- Ultrafine particles (UFP) and odor that is discharged from the machine are collected in the clean unit. Then, air that is purified through the UFP filter is discharged from the machine.
  NOTE
  - **The UFP filter does not require a periodic replacement.**



[1]	UFP filter	[2]	Air path from the UFP exhaust fan (main body: FM17 and FM18)
[3]	Air path from the IH coil cooling fan (models: FM7)	[4]	Air path from the paper exit section
[5]	Duct (main body side)	-	-

2.2 Filter configuration

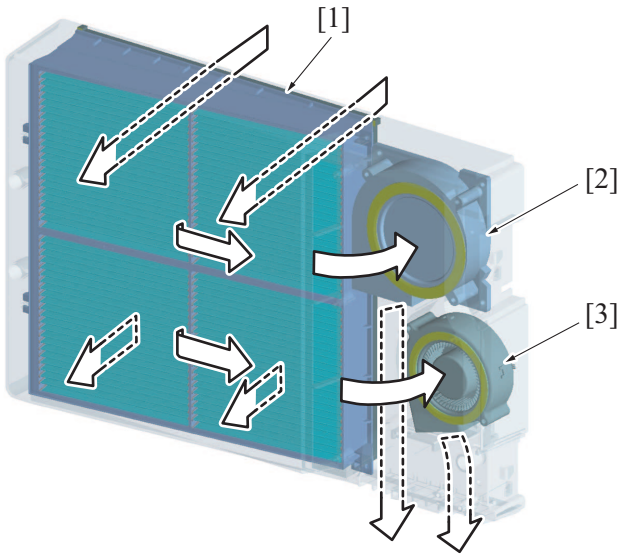
- The UFP filter is located in the clean unit.
- The UFP filter removes ultrafine particles (UFP) while the deodorant filter removes odor.



[1]	UFP filter	[2]	Exterior cover

2.3 Airflow

- Air from the UFP exhaust fan and paper cooling fan is drawn into the clean unit.
- The exhaust fan 1 and exhaust fan 2 exhaust the drawn air outside the machine via the UFP filter.



[1]	UFP filter	[2]	Exhaust fan1 (FM14)
[3]	Exhaust fan2 (FM15)	-	-

2.4 Operation timing

- The exhaust fan1 and exhaust fan2 are driven at the same time that the paper cooling fan (FM8) of the machine is driven.
- If a clean unit is installed, perform the installation settings. [Service Mode] -> [System 2] -> [Cleaning Unit Setting]

	At warm-up	During stand-by	During a print cycle
Paper cooling fan (FM8)	Full speed	Stop	Full speed
Exhaust fan1 (FM14)			
Exhaust fan2 (FM15)			



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